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Collective-Oriented Collaboration: A Grounded Theory Study of Interprofessional Practice in Community Based Maternity Care in Indonesia

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Abstract

This study explores interprofessional collaboration (IPC) among healthcare professionals (HCPs) in community-based maternity care settings in Indonesia, examining how they engage in collaborative practices and identifying the factors that influence their interactions. Despite global recognition of IPC's benefits for enhancing patient care and outcomes, challenges persist, particularly in resource-limited settings where diverse professional roles intersect. Using a constructivist grounded theory approach, this qualitative study provides an in-depth understanding of collaborative dynamics by gathering insights from a range of HCPs engaged in maternity care at community health centres.

Data were collected through online semi-structured interviews and document analysis. Initially, the study employed purposive, focused sampling of healthcare professionals involved in community maternity care, which then transitioned into theoretical sampling to explore and refine emerging categories as the analysis unfolded. A conceptual model, the "Collective Oriented Collaboration Model", was developed to capture the complexity of community maternity services as the central challenge in IPC, with cross-sectoral collaboration serving as a critical means of managing this complexity. It acknowledges the significant role of the cultural values of "*Gotong Royong*" (mutual assistance) in shaping team collaboration, and three identified factors that affect IPC in this context: adaptive systems, value-based teamwork, and community empowerment.

This grounded theory study adds to existing literature by highlighting the unique cultural and structural factors that affect IPC in community maternity settings in

Indonesia. The study provides insights that are valuable for both local health policy and global discussions on collaborative practice in maternity care. This research offers a framework for understanding the complexities of interprofessional collaboration in community maternity care and supports future initiatives aimed at strengthening IPC in similar contexts.

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List of Publications and Dissemination in Conferences

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3. School of Health Sciences Research Festival, University of Nottingham (21 June 2022).

   Poster title: “Understanding of Interprofessional collaboration (IPC) in maternity care in a community context: a Tentative grounded theory”

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ANC	Antenatal care
AIDS	Acquired Immunodeficiency Syndrome
BFHI	Baby-Friendly Hospital Initiative
BPJS	National Social Security System
CAS	Complex adaptive system
CGT	Constructivist grounded theory
CHC	Community health centre
CHW	Community health worker
COCM	Collective-Oriented Collaboration Model
CRG	Conditional Relationship Guide
C-SC	Cross-sectoral collaboration
EBP	Evidence-based practice
FIGO	International Federation of Gynaecology and Obstetrics
GP	General practitioner
GT	Grounded theory
HCP	Healthcare professional
HIV	Human Immunodeficiency Virus
HPEQ	Health Professional Education Quality Project
HWC	Health and Wellness Centre
ICM	International Confederation of Midwives
IOM	Institute of Medicine
IPC	Interprofessional collaboration
IPE	Interprofessional education
IPEC	Interprofessional Education Collaborative Core Competencies
JBI	Joanna Briggs Institute
LHW	Lay health worker

LMIC	Low- and middle-income country
MC	Maternity care
MCH	Mother and Child Health
MMR	Maternal mortality rate
MoH	Ministry of Health
NCD	Non-communicable disease
NGO	Non-Governmental Organisation
PCC	Patient-centred care
PHC	Primary healthcare
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
QoC	Quality of care
RCM	Reflective Coding Matrix
SDG	Sustainable Development Goals
SOP	Standard operating procedure
STP	Sustainability and transformation plan
TBA	Traditional birth attendant
UHC	Universal health coverage
V-BT	Value-based teamwork
WHO	World Health Organization

Glossary of Indonesian Institutions and Terminology

Bhinneka Tunggal Ika	“Unity in diversity”, a national motto of Indonesia that reflects the nation's commitment to embracing cultural, ethnic, religious, and linguistic diversity while maintaining unity as a cohesive state.
CISDI	Centre for Indonesia’s Strategic Development Initiatives
BPJS Kesehatan	Badan Penyelenggara Jaminan Sosial Kesehatan (“Health Social Security Administration Agency”)
Dikti	Direktorat jendral pendidikan tinggi (“Directorate General of Higher Education”)
Dukun Beranak	Traditional birth attendants in Indonesia
GERMAS	Gerakan Masyarakat Hidup Sehat (“Community Movement for Healthy Living”)
Gotong Royong	"Mutual cooperation" or "working together for a common purpose." It represents a deeply rooted cultural value in Indonesia, emphasizing community solidarity, collective effort, and shared responsibility.
HBSAg	Hepatitis B surface antigen
IBI	Ikatan Bidan Indonesia (“Indonesian Midwives Association”)
IDI	Ikatan Dokter Indonesia (“Indonesian Medical Association”)
ILP	Integrasi Layanan Primer (“Primary Care Integration Program”)
Jantung Hati	A maternal health initiative implemented in Boyolali District, Indonesia, emphasizes regular antenatal check-ups, blood pressure monitoring, nutritional counseling, and screening for high-risk conditions like preeclampsia.
JKN	Jaminan Kesehatan Nasional (“National Health Insurance”)
Kader	A term used in Indonesia to refer to Community Health Workers (CHWs), individuals from local communities who support community-based health programs.
Kemilau Cinta	Kelas Ibu Hamil Andalan Utama Cegah Kematian Ibu dan Neonatal ("Flagship Antenatal Class to Prevent Maternal and Neonatal Deaths.") a maternal health education program in Indonesia that aims to reduce maternal and neonatal mortality through structured antenatal classes for pregnant women.
Buku KIA	Buku Kesehatan Ibu dan Anak (“Mother and Child Health Book”), provided by the Indonesian Ministry of Health to monitor and record health information for pregnant women, mothers, and children. It includes data on pregnancy, childbirth, postpartum care, child growth, immunizations, and health education to support maternal and child health.

KIP/K	Komunikasi interpersonal atau konseling (“Interpersonal Communication/Counselling”)
LAM-PTKes	Lembaga akreditas Mandiri- Perguruan Tinggi Kesehatan (“Indonesian Accreditation Agency for Higher Education in Health”)
NS	Nusantara Sehat (“Health Archipelago” public health program)
Pancasila	Nation identity/ citizenship framework of Indonesia (“Five Values”)
PERSAGI	Persatuan Ahli Gizi Indonesia (“Indonesian Nutritionists Association”)
PIS-PK	Program Indonesia Sehat dengan Pendekatan Keluarga (“Healthy Indonesia Program with Family Approach”)
PKMD	Pembangunan Kesehatan Masyarakat Desa (“Village Community Health Development”)
POGI	Perkumpulan Obsteri dan Ginekologi Indonesia (“Indonesian Obstetric and Gynecological Association”)
PONED	Pelayanan Obstetri Neonatal Emergensi Dasar (“Basic Emergency Obstetric and Neonatal Care”)
PONEK	Pelayanan Obstetri Neonatal Emergensi Komprehensif (“Comprehensive Emergency Obstetric and Neonatal Care”)
Posyandu	Integrated health posts
PPAKIA	Program Penguatan akselerasi Kehesatan Ibu dan Anak (“Strategy for the Acceleration of Maternal and Child Health”)
Puskesmas	“Community health centre”, a healthcare facility that provides community and individual health efforts at the primary level.
Pustu	Auxiliary health centres
SAMPER BUMILA	Bersama Perhatikan Ibu Hamil dan Melahirkan ("Together Caring for Pregnant and Birthing Mothers"). a community-based maternal health initiative in Indonesia aimed at improving maternal and newborn outcomes through collaborative efforts between health professionals, community members, and local authorities.
Sisdiknas	Sistem pendidikan nasional (“National Education System”)
SISRUTE	Sistem rujukan terintegrasi (“Integrated referral system”), an online platform developed by the Indonesian Ministry of Health to streamline and manage patient referral processes between healthcare facilities.
TB	Tuberculosis
UKBM	Usaha Kesehatan Berbasis Komunitas (“Community-Based Health Efforts”)
Ukhuwah	Fraternity (lit. “brotherhood”)

CHAPTER 1

Introduction

This introductory chapter presents an overview of the research topic, outlines the study's background (including relevant policy and cultural aspects, especially with regard to the particular studied care delivery context in Indonesia), and emphasises the significance of this research. The chapter concludes with a description of the thesis structure.

1.1. Overview of Research Topic: Interprofessional Collaboration (IPC) in Healthcare

IPC in healthcare has emerged as a key approach to addressing complex patient needs, ensuring effective and holistic care, and improving health outcomes globally. IPC involves healthcare professionals (HCPs) from various disciplines working together cohesively, to provide comprehensive patient care. Its significance in healthcare arises from its potential to reduce medical errors, increase patient satisfaction, and improve healthcare efficiency and quality of care (QoC) by triangulating the unique perspectives and skills of diverse professional specialties in a cohesive care package (Schmutz et al., 2019). However, despite obvious intended benefits, IPC often encounters challenges, such as communication barriers, role ambiguity, and power imbalances among HCPs from different professions. These issues can lead to fragmented care, misunderstandings, and decreased morale among HCPs, ultimately hindering the potential of IPC to deliver quality health services effectively (Ohta et al., 2020; WHO, 2010).

In maternity care (MC), IPC is particularly critical. Pregnant women and neonates require a range of services provided by various HCPs, including physicians, midwives, nurses, nutritionists, and public HCPs. A collaborative approach among these HCPs aims to ensure timely and appropriate care for mothers and infants. However, in many healthcare systems, including in Indonesia, effective collaboration among maternity HCPs faces several obstacles. Prominent challenges include overlapping roles, limited resources, and inconsistent protocols, which can contribute to delays in care, insufficient support for high-risk cases, and miscommunication among team members (Yusra et al., 2019). Addressing these issues is crucial to improving maternity outcomes and ensuring that care is coordinated, especially in settings where resources and trained personnel may be limited (as described in section 2.3.2).

To address these challenges, it is essential to understand how HCPs engage in IPC within MC settings. Examining the ways in which HCPs practice IPC, and the factors that influence their interactions, can provide valuable insights into existing barriers and areas for improvement. Investigating these dynamics is particularly relevant in countries like Indonesia, where the healthcare system is experiencing ongoing reforms. These reforms are aimed at strengthening healthcare delivery, especially at the primary care level, to improve access and QoC across the country. Understanding the interpersonal and systemic factors affecting IPC among maternity HCPs can inform policies and practices that foster more effective collaboration and better patient outcomes.

Like other countries, Indonesia is witnessing dynamic changes in healthcare driven by shifts in global health priorities, technological advancements, and evolving patient

needs. As Indonesia's healthcare landscape continues to evolve, adapting collaborative practice that accommodate these changes becomes increasingly important. Integrating a collaborative, patient-centred approach into routine MC aligns with the broader global trend towards IPC in healthcare and supports the country's efforts to enhance its healthcare workforce's capacity to deliver high-quality, coordinated care.

1.2. Background

This section offers a detailed background to situate the research within its broader context. Establishing the setting is essential in constructivist research, as context plays a critical role in developing the theory framework (Bryant & Charmaz, 2007b; Charmaz, 2014). Rooting the research within its specific environment underscores a key constructivist principle: meaning is shaped by and dependent on particular times, places, and social interactions (Bryant, 2009; Charmaz, 2008). This section therefore highlights the unique policy, cultural, and situational factors that frame the study, setting the stage for understanding the research findings.

1.2.1. Policy Context

The policy framework underpinning Indonesia's healthcare system is based on foundational laws, including Law No. 36 of 2009, which defines health as a basic right, and mandates that the government delivers "preventive, promotive, curative, and rehabilitative healthcare services". This legislation establishes a legal foundation (indeed, an obligation) for healthcare provision from national to regional levels, emphasising the state's role in ensuring that citizens have access to adequate health services (Ministry of Health [MoH], 2009). Additionally, the National Social Security

System Law (SJSN Law No. 40 of 2004) and the Social Security Agency Law (BPJS Law No. 24 of 2011) underpin Indonesia's national health insurance framework. The National Social Security System (BPJS) Health Program established by these laws, forms the backbone of Indonesia's Universal Health Coverage (UHC) goals by working to ensure equitable access to healthcare for all citizens, including remote populations (BPJS, 2011; SJSN, 2004).

Primary healthcare (PHC) in Indonesia is largely delivered through the extensive network of national community health centres (CHCs) known as "Puskesmas", serves as the country's core healthcare model. This PHC platform is designed to reach communities directly, and provides preventive, promotive, curative, and rehabilitative services with an emphasis on reducing pressure on secondary and tertiary facilities by detecting and treating conditions as soon as possible (i.e., before patients suffer from escalating symptoms and disease progression). Given its critical role, the MoH has pursued some policies and initiatives that enhance the capability and integration of PHC services.

One example is the Nusantara Sehat (NS) ("Healthy Archipelago") program in 2015, which deploys healthcare teams to remote and underserved areas. Emphasising a team-based approach, this initiative fosters IPC by combining the expertise of physicians, nurses, midwives, and other HCPs to meet community health needs comprehensively (Sari et al., 2019). The team-based model promoted through NS demonstrates Indonesia's commitment to IPC, which strengthens primary care and improves service delivery in challenging locations (MoH, 2015).

In 2016, the “Healthy Indonesia Program with Family Approach” (PIS-PK) program was outlined in Minister of Health Regulation No. 39 of 2016. This adopts a family-based approach to enhance PHC outreach and promotes visits by community health workers (CHWs) to family homes, allowing for personalised health services and education. By integrating the family as the core unit for health promotion, PIS-PK strengthens health education and prevention at the community level, targeting conditions and behaviours that impact family and community health (Sulistiowati et al., 2020).

Presidential Instruction No. 1 of 2017 serves as the backbone of the Community Movement for Healthy Living (Gerakan Masyarakat Hidup Sehat [GERMAS]), which focuses on preventive healthcare by promoting healthy lifestyles across sectors and at all levels of society. This policy encourages local governments, private sectors, and communities to promote physical activity, balanced nutrition, and regular health check-ups. GERMAS seeks to empower communities and foster behavioural changes to reduce the prevalence of non-communicable diseases (NCDs), thus aligning with the government’s PHC strategy, and the Sustainable Development Goals (SDGs) (MoH, 2017).

Recent legislative developments highlight Indonesia’s ongoing policy evolution to address emerging challenges. The Omnibus Health Law (Law No. 17 of 2023) represents a comprehensive framework for addressing the nation’s healthcare challenges and enhancing healthcare resilience. This law serves as the government’s roadmap for health system reform, introducing the six pillars of transformation: “PHC, Referral Services, Healthcare Financing, Health Security and Resilience, Human

Resources for Health, and Health Technology". These pillars guide the MoH in overcoming longstanding issues, such as disparities in access, rising healthcare demands, and emergency preparedness. They reflect a national commitment to equitable, efficient, and sustainable healthcare improvements, targeting both immediate needs and future challenges (MoH, 2023).

Alongside this law, the MoH launched the Primary Care Integration Program (ILP) in 2023, which promotes cross-sectoral collaboration (C-SC) by unifying services at the primary level to enhance accessibility and care quality. The ILP integrates health services across Puskesmas, auxiliary health centres (Pustu), and integrated health posts (Posyandu) by coordinating with local government, community organisations, and HCPs. This integration fosters a more resilient system capable of addressing complex health challenges, signalling a clear direction toward local-level collaboration (MoH, 2023).

These policy efforts indicate a strategic push by the MoH towards IPC within community settings as the future of healthcare in Indonesia. However, challenges such as limited human resources, funding, and the need for strengthened governance pose potential barriers to achieving seamless collaboration. Despite these obstacles, the ministry's commitment to fostering collaboration highlights the relevance of this thesis in illuminating strategies that could support such goals at both micro and macro levels. While Indonesia's focus on community-level collaboration aligns with its specific context, the global emphasis on PHC integration and community-focused models is not unique. The WHO emphasises the importance of strong PHC systems in improving health outcomes and achieving Universal Health Coverage (UHC),

asserting that these systems must be responsive to the needs of diverse communities (WHO, 2018).

The Global Action Plan articulates a collaborative framework to enhance health and well-being, focusing on SDGs and underscoring the necessity for integrated health services that are accessible and community oriented. The Astana Declaration further reinforces the commitment to PHC, advocating for a holistic approach that involves communities in decision-making processes, ensuring that healthcare systems are equitable and culturally sensitive (WHO, 2018). These global policies urge countries to adopt policies that leverage community and local government engagement to improve healthcare delivery.

For instance, In India, the “Ayushman Bharat” program exemplifies a significant commitment to improving healthcare access for vulnerable populations. Launched in 2018, the program seeks to provide health coverage to over 500 million individuals through the establishment of Health and Wellness Centres (HWCs). These centres focus not only on curative care but also on preventive and promotive health services, thereby fostering community engagement and ensuring that care is tailored to local needs (Lahariya, 2018). Similarly, in the UK, Sustainability and Transformation Plans (STPs) represent an effort to integrate health and social care services at the community level. These plans encourage collaboration among local health systems to focus on prevention, early intervention, and the management of chronic conditions (Coultas et al., 2019).

Such community approaches illustrate that Indonesia's strategies resonate with international health priorities and exemplify globally relevant best practices that can enhance the efficacy of PHC.

1.2.2. Socio-Cultural Context

Understanding the type of society and its prevailing social characteristics and cultural mores is crucial when exploring collaborative MC in a community setting, as it shapes the norms, expectations, and interactions among HCPs, patients, and families. In Indonesia, where society is largely collectivist, this context significantly influences how collaboration unfolds in MC. Although this research is situated within the specific cultural context of Indonesia, the influence of cultural values on IPC holds international relevance. Cultural values play a foundational role in shaping how HCPs interact, communicate, and collaborate within any society. Understanding these dynamics is crucial not only for exploring collaboration in Indonesia but also for recognising the broader implications of culture on teamwork across various healthcare settings worldwide.

For instance, cultural norms around hierarchy, respect, and communication styles significantly impact IPC in countries like Japan, where emphasis on respect for authority and seniority can affect open dialogue among team members (Kawashima & Takeda, 2012). This contrasts with New Zealand, where egalitarian values encourage a more inclusive and participatory approach to IPC, integrating perspectives from diverse healthcare roles, including Indigenous Māori health practitioners (Nelson & Wright, 2016). These examples highlight that while specific cultural values may differ,

they universally shape the dynamics of IPC by influencing how HCPs share responsibilities, make decisions, and build trust.

Indonesia is an extraordinarily diverse country, with over 300 ethnic groups and numerous regional languages, each contributing unique traditions, practices, and worldviews to the nation. This cultural mosaic is held together by the national slogan "*Bhinneka Tunggal Ika*" ("Unity in Diversity"). Originally derived from ancient Javanese philosophy, this phrase has become an emblem of Indonesian national identity, emphasising the importance of embracing and respecting cultural differences while promoting social cohesion (Sholeha & Rahmawati, 2024). This multicultural landscape shapes Indonesian society, where a collective orientation deeply influences social interactions and community values. Collectivism in Indonesia prioritises group goals over individual aspirations, fostering a sense of mutual obligation and shared responsibility, particularly within family and community structures (Shadiqi et al., 2022). This collective ethos is integral to social and professional contexts alike, where collaborative efforts are often preferred to individual achievements.

Social cohesion in Indonesian society is deeply connected to the national value of *Gotong Royong* ("Mutual Cooperation"). This principle, ingrained in Indonesian culture, promotes collective responsibility and communal support, underpinning the nation's emphasis on unity and shared purpose. *Gotong Royong* goes beyond practical cooperation to foster a sense of belonging and mutual trust that reinforces social bonds within diverse communities (Slikkerveer, 2019). Through this cultural lens, individuals are encouraged to set aside personal interests for the greater good,

reflecting a strong community-oriented mindset that aligns with the nation's commitment to "Unity in Diversity".

Gotong Royong is particularly significant in the context of public services, where collective efforts are often mobilised to address complex social issues. This value-driven approach contributes to Indonesia's social resilience, reinforcing social cohesion through shared cultural practices that prioritise collaboration and reciprocity over individual success (Slikkerveer, 2019). Therefore, *Gotong Royong* is not only a reflection of Indonesia's collective identity, but also an active tool for maintaining social harmony and addressing societal challenges effectively.

1.2.3. Maternity Care (MC) Context

1.2.3.1. Maternity Care globally

Maternal and child health remains a key priority for the World Health Organization (WHO, 2019) and is explicitly addressed under the third target of the SDGs. This target aims to reduce maternal mortality to fewer than 70 deaths per 100,000 live births by 2030. Despite global efforts, the maternal mortality rate (MMR) remains a significant issue, with approximately 295,000 women dying from pregnancy and childbirth-related complications in 2017. Alarmingly, 94% of these deaths occurred in developing regions, including Sub-Saharan Africa and South/Southeast Asia. In Indonesia, for example, maternal mortality was recorded at 177 per 100,000 live births in 2019, showing a modest decrease from 192 in 2015. However, this figure remains high compared to other Southeast Asian nations, such as Thailand (37), Malaysia (29), and Singapore (8) (UNICEF, 2019; WHO, 2019).

According to the WHO (2019), approximately 75% of maternal deaths are attributed to complications arising during pregnancy and childbirth, many of which are preventable, including severe bleeding, infections, high blood pressure, complications during delivery, and unsafe abortion. One of the most effective strategies to address these complications is through providing high-quality MC. This aligns with WHO's "Ending Preventable Maternal Mortality Strategy", which highlights the importance of strengthening health systems and improving the quality of maternity services (WHO, 2010). High-quality care involves skilled HCPs delivering services in a coordinated and collaborative manner. In this regard, the WHO advocates for IPC as a critical solution to challenges faced by health systems globally, including those in maternity services. The WHO (2010) defines IPC as a situation where:

> "Multiple HCPs from different professional backgrounds work comprehensively together with patients, families, carers, and communities to deliver the highest quality of care".

This collaboration spans clinical and non-clinical activities, including diagnosis, treatment, health promotion, and patient surveillance. The advantages of effective IPC are well-documented in the literature. Collaborative practice has been shown to optimise healthcare delivery, strengthen healthcare systems, and improve patient outcomes (Institute of Medicine [IOM], 2015). Research also indicates that IPC can reduce complications, shorten hospital stays, minimise conflicts within healthcare teams, and lower mortality rates (Walton et al., 2019).

Conversely, the absence of effective collaboration can negatively impact patient outcomes, leading to wasted resources, poor communication, and reduced job satisfaction among HCPs (Freeth, 2001). Manser's (2009) review revealed that poor

teamwork and collaboration significantly contributed to critical incidents and adverse events in healthcare settings, such as operating rooms. Moreover, ineffective communication—a key issue in the absence of IPC—was identified as a factor in 22-32% of adverse events (Cleary et al., 2019; Varspury & Van Bogaet, 2018).

In MC specifically, Heatley and Kruske (2011) conducted a literature review to identify the key elements of IPC in this context. They described IPC as:

> "a reflexive and dynamic process that involves maternity care professionals from multiple professions working together with the woman to produce quality outcomes".

This collaboration emphasises shared responsibility and accountability, mutual trust and respect, and the integration of diverse expertise to meet the unique needs of women from pregnancy through to the postnatal period.

When focusing on collaboration between midwives and physicians, Smith (2015) noted that effective IPC entails working together to provide safe, patient-centred care (PCC) for women and their families. However, studies highlight significant challenges in maternity collaboration that impact maternal and neonatal outcomes (Heatley & Kruske, 2011; van der Lee et al., 2014, 2016). For instance, the high perinatal morbidity rates in the Netherlands have been linked to suboptimal collaboration between obstetricians and community midwives (van der Lee et al., 2016). Factors such as professional hierarchies, lack of teamwork, poor communication, and differing care models create barriers to effective collaboration, undermining patient safety and maternal health outcomes (Freytsis et al., 2017).

To address such challenges, it is essential to foster effective IPC. Strengthening collaboration within maternity services has the potential to improve patient safety, enhance healthcare quality, and achieve better maternal and neonatal outcomes globally.

1.2.3.2. Maternity Care in Indonesia

MC in Indonesia is provided through a network of healthcare facilities and a diverse group of professionals who play vital roles in maternal and child health. The primary facilities involved in MC include Puskesmas, Posyandu, and hospitals, which are categorised public healthcare facilities. Puskesmas serve as the backbone of primary maternal healthcare in Indonesia, especially in rural areas, offering antenatal, delivery, and postnatal services and addressing common pregnancy-related issues. Posyandu, staffed by trained community health volunteers, provides supplementary maternal care and health education at the village level, facilitating access to preventive services, nutrition programs, and basic health screenings. In more complex cases, women are referred to hospitals, which offer specialised and emergency obstetric care, including caesarean sections, for high-risk pregnancies.

Besides public healthcare facilities, private clinics play an essential role in urban and peri-urban areas, where access to diverse maternal care options is greater. Private obstetricians, typically based in private hospitals or independent clinics, provide specialised maternal healthcare, including antenatal care (ANC), ultrasound diagnostics, and delivery services, often with more advanced equipment and personalised care options than are available in public facilities. They are particularly sought-after for high-risk pregnancies, and by women who prefer continuity with a

specific provider throughout their pregnancy journey. Private midwives' clinics are also widespread across Indonesia, offering convenient, community-based maternity services. Midwives in these clinics provide a range of maternal health services such as antenatal check-ups, family planning consultations, assistance during labour, and postnatal care. Many women choose private midwives' clinics for their accessibility and the perceived quality of one-on-one care.

While private and public healthcare facilities both contribute to MC, there remains a significant gap in coordination between these sectors, particularly in sharing patient record data and monitoring maternal health cases. This gap is most evident in the lack of integrated health information systems that allow data exchange between private obstetrician clinics and public facilities like Puskesmas and hospitals. Consequently, public healthcare facilities may be unaware of any pre-existing conditions, previous treatments, or identified risk factors when these patients require emergency care or transfer to a public hospital.

The range of care providers involved in MC is similarly diverse, comprising obstetricians and gynaecologists**,** midwives**,** nurses**,** and CHWs**.** Obstetricians and gynaecologists are often based in hospitals or private clinics, where they handle high-risk cases and perform specialised procedures. Midwives, however, are the primary providers for most maternal healthcare needs in community settings, particularly at Puskesmas and Posyandu, where they conduct routine antenatal check-ups, assist in normal deliveries, and provide postpartum care. They are essential in rural and underserved areas, acting as the first point of contact for many pregnant women. Nurses often work alongside midwives, offering additional support and maternal

health education, while CHWs are critical in promoting maternal health awareness and encouraging women to attend regular antenatal check-ups.

Recent data on maternity health conditions in Indonesia reveals a complex landscape marked by ongoing challenges despite improvements in healthcare access. As mentioned previously, the MMR in Indonesia was recorded at 177 per 100,000 live births in 2019, down from 192 in 2015 (UNICEF, 2019; WHO, 2019); however, a more recent study reported an increase to 189, with significant regional disparities highlighting the need for targeted interventions (Kemenkes, 2023).

Factors contributing to maternal mortality include inadequate access to quality healthcare services, especially in rural areas, where healthcare facilities are often under-resourced. While Indonesia has made progress in expanding healthcare infrastructure, many remote regions still face shortages of qualified care providers, including obstetricians and midwives. This shortage hampers the availability of essential maternal health services, leading to delays in care and increased risks for pregnant women. Moreover, existing healthcare facilities often struggle with inadequate supplies, limited training for staff, and a lack of integrated care approaches that address the multifaceted needs of mothers.

The Strategy for the Acceleration of Maternal and Child Health (PPAKIA) is a national initiative by the Indonesian MoH aimed at reducing maternal and child mortality. This program addresses the key factors contributing to high maternal and child mortality rates, including limited access to healthcare, variations in the quality of services, and lack of coordination among HCPs (MoH, 2021). One of the key components of PPAKIA is the Integrated ANC program. This program emphasises the

importance of comprehensive ANC to reduce maternal morbidity, which remains a significant concern in Indonesia. Integrated ANC combines preventive, promotive, and curative services within each antenatal visit. This approach includes routine health assessments, screening for complications, vaccinations (such as tetanus toxoid), and nutritional guidance. Additionally, through outreach activities, integrated ANC provides health education on topics like birth preparedness, recognising danger signs in pregnancy, and understanding the importance of skilled birth attendance (Afrizal et al., 2020).

Many causes of maternal morbidity can be prevented through early detection and timely intervention, making ANC crucial for the health of both mothers and their babies. However, women in Indonesia commonly book their first antenatal visit relatively late, due to factors such as lack of awareness and accessibility issues, which can lead to missed opportunities for early screening and intervention (MoH, 2021). Furthermore, regular assessments during antenatal visits are essential for identifying complications such as hypertension and gestational diabetes; delays in these assessments increase health risks.

Additionally, when complications are identified, timely referrals to specialised care are vital, but communication gaps and resource limitations in rural areas often lead to delays (Mohan et al., 2020). The integrated ANC program under the PPAKIA aims to streamline these processes, ensuring that expectant mothers receive holistic care that addresses not only their medical needs but also psychosocial aspects. By engaging communities through outreach programs (Posyandu) and providing comprehensive

services, the integrated ANC strives to improve access to and quality of ANC, ultimately contributing to better maternal health outcomes in Indonesia.

1.2.3.3. Community Maternity Care

In Indonesia, MC consists of three levels: PHC, basic emergency obstetric and neonatal care (PONED), and comprehensive emergency obstetric and neonatal care (PONEK) (Fatalina, 2015). PHC is the main maternal and child health service, with midwives as the main care providers. In the context of improving maternal health and reducing maternal mortality, the government has decided to intensify the development of integrated antenatal services in PHC. These antenatal services include maternal and foetal examinations, laboratory examinations for early detection of diseases and complications in pregnancy, health counselling, preparation for safe delivery, preparation of referrals, and involvement of mothers and families in maintaining maternal health (Jap, 2019).

In providing these antenatal services, midwives do not work alone, but rather involve other HCPs such as physicians, laboratory assistants, nutritionists, pharmacists, and social workers. For this reason, good teamwork and collaboration between all HCPs involved is needed to produce quality integrated antenatal services. This is stipulated in the Indonesian National Universal Health Coverage System, which states that midwives and physicians must collaborate in providing ANC in PHC (Randita et al., 2019).

The collaboration among primary care providers is characterised by shared information and decision making, effective communication, and role clarity (Smith,

2015). This collaboration includes the midwife having a consultation with the physician regarding the case of high-risk pregnancy and having a discussion between them to consider referral to the higher healthcare facility. Some discussions were held to find solutions for certain cases such as gestational diabetes and chronic energy deficiency, which involved the midwife, nurse, physician, nutritionist, and public health practitioner. Shared information and responsibility as a form of collaboration should also occur between the midwife and the health visitor, whereby the latter should help to ensure that pregnant women gets access to adequate ANC, particularly those who live in rural areas (Ridar & Santoso, 2018). However, recent studies report problems in IPC in Indonesia.

A qualitative study using focus group discussions with five different health professions showed that each profession had a different understanding of IPC. These differences were influenced by their unique roles, responsibilities, and experiences. The study highlighted the challenges of creating a shared approach to teamwork and the need for strategies that address each profession's specific expectations and contributions (Fatalina, 2015). This shows the importance of recognising and addressing these differences to strengthen collaboration between professions. Communication issues among HCPs were reported in a study by Lasmin (2018) involving health practitioners and patients in two CHCs. The study examined communication between health professions and reported that poor communication between HCPs often leads to overlapping tasks.

For example, Lasmin (2018) reported that midwives and nurses frequently performed the same activities, such as patient education and routine check-ups, and such

duplication of efforts caused inefficiencies and confusion, directly affecting patients. Many patients shared feelings of frustration and discomfort, highlighting inconsistencies in the information provided by different workers and delays in receiving the care they needed. These findings show the need for better communication and coordination between HCPs to improve patient experiences and the QoC. Therefore, further research is necessary to explore the barriers and facilitators to implementing IPC, with the aim of providing actionable recommendations for its initiation and effective development.

1.3. Significance of the Study

This research on IPC in community MC in Indonesia holds significant relevance for involved stakeholders, including HCPs, policymakers, and educators. First, it contributes to the growing body of knowledge surrounding IPC in MC, particularly within the Indonesian context, which has been underrepresented in the existing literature (particularly relative to the numerically large population of underserved women in Indonesia). By examining the dynamics of collaboration among various HCPs, this study provides insights into effective practices, barriers, and facilitators that impact the delivery of MC. This knowledge is crucial for enhancing the QoC offered to pregnant women and their families, ultimately improving maternal and neonatal health outcomes.

Furthermore, the findings of this research can inform the development of training programs and policies aimed at fostering a collaborative culture among HCPs. By identifying the cultural values that influence IPC in Indonesia, this study emphasises the importance of context-specific approaches in designing interventions that enhance

teamwork and communication. Policymakers can utilise the insights gained to create supportive frameworks that promote interprofessional education (IPE) and practice, ensuring that HCPs are equipped with the necessary skills and knowledge to work collaboratively in community settings.

Additionally, this research underscores the significance of incorporating local cultural contexts into MC practices. By recognising and valuing the unique cultural dimensions of Indonesian society, HCPs can deliver more responsive and culturally competent care. This is particularly important in a diverse nation where local beliefs, values, and customs shape health seeking behaviours and attitudes toward MC. The study's emphasis on cultural sensitivity not only enhances the relevance of collaborative practice but also fosters trust and respect between HCPs and the communities they serve.

In summary, the significance of this study extends beyond academic inquiry; it serves as a practical guide for improving IPC in community MC in Indonesia. By bridging the gap between theory and practice, this research offers valuable recommendations that can lead to more integrated, effective, and culturally competent MC, ultimately benefiting women and families across the nation.

1.4. Structure of the Thesis

Chapter 1: Introduction

The current chapter introduces the background knowledge pertaining this study by examining the global landscape of MC, along with the specific practices and policies in the Indonesian healthcare and socio-cultural context. It discussed the significance of IPC in MC, highlighting relevant policies that shape healthcare delivery in the

country. In presenting the socio-cultural context, this chapter addresses how Indonesia's diverse cultural landscape influences maternal health practices and the collaborative dynamics among HCPs. By setting this foundation, the chapter established the relevance and necessity of the research within the broader discourse on MC.

Chapter 2: An Integrative Literature Review of Interprofessional Collaboration in Maternity Care

In this chapter, an integrative literature review is presented, focusing on the implementation of IPC in MC. The review synthesises existing research, highlighting key themes, findings, and methodologies employed in previous studies. It critically assesses the literature to identify gaps and limitations that necessitate further exploration, thereby justifying the research questions posed in this study. This chapter aims to contextualise the current research within the existing body of knowledge, illustrating how this study will contribute to advancing the understanding of IPC in MC.

Chapter 3: Research Methodology

This chapter elucidates the philosophical assumptions that underpin the current study, specifically emphasising the use of constructivist grounded theory (CGT) as the chosen methodology. It outlines the study's objectives and research questions, providing a rationale for the selected approach. The chapter discusses the process of choosing this methodology, including considerations related to the nature of the research questions and the context of the study. By establishing a clear methodological

framework, this chapter lays the groundwork for the subsequent research methods employed in the study.

Chapter 4: Research Methods

In this chapter, the conduct of the study is presented in detail. It outlines the data collection methods employed, including interviews and document analysis, and explains the rationale for these choices. The chapter describes the study's sampling strategy, including the settings and participants involved, as well as the process of gaining research access and recruiting participants. Ethical considerations are addressed, ensuring that the research adheres to ethical standards. Additionally, this chapter covers the management of research data, and the analysis process used to interpret the collected data. A significant aspect of this chapter is the discussion of the researcher's reflexivity journey, detailing how positionality and personal experiences influenced the research process.

Chapter 5: Findings

This chapter presents the findings from the data collection and how these insights informed the development of the conceptual framework, the Collective-Oriented Collaboration Model (COCM). It describes the key conceptual categories related to this model, including complexity, value-based teamwork (V-BT), and intersectoral collaboration. The findings are illustrated with relevant data extracts, offering a rich understanding of the collaborative dynamics observed in community MC settings. This chapter provides a comprehensive overview of the emergent themes, setting the stage for further discussion in the subsequent chapter.

Chapter 6: Discussion and Conclusion

In the final chapter, the study's findings are discussed in relation to existing literature and theoretical frameworks. This chapter synthesises the insights gained from the research, drawing connections to broader themes in IPC and MC. The conclusion summarises the key findings of the study, reiterates their significance, and highlights the implications for practice, policy, and future research. Additionally, this chapter addresses the limitations of the study and offers recommendations for enhancing IPC in community MC and further research, thus concluding the thesis with a comprehensive overview of the research contributions.

CHAPTER 2

An Integrative Literature Review of Interprofessional Collaboration in Maternity Care

2.1. Introduction

This chapter aims to synthesise existing knowledge, identify gaps in the literature, prevent research duplication, and at its conclusion, will show justification of the proposed study. This literature review is presented using an integrative review method. This approach critically analyses articles related to the implementation of IPC in MC to get an overview of the challenges, enablers and factors that influence the implementation of IPC from the perspective and experience of maternity HCPs.

The integrative review method was chosen for this study as it offers a comprehensive approach to synthesising knowledge by combining experimental and non-experimental research to gain a deep understanding of a phenomenon (Whittemore & Knafl, 2005). Unlike systematic reviews, which are typically limited to experimental studies and focused on addressing specific research questions with strict inclusion criteria, integrative reviews allow for greater flexibility. This flexibility is particularly valuable in qualitative research, as it accommodates diverse data sources and methodologies, thereby enabling a broader exploration of complex phenomena (Souza et al., 2010). Systematic reviews often aim for replicability and precision in synthesising findings, while integrative reviews prioritise depth, contextual understanding, and theoretical development, making them particularly suited for the exploratory nature of this study.

In the context of grounded theory (GT), the integrative review method is especially appropriate as it supports theoretical sensitivity by allowing the researcher to engage with a wide range of literature without prematurely imposing preconceptions (Whittemore, 2005). GT emphasises openness to emergent patterns and concepts, and the integrative review complements this approach by incorporating diverse evidence that can inform and enhance the iterative process of theory development (Souza et al., 2010).

Additionally, the integrative review facilitated the identification of methodological gaps and inconsistencies in previous research, aligning with GT's aim to refine and build upon existing knowledge. For example, while the systematic review might narrowly focus on intervention outcomes, the integrative review allowed me to consider broader contexts. This capacity to synthesise diverse insights not only enriched the conceptual framework of my study but also ensured that the literature review aligned with the constructivist principles underpinning GT.

This chapter begins by outlining the aim of the review. It then details the search strategy, including the keywords and eligibility criteria for study inclusion and exclusion. The chapter explains the rationale for using JBI (Joanna Briggs Institute) Critical Appraisal Checklists to evaluate the quality of the selected studies. Subsequently, it describes the data extraction process, followed by a presentation and discussion of the findings. The chapter concludes with a summary of the review, emphasising the research gap identified in the existing literature and providing justification for the current study.

2.2. Review Aim

The aim of this integrative review is to identify and appraise studies concerning the implementation of IPC among healthcare professions including challenges and enabling factors in MC internationally.

2.3. Methods

This integrative review was conducted using the framework proposed by Whittemore and Knafl (2005). The five stages of this framework were applied: problem identification, literature search, data evaluation, data analysis, and presentation. This approach was chosen for its ability to incorporate diverse methodologies, providing a comprehensive understanding of IPC in MC.

2.3.1. Search Strategy

A comprehensive search strategy was applied to identify relevant articles by searching databases, journals, google scholar, grey literature, and reference lists of included papers. The search was performed on 13 July 2020. CINAHL, PubMed, and Web of Science were searched using MeSH headings such as “interprofessional collaboration”, “multidisciplinary collaboration”, “teamwork”, “interdisciplinary collaboration”, “maternity care”, and “healthcare provider” (Appendix 1). To widen the search strategy, some grey literature was searched, including theses and dissertations, and articles from websites of professional associations (e.g., ICM [International Confederation of Midwives] and FIGO [International Federation of Gynecology and Obstetrics]). A manual search of reference lists of included studies was also carried out to ensure that the author conducted an exhaustive search. The search was focused on the studies of the implementation of IPC including challenges

and enabling factors from the perspective of HCPs. These included studies using qualitative and quantitative methods published in English and Indonesian without limiting the date range. Articles of IPC from non-health fields and other literature such as review articles, expert opinions, poster and conference proceedings were excluded.

2.3.2. Study Screening

After completing an extensive literature search and retrieving all potential articles, the study selection process was conducted systematically. Each article's eligibility was assessed through a detailed screening of titles and abstracts. This step ensured alignment with the predefined inclusion and exclusion criteria, as outlined in Table 2.1.

Table 2.1: Inclusion and exclusion criteria for integrative review

Inclusion criteria	Exclusion criteria
Studies focused on implementation including challenge and facilitator of IPC in MC. Studies using qualitative and quantitative methodology and also include systematic review. Using English and Indonesian language Available in full text.	Studies of IPC from non-MC setting. Non-primary studies and without a formal search strategy and quality appraisal.

The study search, screening, and retrieval processes are depicted as per the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (PRISMA, 2009); the PRISMA flow diagram for this review is displayed in Appendix 2. After removing duplicates, identifying the title, examining the abstract, and considering inclusion and exclusion criteria, 18 articles were selected to be included in this review.

2.3.3. Data Evaluation

Following the identification of relevant articles, a full-text appraisal was conducted to thoroughly assess their quality. Critical appraisal is an important step in an integrative review to ensure the findings are reliable and high-quality (Whittemore & Knafl, 2005). This process involves carefully evaluating the included studies to check their methods, relevance, and how well they address the research topic. It helps identify any weaknesses or biases in the studies, ensuring only strong evidence is used in this review. All articles in this review were evaluated for quality using the specific Joanna Briggs Institute (JBI) "critical appraisal tools" appropriate for each study design, as shown in Table 2.2. These tools were applied systematically to ensure a thorough appraisal of methodology, analysis, results, discussion, and conclusions, providing a robust foundation for synthesising evidence across diverse study designs.

Table 2.2: Selected JBI critical appraisal tools

Study type	Tool	Focus
Qualitative	JBI Critical Appraisal Checklist for Qualitative Research (Lockwood et al., 2015)	Focusing on aspects such as congruity between research methodology and objectives, representation of participants' voices, and clarity of findings.
Case studies	JBI Critical Appraisal Checklist for Case Reports (Moola et al., 2020)	Evaluates elements such as the clarity of case description, the adequacy of clinical history, and the alignment of discussion with available evidence.
Cross-sectional studies	JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies (Moola et al., 2020)	Aspects such as sample representativeness, validity and reliability of measurements, and appropriate statistical analysis.

In an integrative review, where different types of studies are included, critical appraisal ensures that all studies are assessed in the same way. Using tools like the JBI checklists helps maintain consistency, whether the studies are qualitative, cross-

sectional, or case reports. This step strengthens the review by ensuring the evidence is both diverse and trustworthy.

The quantitative studies in this review primarily used questionnaires and surveys to collect standardised data for statistical analysis. These methods, coupled with large sample sizes, aiming to enhance reliability and validity while providing a comprehensive understanding of IPC in MC. However, two studies reported low response rates, which significantly impacted their ability to generalise findings (Watson et al., 2012, 2016). Low response rates introduce the risk of non-response bias, where participants who responded may differ in keyways from those who did not, potentially skewing results. This can lead to an overrepresentation of certain perspectives, such as those with strong opinions, while underrepresenting more neutral or dissenting views.

Consequently, the reduced representativeness of the sample raises concerns about the validity and applicability of these findings to the broader population, limiting their utility for informing policy or practice. Three studies (Beasley et al., 2012; Miller, 1997; van der Lee, 2016) reported the significance of the study results, but did not answer predefined research questions. Acknowledging this, Beasley (2012) recommended the use of qualitative methods for future research, to gain a deeper understanding of perception.

The qualitative studies included in this review used semi-structured interviews and focus group discussions, which are suitable data collection methods in qualitative research. Almost all studies clearly state the justification for the choice of methodology, but some studies do not convey the research design. For example, it was

not certain that data saturation was achieved in a GT study by Miller (1997). Most identified studies did not explain the role and influence of researchers on participants and research. Although all the study findings were supported by the view of the participants' quotes, some studies did not validate the findings with participants to make the study more robust. In addition, the heterogeneity of participants in several studies was not broad, because it only explored the perceptions of IPC from one profession. The comprehensive evaluation of the quality of included studies can be found in Appendices 3 and 4.

2.3.4. Data Analysis and Synthesis

Data analysis of this integrative review followed the five-stage method from Whittemore and Knafl (2005): articles were divided into subgroups according to similar topic, and relevant data from included articles was extracted (data reduction). They were then organised in the form of a matrix table (data display) to enhance the visualisation of the pattern; the similar findings were then integrated to identify the patterns and themes (data comparison). Appendix 3 shows the characteristics of included studies, while Appendix 4 summarises the critical appraisal. Through an interpretive process, the integrated data was then used to describe the implementation of IPC including barriers and facilitators in MC, then verification of the data synthesis with the findings from included studies was done for accuracy and confirmability.

2.4. Results

This section presents the results of the integrative review, beginning with the characteristics of the included studies, followed by the thematic findings that emerged from the data analysis. The review included 18 studies conducted across diverse

countries and healthcare settings, reflecting varied professional perspectives and methodologies in exploring interprofessional collaboration (IPC) in maternity care.

2.4.1. Study Characteristics

The majority of included studies (n=16) were conducted in high-income countries, including Australia, the Netherlands, Canada, and the UK, with only two studies carried out in developing countries (Ethiopia and Indonesia). Most studies (n=11) focused on hospital-based maternity care, while only five explored community or primary care settings. Regarding study design, a range of methodologies was used: eleven studies applied qualitative approaches, six employed quantitative methods, and one adopted mixed methods. In terms of professional representation, many studies (n-8) examined IPC between midwives and obstetricians, while others included a broader range of healthcare professionals such as nurses, general practitioners, health visitors, social workers, pharmacists, and nutritionists. Notably, several studies explored IPC from the perspective of only one or two professional groups, which limits a comprehensive understanding of the dynamics across wider interprofessional teams. These methodological and contextual variations provide an important background for interpreting the thematic findings of the review. The characteristics of the included studies in more detail can be found in Appendix 3.

2.4.2. Emerging Themes from the data

Through a systematic process of data extraction, comparison, and synthesis, several recurring patterns were identified that reflect how interprofessional collaboration is understood, implemented, and experienced within maternity care contexts. This review resulted in three overarching themes (each with a number of sub-themes): (i)

perspectives on IPC, (ii) challenges and barriers in implementing IPC and (iii) facilitators of maternity IPC.

Table 2.3. Themes and sub-themes identified in the integrative review

Themes	Sub-themes
Perspectives on IPC	- Agreement with the definition and the importance of IPC - Discrepancies in mutual perceptions
Challenges and barriers in implementing IPC	- Different philosophies and models of care - Conflict over professional power and autonomy - Lack of mutual trust and respect - Poor communication and transfer of information
Facilitators of maternity IPC	- Regular interprofessional team meetings - IPE and Training - Establishment of ground rules and practice guidelines

2.4.2.1. Perspectives on IPC

A total of five identified studies explored the perspectives of maternity HCPs towards IPC (Behruzi et al., 2017; Peterson et al., 2007; Reiger & Lane, 2009; van der Lee et al., 2014; Watson et al., 2012). This theme included agreement with the definition and the importance of IPC, and discrepancies in mutual perceptions. This theme shows that HCPs believe that IPC provides many benefits for maternity health services, but there are differences in defining IPC between HCPs in developed countries and developing countries such as Indonesia. In addition, each health profession assigns a different assessment for their collaboration with other professions.

Agreement with the definition and the importance of IPC

A shared understanding of IPC, including a common definition among HCPs, is crucial for fostering effective collaboration. The general definition of IPC promoted by WHO is derived to MC context by some countries with well-established IPC programs. One in Queensland, Australia, defines collaboration as:

> "A dynamic process of facilitating communication, trust and pathways that enable HCPs to provide safe, woman-centred care". (National Health and Medical Research Council, 2012)

Another in Canada offers the following similar definition:

> "Working together for the same goal, working with agreement, having a good communication and exchange of ideas, listening to each other, meeting the needs of other professionals, and being available to each other". (Behruzi et al., 2017)

A web-based survey of Australian maternity HCPs (Watson et al., 2012) and a case study conducted in Canada (Behruzi et al., 2017) showed that most of the participants agree with the definition of IPC. In other words, most of them have the same perception of IPC, which is believed to be a key feature of successful IPC. However, differing findings were shown from a study of perceptions and acceptance of maternity workers towards IPC in Indonesia (Fatalina, 2015).

Fatalina (2015) reported that even though all participants accepted the implementation of IPC, a focus group discussion with midwives, nurses, obstetricians, pharmacists, and nutritionists showed that most respondents had interpreted the meaning of IPC differently to the commonly accepted WHO definition, as seven of the ten respondents from different professions stated that IPC is collaboration among colleagues in the same profession (Fatalina, 2015).

The importance of IPC *per se* was highlighted by some studies (Peterson et al., 2007; Reiger & Lane, 2009). Peterson et al. (2007) conducted a qualitative interview study amongst 25 Canadian health practitioners from six different health professions and identified IPC as a potential solution to the human resource shortages affecting MC in Canada. The study emphasised that collaborative MC models, characterised by mutual trust and an understanding of team members' competencies, could address the growing shortage of maternity HCPs across different disciplines, including obstetricians, midwives, nurses, and family physicians. By enabling shared responsibilities, IPC alleviates the workload on individual practitioners, particularly in resource-constrained and rural settings where shortages are most acute (Peterson et al., 2007).

Reiger and Lane (2009) identified that the division of care responsibilities inherent in IPC can address HCP shortages in the Australian MC system. Their findings highlight that IPC, by allowing HCPs such as midwives, obstetricians, nurses, and general practitioners (GPs) to share tasks according to their expertise, can distribute workload more effectively. This approach not only helps to manage limited human resources but also reduces the strain on individual providers. Additionally, they reported that this division of responsibilities can positively impact the work-life balance of MC professionals. By alleviating individual workload pressures, IPC may reduce stress and prevent burnout, thereby enhancing job satisfaction and improving retention rates among MC workers. Reiger and Lane (2009) suggested that implementing IPC as a standard practice could support a more sustainable workforce in the MC sector.

However, stated perceptions about IPC and beliefs in its hypothetical importance do not always appear to be in line with the actual IPC that occurs in real practice. Some

studies reported conflicts in MC about professional boundaries and the scope of practice, and the dominance of physicians over midwives, which is reported in current midwifery practice across the world, including America, the Netherlands, and Australia (Avery et al., 2020; Berger et al., 2019; Warmelink et al., 2017).

Discrepancies in mutual perceptions

Relationship aspects such as communication and mutual respect were found to be endemic and systematic problems in IPC by several studies, which commonly reported that physicians viewed their collaborative relationship with midwives as positive, whereas midwives gave low scores for physician performance, as revealed by a survey in the Netherlands to understand the discrepancies in the perception of IPC among maternity HCPs (van der Lee et al., 2016). This study reported that obstetricians rated their collaboration (in terms of sharing opinions, discussing new practice and mutual respect) with midwives and nurses higher than those two professions rated their collaboration with obstetricians (i.e., medical professionals tend to underestimate problems in IPC with nurses and midwives). In line with this finding, a survey conducted in Australia also reported that physicians rated team collaborative behaviour more positively than midwives, and midwives gave lower scores for decision making and physician's skills (Watson et al., 2016). In other healthcare settings, a study of intensive care unit and operating theatre staff reported that physicians had more positive perceptions of collaboration compared with nurses and other team members (Bookey-Bassett et al., 2017).

Interestingly, a recent cross-sectional study conducted in Ethiopia to assess the collaboration of 358 nurses and 52 midwives with physicians resulted in a half of

midwife participants showing a favourable attitude towards collaboration with physicians, and more than two-thirds of the participants being satisfied with their collaboration with physicians. However, the substantial proportion of those who had unfavourable attitudes and experienced unsatisfactory collaboration cannot be ignored. Qualitative research is needed to deeply understand these phenomena. This study concluded that nurses and midwives have a good collaboration with physicians. However, these findings were derived only from the midwives' perspective.

From the studies above, it can be concluded that building collaborative relationships must also consist of accommodating the philosophy, values and perspectives of each member of the profession into practice. In addition, it has long been acknowledged that a change in the mindset of HCPs from working independently to being interdependent is needed to create collaboration, especially in multicultural and complex care contexts (Bronstein, 2003; Egede-Nissen et al., 2019).

2.4.2.2. Challenges and Barriers to interprofessional collaboration

This theme relates to the prevalent problems of IPC, including relational and organisational aspects, which hinder collaboration among maternity HCPs. It consists of four subthemes: different philosophies and models of care, conflict over professional power and autonomy, lack of mutual trust and respect, and poor communication and transfer of information.

Different philosophies and models of care

In a hospital setting, the different philosophies and models of care promoted by physicians and midwives have been reported by some studies to pose barriers to effective IPC (Behruzi et al., 2017; Wieczorek et al., 2016). For instance, in MC,

midwives are typically highly concerned with empowering women, continuity of care, and one-on-one care, but they commonly perceive that this paradigm is not applied in hospitals due to a predominantly biomedical focus. A case study observed and interviewed maternity HCPs in Canada and confirmed that it is very difficult to find common ground between midwives and obstetricians regarding interventions (Behruzi et al., 2017). Despite significant attempts to improve holistic care in medical research, the reality in most healthcare contexts worldwide is that gynaecologists and obstetricians still fundamentally treat pregnancy and childbirth as high-risk events requiring medical intervention (Poleshuck & Woods, 2014), whereas midwives view pregnancy and childbirth as natural processes, unless and until complications occur. Nurses and midwives are in the vanguard of challenging the traditional medicalisation of pregnancy and advocating for PCC (i.e., "woman-centred") care, but progress in clinical practice remains tentative (Fontein-Kuipers et al., 2018).

In the context of postnatal care, Wieczorek et al. (2016) conducted a qualitative interview study to investigate IPC among Australian obstetricians, midwives, and nurses. They concluded that different approaches to childbirth and breastfeeding care between professions was a barrier to the IPC in maternity unit. The study highlighted that physicians often adopt a medicalised and interventionist approach to breastfeeding, viewing it within a clinical and controlled framework. For instance, rather than enabling mothers to complete and monitor breastfeeding on their own, physicians are more likely to monitor and control breastfeeding. They focus on measurable outcomes, such as infant weight gain or milk transfer during feeding and often intervene through practices like pre- and post-feeding weight checks and recommending formula if deemed necessary. In contrast, midwives use an approach

that focuses on the naturalness of the breastfeeding process by providing emotional support and building the mother's confidence to breastfeed as well as preventing the mother from unnecessary medical interventions such as the use of a nipple shield and breast pump.

The different approaches used by each profession in turn have implications for the difficulty of determining the appropriate collaboration model for maternity services.

Conflict over professional power and autonomy

The dominance of physicians and disputes about professional boundaries and scope of practice make collaboration difficult (Klode et al., 2020). This may contribute to contemporary collaborative problems. An interpretive interactionism study conducted by Hastie and Fahy (2010) investigated the relationship between midwives and physicians involved in the IPC in 10 Australian birth centres. They interviewed 9 physicians, and 10 midwives determine which factors affect the inter-professional relationship between physicians and midwives at birth centres and the effects of these interactions. This study reported participants from both professions described negative interactions, with the existence of power struggles between midwives and physicians being associated with adverse outcomes for patients.

Moreover, such negative interactions are known to be a barrier for midwives to collaborate with obstetricians, as affirmed by van der Lee et al.'s (2016) questionnaire survey of midwives. They reported experiencing negative interactions with obstetricians, often characterised by a power imbalance, which was reflected in obstetricians perceiving themselves as holding a higher status than midwives and, at times, failing to acknowledge midwives with the respect or recognition they deserved.

Inequality of power in a collaborative team is known to undermine the sustainability of interprofessional practice, and can be a potent barrier to effective collaboration (D'Amour et al., 2005; King, 2015).

Lack of mutual trust and respect

Related to the power imbalance described above, Schölmerich et al. (2014) found that the issues of mutual respect and trust between community midwives and obstetricians in the Netherlands were obstacles to IPC. Community midwives emphasised the problems related to respect that often arise, including the attitude of obstetricians which ignore the opinions of midwives in the clinical decision-making process, competition between community midwives and obstetricians and a lack of trust between the two.

Besides, midwives often perceive a lack of trust from obstetricians in their professional practices, as evidenced by obstetricians frequently repeating evaluations or clinical actions already performed by midwives, such as re-ordering blood tests or reassessing the pregnant women (van der Lee, 2016). Midwives noticed that obstetricians commonly lack knowledge about the midwifery role, which then leads to misunderstanding or even disrespect towards midwives' decisions and provision of care (Downe et al., 2010). Midwives also argued that sometimes obstetricians tended to do unnecessary interventions because of their limited knowledge regarding the physiology of pregnancy and labour (Wieczorek et al., 2016).

Poor communication and transfer of information

Interprofessional coordination, including communication and shared knowledge, was found to be difficult to achieve by community midwives as primary care providers and

obstetricians as secondary care providers in the Netherlands (Schölmerich et al., 2014). Coordination problems often arise when referring patients from one level of care to another level. For example, this study reported inaccurate communication at the time of referral and consultation, where important patient data were not completely reported. In this case, community midwives and hospitals used different and incompatible antenatal records for patients, making it difficult to exchange information when referring patients to the hospital.

Moreover, several studies have shown that collaboration between HCPs potentially occurs when they treat high-risk patients. A retrospective analysis study found that collaboration between midwives and obstetricians in Australia occurred most frequently when they treated women who had complications of pregnancy and childbirth (Beasley et al., 2012). Likewise, in the IPC between midwives and health visitors, it was reported that collaboration occurred when they cared for families with complicated health problems (Sanders et al., 2019). In such conditions, effective communication and collaboration between professions is needed to attain the best outcomes for patients. Unfortunately, communication between professions is known to be lacking, as reported by Schölmerich et al. (2014), which was that the physical distance between community midwives and obstetricians limits their communication, which in turn disrupts IPC.

2.4.2.3. Facilitators of MC IPC

Considering the challenges of IPC implementation, policymakers need to find strategies to solve collaboration problems. A number of studies explored the

facilitators or the strategies in improving IPC in MC including regular interprofessional team meetings, IPE and training, and establishment of guidelines.

Regular interprofessional team meetings

The lack of effective communication among interprofessional teams is one of the serious issues in collaboration. Some studies suggested regular interprofessional team meetings as a solution for this problem. A qualitative study evaluating the IPC in the Baby-Friendly Hospital Initiative (BFHI) program in Australia (Wieczoreck, 2016) concluded that establishing regular team meetings would improve interprofessional communication. Team meetings would facilitate all professionals to share their perception of and experiences with BFHI activities which in turn, can strengthen their collaboration.

An interpretive study of IPC between Australian midwives and physicians in a birth centre conducted by Hastie and Fahy (2011) conclude that it is very important to provide an environment that provides opportunities for midwives and physicians to get to know each other more and respect and trust each other, for example by providing a shared tearoom. When a comfortable situation in terms of interacting and dialoguing has been formed, it will create mutual trust and respect, which is an important factor for IPC.

Interprofessional Education and training

Collaborative learning is an important strategy to build a culture of mutual respect between health professions. A qualitative study conducted in Canada found that learning together in a multiprofessional group helps in understanding the roles and skills of each profession, which will then encourage the desire to work together in a

team (Peterson et al., 2007). A study focusing on Dutch MC collaboration across different health settings also recommended interprofessional training, because it is stated that the training of resident obstetricians includes time spend at community midwifery practice to facilitate them to share knowledge and know each other's scope of practice (Schölmerich et al., 2014).

In the context of breastfeeding care, interprofessional training can facilitate discussion among physicians, nurses, and midwives of different approaches and perspectives used by each professional (Wieczorek et al., 2016). Professional organisations play an important role in designing interprofessional training, which can improve the collaborative skills of the care providers. As reported by Olvera et al. (2020) in their quantitative study, which included IPE and a collaborative mock drill for obstetric emergency transfer, such a program significantly increases the confidence and communication skill of interprofessional team members.

Establishment of ground rules and practice guidelines

Creating collaboration rules for organisational and clinical behaviour is important for the success of IPC. This is supported by Watson et al. (2012) who developed a guideline, which describes the division of roles between professions and clear rules for IPC, which would assist obstetricians and midwives to recognise their unique and specific areas of expertise. For practical realisation of mutual respect among HCPs, a pioneering study by Miller (1997) highlighted the necessity of ground rules in the collaboration between nurses and physicians. The establishment of non-hierarchical structures and rotating leadership was found as an effective way of levelling power imbalances. In addition, creating collaboration rules that allow the teams to discuss

their clinical practice will let them learn from one another, which in turn helps to develop mutual understanding of each other's professional roles (Klode et al., 2020).

However, a joint commitment to comply with existing guidelines is required to achieve a successful collaboration. A questionnaire analysis study to assess the collaborative performance of Dutch obstetricians reported that obstetricians tended to neglect or ignore the interprofessional guidelines and protocols that already exist (van der Lee et al., 2016). This attitude can hinder willingness of other professions to collaborate.

2.5. Discussion

This discussion section explores the key findings of this integrative review on IPC in MC, situating them within the broader context of existing literature and theoretical frameworks. The review identified significant insights into the understanding and practice of IPC globally. The findings highlight varying perceptions of IPC and the factors that both hinder and facilitate effective collaboration among HCPs in MC.

2.5.1. Professional and Social Perspectives on Collaboration

The findings of this review highlight that differing professional and social perspectives contribute to discrepancies in how collaboration is perceived by midwives and obstetricians. The findings from Watson et al. (2012) and van der Lee et al. (2016) indicate that midwives often feel marginalised within interprofessional teams, perceiving that their contributions are undervalued compared to those of obstetricians. This can be interpreted in light of social constructivist theory (Berger & Luckmann, 1966), which posits that individuals' understanding of reality is shaped by their social contexts and interactions, which influence how they view their professional roles.

In healthcare, this theoretical perspective suggests that the roles and contributions of different professions are socially constructed through formal education, clinical training, institutional policies, and everyday interactions. In formal education, midwives are often educated within a framework that emphasises holistic, continuous, and woman-centred care, reflecting a philosophy of normality that views childbirth as a natural process requiring minimal intervention unless medically necessary (Begley et al., 2019). This approach fosters a collaborative and supportive ethos. In contrast, medical education for obstetricians typically emphasises clinical precision, hierarchy, and risk management, embedding a philosophy of medicalisation that frames childbirth as a potentially high-risk event requiring surveillance and intervention (Clark et al., 2015). These philosophical differences, instilled early during professional training, create divergent understandings of collaboration and influence how roles are negotiated within interprofessional teams.

Institutional policies can also play a role to entrench such differences in the form of power imbalances, as hospitals often create procedures that formalise hierarchies. Perceptions of collaboration remain influenced by historical power dynamics and organisational structures. Historical power dynamics stem from long-standing professional hierarchies that have positioned physicians as the primary decision-makers in healthcare settings, often framing midwives as subordinate practitioners (Reiger & Lane, 2009). These dynamics are institutionalised through policies and unwritten norms that reinforce deference to medical authority, further entrenching power imbalances (Croker et al., 2020). Organisational structures, such as hierarchical chains of command and limited interprofessional leadership roles, can exacerbate these dynamics by formalising decision-making processes that exclude non-physician

voices (WHO, 2016). Bourdieu's (1986) concept of symbolic capital illustrates how professional expertise, and credentials serve as markers of authority, reinforcing the dominance of medical perspectives within collaborative teams.

In everyday interactions within clinical settings, personal characteristics such as communication style, emotional intelligence, and openness to feedback can also influence collaborative dynamics (Mannix et al., 2018). Positive interactions, such as mutual recognition and informal support, can build trust and facilitate collaboration. Conversely, repeated negative interactions can exacerbate power dynamics and lead to avoidance behaviours or distrust (Reeves et al., 2017). Everyday interactions within team settings often reflect broader social constructions of professional identity, reinforcing either inclusivity or exclusivity in teamwork.

This difference in perception can also be viewed through the lens of professional identity theory, which posits that strong professional identities can create rigid boundaries that hinder collaboration (Adams et al., 2018). When professionals view themselves primarily through the lens of their discipline, they may adopt an "us versus them" mentality that reinforces intergroup divides, leading to entrenched silos and reduced willingness to collaborate across disciplines (Clark et al., 2015). In the context of MC, midwives may emphasise their expertise in holistic, woman-centred care, while obstetricians may highlight their role in managing medical risks, each viewing their contributions as central to patient safety (Begley et al., 2019). This divergence can perpetuate mistrust and create barriers to joint decision-making (Croker et al., 2020).

However, adopting a social perspective that emphasises interdependence within a team can foster a more inclusive and collaborative environment. Tajfel and Turner's (1979) social identity theory suggests that when team members see themselves as part of a shared group identity, they are more likely to value diverse contributions and collaborate effectively. Studies such as Reeves et al. (2017) have shown that interventions fostering shared team identity, such as interdisciplinary training and joint reflective practice, where professionals from different backgrounds learn to appreciate and rely on each other's expertise, can foster interdependence and reduce intergroup bias.

By shifting from profession-specific identities to a shared team identity that prioritises collaboration and mutual respect, healthcare organisations can support more cohesive interprofessional teamwork. Moreover, the social exchange theory (Blau, 1964) offers insight into how mutual trust and reciprocal respect are critical for sustaining collaboration. When professionals perceive an imbalance in respect and contribution, they may disengage from IPC processes. Shields et al. (2016) support the notion that rural or smaller teams, as seen in Warmelink et al. (2017), often report higher satisfaction with IPC, which can be attributed to closer working relationships and increased interdependence.

To address the well-known professional and social divides discussed above, recent frameworks such as the WHO's (2016) "Collaborative Practice Competency Framework" recommend fostering role clarity, shared governance, and joint training programs that emphasise the complementary nature of different professions. This framework highlights that role clarity involves clearly defining responsibilities to

avoid duplication of tasks or omission of care, which is crucial in high-stakes MC, where swift, coordinated action is needed (Reeves et al., 2017).

Shared governance encourages equal participation in decision-making processes, ensuring that all voices, particularly those of midwives and allied professionals (i.e., non-physicians), are heard (WHO, 2016). Similarly, joint training programs help reinforce these practices by simulating real-life scenarios where professionals must collaborate and adjust their roles dynamically (Clark et al., 2015). Smith et al. (2021) found that teams engaging in interprofessional simulation-based training improved mutual trust and communication, which are foundational for effective IPC. Such innovative solutions may be necessary to drive improvement in professional relationships in healthcare contexts in the future.

In conclusion, acknowledging and addressing the professional and social perspectives that shape collaboration is crucial for fostering cohesive and respectful interprofessional teams. By integrating training programs, reflective practices, and governance structures that promote mutual respect and shared goals, healthcare organisations can mitigate perceptual differences and enhance teamwork in MC.

2.5.2. Communication in Collaborative Teams

Communication plays a pivotal role in IPC and emerged as a recurring issue in the integrative review. Effective communication ensures that information is accurately shared, fostering trust and coordinated care (Reeves et al., 2017). However, the review identified several communication-related barriers that hinder collaboration in MC.

One common issue was the lack of standardised communication tools, such as shared digital records and care plans. Watson et al. (2016) found that without shared platforms, midwives and obstetricians often operated in silos, leading to fragmented information transfer and misaligned care goals. This supports Gittell's (2009) relational coordination theory, which emphasises that frequent, timely, and accurate communication strengthens relational ties and improves team performance. Without effective communication systems, professionals may rely on informal methods, increasing the risk of miscommunication and errors (Kripalani et al., 2007).

Moreover, the integrative review highlighted the absence of interdisciplinary feedback mechanisms, which are essential for reinforcing open communication and mutual respect. Reeves et al. (2017) emphasised that regular feedback loops enable professionals to reflect on their roles and contributions, strengthening team cohesion. Schölmerich et al. (2014) noted that in the absence of structured communication processes, patients are often forced to act as intermediaries, conveying information between providers to ensure continuity of care.

The review also revealed that communication breakdowns are influenced by power dynamics. For example, hierarchical structures can discourage midwives from voicing concerns or contributing to decision-making processes (Croker et al., 2020). Bourdieu's (1986) concept of symbolic power explains how professional hierarchies, reinforced through language and institutional norms, can silence contributions from non-physician team members. This reinforces the need for communication frameworks that prioritise inclusivity and active listening.

2.5.2.1. Formal and informal communication in IPC

In collaborative teams, communication occurs through both formal and informal channels, each playing a significant role in the coordination of care. The integrative review findings highlighted that formal communication practices, such as handovers and case discussions, were often inconsistently implemented, while informal communication compensated for gaps but sometimes led to key information being omitted or undocumented. Formal communication involves structured interactions such as team meetings, clinical handovers, and documentation within patient records. The review found that when formal communication protocols were followed, such as using standardised handover tools, it helped reduce errors and ensured that all professionals were aligned (Watson et al., 2016).

However, in several studies (e.g., Schölmerich et al., 2014), the absence of structured formal communication meant that professionals often relied on memory or incomplete notes, leading to inconsistencies and missed care steps. This aligns with patient safety frameworks that emphasise the importance of formal, documented communication for maintaining continuity and accountability (WHO, 2019). Conversely, *informal* communication refers to spontaneous exchanges that occur during daily interactions, such as hallway conversations or quick updates during patient rounds (Mannix et al., 2018).

The review revealed that informal exchanges often build team rapport and allow for immediate clarifications concerning ward business (including clinical care), which is consistent with the relational coordination theory (Gittell, 2009), which emphasises the importance of relational reinforcement. However, the review also highlighted that

when professionals relied too heavily on informal communication, critical details were sometimes not shared with the broader team or properly recorded (Clark et al., 2015). An example from MC included cases where updates shared informally during rounds were not captured in the patient's formal record, leading to inconsistent care plans.

Balancing formal and informal communication is crucial for effective IPC. The integrative review findings suggest that both types of communication must be integrated into daily workflows to ensure adaptability while maintaining accountability. Strategies such as structured team huddles combined with informal check-ins can improve coordination and trust, mitigating the risk of information loss.

2.5.2.2. Impact of poor communication on adverse events

A lack of effective communication within collaborative teams can directly contribute to adverse events in MC, affecting both maternal and neonatal outcomes. According to Singh et al. (2021), communication breakdowns during emergency obstetric situations, such as delays in transferring critical information between midwives and obstetricians, have been linked to increased rates of preventable complications. Patient safety frameworks, such as the WHO's (2019) "Patient Safety Strategy", emphasise that communication failures can lead to breakdowns in coordination, increased response times, and preventable errors that compromise maternal and neonatal safety. These frameworks highlight the need for proactive measures such as standardised handover protocols, team briefings, and consistent feedback loops to prevent critical information loss during care transitions (WHO, 2019).

Brown et al. (2020) reported that ineffective communication during emergency obstetric events led to delays in recognising and addressing foetal distress,

emphasising the importance of closed-loop communication where instructions are confirmed and acknowledged by all team members. Moreover, patient safety frameworks advocate for creating a culture of psychological safety where team members feel empowered to speak up without fear of retribution (Singh et al., 2021). In MC, this can reduce the likelihood of missed interventions and foster more cohesive, high-performing teams.

An example from recent studies includes cases where unclear documentation or incomplete verbal handovers led to missed signs of foetal distress during labour (Brown et al., 2020). These preventable adverse events highlight the importance of implementing standardised handover protocols and team huddles to align care plans and responsibilities in real-time (O'Leary et al., 2012). The concept of "closed-loop communication", where team members repeat and confirm instructions, has been shown to reduce miscommunication during high-pressure situations (Reeves et al., 2017).

In MC, the consequences of poor communication extend beyond clinical outcomes to affect patient trust and emotional well-being. For example, patients often report anxiety when care providers appear disorganised or fail to convey consistent information (Smith et al., 2021). By fostering transparent and structured communication, teams can enhance patient safety and provide more cohesive and reassuring care.

2.5.3. The Need for Structured Guidance on IPC

The findings highlight a pressing need for structured guidance in implementing effective IPC in MC. Structured guidance includes clear policies, role definitions, and

communication frameworks that help align professional expectations and foster teamwork (WHO, 2016). Organisational theories, such as contingency theory (Lawrence & Lorsch, 1967), support the idea that organisations must adapt their structures to fit their dynamic environments. Contingency theory posits that there is no single best way to organise a team or process; instead, structures must align with specific environmental demands. In the context of IPC, this means that MC teams should have flexible yet structured protocols that can adjust to patient complexities and emergencies while still maintaining clarity in roles and responsibilities.

The integrative review findings indicate that the absence of adaptable yet clear guidelines in handovers and communication channels contributed to inconsistent practices, reinforcing the need for contingency-based policies, which involve creating adaptable protocols tailored to specific clinical contexts. For example, MC teams faced issues during emergency interventions where rigid handover processes delayed information transfer, emphasising the importance of flexible but structured communication frameworks that clarify roles while remaining responsive to changing care demands (Reeves et al., 2017).

Leadership plays a crucial role in ensuring the implementation of contingency-based policies and fostering collaboration. Transformational leadership theory (Bass, 1985) emphasises the importance of leaders who inspire and motivate their teams, fostering trust and a shared vision. In IPC, transformational leaders can promote inclusivity and open communication by empowering all team members, regardless of their professional hierarchy, to contribute to decision-making (Reeves et al., 2017). Additionally, distributed leadership theory (Spillane, 2006) posits that leadership is

not the sole responsibility of one individual but is distributed across the team. In MC, this approach allows midwives, obstetricians, and other HCPs to take leadership roles in different situations, enhancing team resilience and adaptability.

Moreover, institutional theories suggest that organisational practices are shaped by institutional norms and pressures (Scott, 2008). Structured IPC guidance should address hierarchical norms that reinforce power imbalances by fostering a culture of shared governance and distributed leadership. Complexity theory (Plsek & Greenhalgh, 2001) also highlights that healthcare is a complex adaptive system where team interactions must be managed dynamically to address emergent challenges. Structured guidance, such as team-based reflection and continuous improvement frameworks, can enable teams to respond to unexpected challenges while maintaining collaborative coherence.

In addition to communication frameworks, structured guidance involves fostering a culture of continuous improvement through team-based audits and feedback mechanisms. Mannix et al. (2018) suggest that reflective practice sessions, where team members review cases and discuss collaborative challenges, help strengthen team cohesion and adaptability. Structured IPC guidance should also include leadership development programs to ensure equitable decision-making and promote inclusive leadership structures (Croker et al., 2020). Leaders who model transparency, active listening, and respect for diverse perspectives create an environment that supports effective IPC.

By embedding structured guidance into MC workflows and drawing from organisational and leadership theories, healthcare organisations can address

communication gaps, reduce professional silos, and foster a culture of mutual respect and shared responsibility.

2.5.4. Interprofessional Education (IPE) to Foster IPC

The findings of the integrative review underscore the importance of IPE in fostering effective IPC. IPE refers to learning activities where students and professionals from different disciplines learn with, from, and about each other to improve collaboration and the QoC (WHO, 2010). Structured IPE programs can help bridge perceptual divides by enhancing mutual understanding and respect among HCPs.

Studies such as Reeves et al. (2016) have shown that IPE programs that include simulation-based training and case discussions improve role clarity, reduce interprofessional tensions, and foster shared decision-making. The integrative review findings highlighted that midwives and obstetricians often differ in their care philosophies, which can lead to fragmented care. IPE initiatives provide opportunities for reflective practice, where teams can explore their assumptions and develop strategies for collaborative care that align with patient-centred values (Begley et al., 2019).

IPE is crucial not only for healthcare students but also for practitioners. Preparing healthcare students through early IPE experiences helps prevent professional stereotypes and hierarchical mindsets by emphasising teamwork and role interdependence (Clark et al., 2015). For example, case-based collaborative exercises during training encourage future professionals to recognise the value of diverse perspectives and to practice joint decision-making. In addition, interprofessional training for HCPs is important for enhancing adaptive communication strategies and

reinforcing mutual accountability in practice. This aligns with Kolb's (1984) experiential learning theory, which supports the design of IPE programs that emphasise active participation and reflection in realistic scenarios to enhance collaborative skills.

By engaging in continuous interprofessional learning, HCPs can also strengthen relational coordination, as proposed by Gittell (2009), where frequent, quality communication builds team cohesion and responsiveness. Studies indicate that sustained IPE efforts contribute to improved team trust, reduced conflict, and better patient safety outcomes (Smith et al., 2021).

To maximise the impact of IPE, institutions must integrate it into continuous professional development and create an organisational culture that supports lifelong learning. Reflective IPE sessions, joint debriefings, and mentorship programs can reinforce collaborative competencies and foster environments where team members are equipped to work together seamlessly. Furthermore, implementing IPE at the preregistration level can help overcome entrenched professional silos and foster more cohesive, effective IPC frameworks that support PCC.

2.5.5. Strengths and Limitations of this Review

The strengths of the integrative review approach lie in its ability to combine diverse data sources, methodologies, and perspectives, thereby providing a rich and comprehensive analysis. This inclusivity helps to uncover patterns, themes, and gaps that might be overlooked in narrower reviews. However, limitations include the potential for bias in study selection and the challenge of synthesising findings from studies with differing methodologies and contexts. These limitations were mitigated

through a systematic and transparent review process, ensuring the rigor and credibility of the findings.

2.5.6. Summary

This discussion has examined the key findings of the integrative literature review on IPC in MC, highlighting critical themes such as professional and social perspectives, communication dynamics, and the need for structured guidance. The review underscores that differing professional identities and hierarchical organisational structures can create barriers to effective collaboration. However, targeted interventions, including role clarity, IPE, and leadership development, can foster mutual respect and shared accountability.

Leadership theories such as transformational and distributed leadership demonstrate the importance of empowering team members and promoting inclusivity to improve team cohesion. Additionally, theories like relational coordination and social constructivism provide insights into how shared communication and team identity can strengthen relational ties and reduce intergroup biases.

By addressing these factors comprehensively, on a sound theoretical basis, healthcare organisations can transition from fragmented collaboration to cohesive, patient-centred approaches in practice. Implementing structured IPC frameworks that integrate communication protocols, role definitions, and continuous reflection will be pivotal in achieving sustainable improvements in MC. Based on the findings of this analysis, the justification for the current study can be identified, as explained in the following section.

2.6. Conclusion and Study Justification

This integrative review concludes that maternity HCPs generally have positive perceptions towards IPC, but there are some factors regarding the interactional and organisational aspects that potentially hinder their effective collaborative practice. These can be grouped under different philosophies and models of care, power imbalances, conflict over professional autonomy and boundaries, and poor communication among HCPs in different fields. To overcome these collaboration barriers, some strategies have been proposed and tested to promote more effective collaboration, including regular collaborative team meetings, exchange of monitoring and documentation data, IPE and training, and establishment of guidelines. These findings prove that successful IPC in MC is challenging and needs commitment from all of the involved professionals in implementing this approach in the provision of care, in order to achieve more effective maternity collaborative care.

Refer to the Study Characteristics section, the review demonstrated that existing studies on maternity interprofessional collaboration (IPC) have predominantly focused on a limited range of healthcare professions, most commonly midwives and obstetricians. For example, eight of the studies included in this integrative review explored IPC from the perspective of only one or two professions (Warmelink et al., 2017; Van der Lee et al., 2016; Beasley et al., 2012; Melkamu et al., 2020; Psaila et al., 2014; Hastie and Fahy, 2010; Miller, 1997; Scholmerich et al., 2014), thereby restricting the understanding of how collaboration operates in more complex, multidisciplinary teams. In addition, the majority of these studies (n=11) were conducted in hospital settings (Beasley et al., 2012; Warmelink et al., 2017; Van der Lee et al., 2016; Melkamu et al., 2020; Romijn et al., 2018; Behruzi et al., 2017;

Wieczorek et al., 2016; Watson et al., 2012; Peterson et al., 2007; Scholmerich et al., 2014; Fatalina et al., 2015), further limiting the applicability of findings to broader healthcare contexts. Consequently, there remains a significant gap in understanding IPC in community-based maternity care, where midwives often collaborate with a wider array of professionals such as nurses, family physicians, public health experts, and nutricians. Incorporating perspectives from these varied professions could enrich insights into how IPC is implemented across diverse maternity care settings. Most importantly, PHC is the bedrock of all health system that provides key primary services, such as promotive, preventive, curative, and rehabilitative services; maternal and child healthcare; and health education (Hone et al., 2018).

In low- and middle-income countries (LMICs), such services are the frontline and mainstay of health services (Kruk et al., 2010), as emphasised by the Global Conference on Primary Healthcare (WHO, 2019) including their potential contribution to achieve the third SDG: "to ensure healthy lives and promote well-being for all at all ages" (Chotchoungchatchai et al., 2020). Thus, it is crucial to ensure that care is delivered effectively in this health setting. An exploration of the collaboration as experienced by those involved could provide a better understanding of the different aspects of the collaboration, such as barriers and enabling factors of IPC, which in turn would help the different stakeholders identify interprofessional threats and opportunities in their area in order to improve care.

To achieve this, scientific evidence on this matter is needed, to support evidence-based practice (EBP). However, evidence from LMICs remains very limited; as demonstrated by this review, most of the included studies were conducted in

developed countries, and only two articles were found from developing countries (one of which was Indonesia, the focus of the current thesis).

Besides, most of the studies included in this integrative review examined perspectives used quantitative methodologies, whereas Charmaz (2006) argued that qualitative methods (e.g., in-depth interviews) are more appropriate when seeking to gain a deeper understanding of subjective perspectives and experiences, especially for emerging contexts lacking an existent body of empirical research, as in Indonesia in this case. In addition to gaining comprehensive understanding regarding barriers and facilitators of collaboration, information should be considered from the perspectives of all professionals included, which is also something qualitative analysis can help with (i.e., including diverse HCPs to determine their differing experiences and perspectives on MC). Unfortunately, some studies only described the perspective of one profession.

Therefore, the current study's qualitative analysis of the implementation of interprofessional maternity IPC in primary care in Indonesia considers the perspectives of professions most commonly involved in providing MC. By exploring their experiences and insights, this study aims to contribute to the development of knowledge regarding interprofessional collaborative MC, particularly within the context of community-based primary care in Indonesia.

2.7. Chapter Summary

This chapter has provided a comprehensive review of the literature on IPC in MC, employing an integrative review methodology. By synthesising evidence from both quantitative and qualitative studies, this chapter highlights the diverse approaches, benefits, and challenges of IPC within various MC contexts, particularly focusing on

primary care settings. The integrative review methodology enabled the inclusion of a broad range of studies, offering a holistic understanding of the topic while addressing the complexities of IPC in MC.

The review identified a significant gap in the existing literature: while IPC in MC has been extensively studied in high-income countries, there is limited research addressing its implementation in LMICs, such as Indonesia. Furthermore, existing studies often focus on hospital-based care, leaving community-based primary care settings underexplored. This gap justifies the need for further research to understand how IPC is implemented in community-based MC in Indonesia, particularly from the perspectives of HCPs. Addressing this gap is crucial for developing context-specific strategies to enhance IPC and improve MC outcomes.

Building on the insights and gaps identified in this chapter, the next chapter outlines the methodology of this study. It describes the qualitative approach adopted to address the identified research gap.

CHAPTER 3

Research Methodology

3.1. Introduction

This chapter outlines the research methodology used in exploring the implementation of IPC in MC in community settings in Indonesia, particularly from the perspective of HCPs. The study adopted a qualitative research design, which was appropriate to capture the nuanced experiences and perspectives of individuals involved in collaborative MC.

A constructivist epistemological framework was chosen, which emphasises the co-construction of knowledge between researchers and participants. This framework aligned with the research objective of understanding how HCPs perceive and experience IPC in their everyday practice.

Grounded theory (GT) was chosen as the methodological approach, which is well suited to this research because it facilitates exploration of complex processes, such as IPC, and generates insights that are firmly rooted in the lived experiences of participants.

The following sections detail the research philosophy and methodology applied throughout the study.

3.2. Research Question

The research question for this study is:

"How do healthcare professionals perceive and implement collaborative practice in a community maternity care context in Indonesia?"

3.3. Research Aims and Objectives

The aim of this study is to explore the IPC in the provision of ANC in Puskesmas CHCs in Indonesia from the perspective of HCPs.

The related objectives of this study are to:

- Investigate the perceptions of HCPs and stakeholders towards IPC including different aspects, dimensions and how they link to MC.
- Identify the model of IPC used to deliver integrated antenatal care.
- Explore the barriers and facilitators of IPC in MC, particularly in providing integrated antenatal care.
- Develop a conceptual model for what IPC looks like in a primary health MC context.

3.4. Epistemological Positioning: Constructivism

This study was epistemologically positioned within the paradigm of constructivism. Constructivism is a philosophical approach which believes that knowledge is socially constructed through interaction and engagement with the world, rather than discovered as a fixed and existential truth. The fundamental premise of constructivism is that meaning arises through the interpretation of experiences, and those interpretations are influenced by the contexts in which individuals live and work (Guba & Lincoln, 1994). In contrast to objectivist epistemologies, which assume a single, observable reality, constructivism recognises that reality is perceived and understood differently by each

individual. As such, multiple interpretations and realities exist, each valid within its own context (Creswell & Poth, 2018).

This research seeks to explore the implementation of IPC in MC in a community setting, a process influenced by various professional, social, and cultural factors. A constructivist epistemology is ideal for this exploration because it prioritises understanding the subjective meanings that HCPs assign to their experiences within this complex collaborative environment. Constructivism views knowledge as emerging from the interplay between these professionals' perceptions and the contextual factors surrounding their work, making it particularly suited for studying IPC, which itself is shaped by the interactions between multiple professionals.

Constructivism aligns with this study's aim of understanding professionals lived experiences, and also influences the way data is collected and interpreted. As a researcher, adopting a constructivist stance means acknowledging my own position within the research process. My interpretations of the data are shaped by my interactions with the participants and the socio-cultural environment of the research. This idea is emphasised by Charmaz (2014), who argues that in CGT, both researchers and participants engage in the construction of meaning through dialogue and exchange. This mutual interaction becomes central to how knowledge about IPC is co-created, ensuring the analysis remains grounded in the real-world experiences of the participants (Mills et al., 2006).

The study also involves understanding the influence of broader organisational and cultural contexts, particularly in an Indonesian community setting where collaboration may be shaped by unique health system structures, social norms, and resource

availability. Constructivism allows for this broader, contextual exploration. The epistemology recognises that HCPs' experiences cannot be separated from their specific socio-cultural and institutional contexts. The IPC in MC is not just a process but an ongoing interaction influenced by various external factors such as power relations, organisational hierarchies, and cultural values (Berger & Luckmann, 1967). This contextual sensitivity is a key strength of the constructivist approach.

Additionally, constructivism emphasises the importance of reflexivity, acknowledging that the researcher's background, values, and perspectives shape both the data collection and analysis processes. In this study, reflexivity is integral because, as a researcher, my interpretation of IPC is also influenced by my understanding of healthcare systems, professional roles, and the cultural dynamics in Indonesia. By actively reflecting on these influences, I can ensure that the findings are not merely a reflection of my preconceived ideas but are instead rooted in the participants' actual experiences (Creswell & Poth, 2018; Finlay, 2002).

In summary, constructivism provides an epistemological foundation that aligns with the goals of this research by recognising the socially constructed nature of knowledge and reality. This approach allows for the exploration of subjective experiences within the dynamic, context-specific process of IPC in MC. Constructivism emphasises the co-construction of knowledge between the researcher and participants, supporting an iterative and flexible process of data collection and analysis, which is central to GT methodology. Additionally, it acknowledges the influence of the researcher on the research process, incorporating reflexivity to address these dynamics. These features

make constructivism essential for understanding how HCPs in Indonesia navigate, perceive, and implement IPC in MC.

3.5. Methodological Positioning

While formulating my research proposal, I realised the importance of aligning the chosen research methodology with the research questions (Crotty, 2003; Denzin & Lincoln, 1994). It became clear at an early stage that qualitative study design using GT approach, with its focus on exploring social processes, was well-suited to my research questions. These questions aimed to understand how HCPs articulate their collaborative practice in community MC teams. However, simply stating that I was using GT for credibility was not enough. Scholars of research methodology, including Bryant and Charmaz (2007a) and Morse (2009), argue that using the GT label broadly can undermine the method's trustworthiness and expose proponents to criticism.

Bryant and Charmaz (2007b) suggest that specifying the GT methods "family" branch can enhance rigour. Yet, for novice researchers, choosing a specific variant of GT can be challenging (McCallin, 2009). To improve my research skills, I studied the main variants of GT developed over the past four decades before starting my study. Through this exploration, I became convinced that selecting a variant aligned with the study's objectives and my personal perspective was a crucial aspect of the process (McCallin, 2009; Morse et al., 2009).

The following subsections detail my exploration of qualitative research, particularly GT and its variants, starting from the original work of Glaser and Strauss (1967) and progressing chronologically through subsequent developments. The section concludes by briefly explaining why I chose Charmaz's (2006) version of CGT as the

methodological approach for this study. The final part of the chapter then provides a more in-depth explanation of CGT tenets and outlines key components according to Charmaz (2006).

3.5.1. Qualitative Research

Qualitative research is a methodological approach that aims to explore and understand the complexity of human behaviour, social processes, and phenomena by examining the meanings, experiences, and perspectives of individuals within their natural settings (Creswell & Poth, 2018). Rather than seeking to quantify variables or establish causality, qualitative research prioritises in-depth inquiry, focusing on the "how" and "why" of a given phenomenon, in contrast to the greater focus on the "what" seen in quantitative research. Qualitative research is rooted in the assertion that human experiences are subjective, context-dependent, and influenced by social, cultural, and environmental factors (Denzin & Lincoln, 2011).

In contrast to quantitative research, which relies on numerical data and statistical analysis to draw generalisable conclusions for large populations, qualitative research is more concerned with capturing the richness and complexity of lived experiences. It often involves smaller sample sizes, and is less representative of general populations, but allows for a deeper exploration of the meaning's individuals attribute to their experiences in specific contexts (Flick, 2020). Data is typically collected through methods such as interviews, focus groups, observations, and document analysis, allowing the researcher to engage closely with participants and gain an insider perspective. The flexibility and adaptability of qualitative research make it particularly well-suited for studying phenomena that are not easily reducible to numerical data or

for examining issues that require nuanced, context-sensitive exploration (Merriam & Tisdell, 2016).

In the context of this study, qualitative research is especially relevant for exploring the implementation of IPC in MC within a community setting in Indonesia. IPC involves complex interactions between HCPs from different disciplines, each with their own roles, responsibilities, and perspectives. These interactions are shaped by various factors, including professional hierarchies, communication practices, and cultural norms. Understanding how HCPs experience and interpret their roles within this collaborative process requires an approach that can capture the subjective and context-specific nature of their experiences (Green & Thorogood, 2018).

The choice of qualitative research aligns with the constructivist epistemological framework guiding this study, which posits that knowledge is co-constructed through social interactions and shaped by the context in which it is produced (Charmaz, 2014). This approach is particularly useful for investigating processes such as IPC, where meanings and interpretations are negotiated between professionals as they work together to provide care. A qualitative approach allows the researcher to explore how HCPs make sense of their roles within collaborative teams and how they navigate challenges related to communication, power dynamics, and resource constraints in Indonesian care delivery contexts.

Additionally, qualitative research allows for the exploration of the broader social and cultural contexts in which IPC occurs. In Indonesia, healthcare delivery in community settings is influenced by a range of factors, including resource availability, governmental policies, and local customs. These contextual factors play a critical role

in shaping how IPC is implemented and experienced by HCPs. By using qualitative methods, this study can account for the influence of these broader social and cultural dynamics, providing a more comprehensive understanding of the phenomenon (Hennink et al., 2020).

3.5.2. Grounded Theory (GT)

3.5.2.1. Overview

GT is a qualitative research methodology that focuses on generating theory from data systematically gathered and analysed throughout the research process. Unlike deductive approaches, where hypotheses are formed and then tested, GT employs inductive reasoning to allow theories to emerge from the data itself (Charmaz, 2014). This inductive approach makes GT particularly useful for exploring complex social processes, like IPC in MC, where little is known or where existing theories may not fully capture the dynamics at play (Corbin & Strauss, 2015).

Another potential qualitative approach considered to explore IPC is ethnography. Like GT, ethnography also shares beliefs in multiple realities (Charmaz, 2006; Fetterman, 2009). In addition, ethnography is concerned with studying shared group culture (Creswell, 2007). However, given the uncertain conditions caused by the COVID-19 pandemic and the time constraints of this doctoral research project, the researcher was unable to undertake observation and long-term fieldwork in specific sites and settings, which are key methods in ethnography. Ethnography would have offered a valuable approach for deeply exploring the social dynamics, cultural practices, and contextual factors shaping IPC in MC.

Unfortunately, the restrictions on travel and in-person interactions during the pandemic (effective c. 2020-2022), combined with the limited timeframe available for the study, made such an approach impractical. Instead, a GT approach was chosen as a robust alternative methodology, offering several strengths under these circumstances. One key advantage of GT is its flexibility in using diverse data sources, including interviews and policy documents, to generate theory. The analysis of policy documents was particularly beneficial for understanding systemic influences and contextual frameworks relevant to IPC. This capacity to integrate different types of data provided a broader perspective that complemented the findings from interviews.

While GT does not provide the same depth of contextual immersion as ethnography, it allows for systematic and iterative data analysis, ensuring that findings remain grounded in participants' perspectives and the data itself. Additionally, GT's structured approach to developing theory was well-suited to the study's aim of constructing a conceptual model of IPC. GT is characterised by several key features that are essential for understanding its methodological approach.

One of these is the constant comparison process, which involves continuously comparing new data with emerging categories and concepts. As data is collected and analysed, the researcher refines and deepens their understanding by ensuring that emerging themes remain closely connected to the raw data, rather than being influenced by preconceived ideas (Glaser, 1978). This iterative process of comparison allows the theory to evolve in real-time, as new insights emerge, leading to more robust conclusions. In this study, constant comparison is employed to analyse

interview data and documents, ensuring that the evolving theory accurately reflects the HCPs' experiences of collaboration in MC.

Theoretical sampling is another distinguishing feature of GT. In this process, data collection is guided by the emerging theory. As the analysis progresses, key themes or gaps in understanding are identified, prompting the researcher to seek additional data that can provide further clarification or deepen the analysis of certain concepts (Corbin & Strauss, 2015). This approach allows the research to remain flexible and adaptive, enabling the researcher to refine and adjust the focus of the study as insights and patterns emerge from the data. For example, in this study, when communication breakdowns or role negotiations emerged from the analysis of participants' accounts as significant but underexplored factors, I targeted additional participants or documents to shed light on these areas. This approach ensures that the resulting theory is both comprehensive and reflective of the full range of participant experiences.

Finally, the generation of theory is the ultimate goal of GT methodology. Unlike other approaches that seek to test or apply pre-existing theories, GT uses an inductive process to develop a theoretical framework that is directly derived from the data. Through the iterative processes of constant comparison and theoretical sampling, this theory is continuously refined and grounded in the lived experiences of participants (Charmaz, 2014). In this study, the aim is to generate a theory that explains the mechanisms of IPC in MC, including how HCPs navigate roles, relationships, challenges, and communication in a community-based MC in Indonesia. By generating a theory from the data, this study offers practical and contextually relevant insights into collaboration in this specific healthcare environment.

3.5.2.2. Historical development

In its development, GT is divided into three groups. The original form of GT, Glaserian GT, developed by Glaser and Strauss (1967), is rooted in the positivist epistemology, viewing reality as independent of the researcher and discoverable through systematic inquiry. In this approach, the researcher is seen as a neutral observer, with data collection and analysis occurring simultaneously through constant comparison. Glaser (1978) emphasises theoretical sensitivity, whereby the researcher remains open to the data without imposing preconceived categories, allowing theory to emerge inductively. The approach focuses on identifying core categories organically from the data, refining them through comparison, and using theoretical sampling to guide further inquiry. While praised for its rigor, critics argue that it underplays the researcher's influence in shaping the analysis.

Straussian GT, developed by Corbin and Strauss (2015), offers a more structured and prescriptive approach compared to the original Glaserian formulation. It emphasises systematic coding procedures, with three types of coding: open coding (identifying key concepts), axial coding (exploring relationships between categories), and selective coding (integrating categories around a core concept). Unlike Glaser's (1978) emphasis on theoretical emergence, Corbin and Strauss (2015) acknowledge the active role of the researcher in shaping the analysis, reflecting a shift toward a more constructivist stance. While this approach provides detailed guidelines for ensuring rigor and consistency, critics argue that it can limit the flexibility and openness to data that Glaser championed (Corbin & Strauss, 2015).

Charmaz (2006) developed CGT, which diverges from both Glaserian and Straussian approaches by embracing a social constructionist perspective. CGT emphasises the co-construction of meaning between the researcher and participants, rejecting the idea of an objective reality and instead viewing knowledge as subjective and shaped by interactions. Charmaz (2006) encourages researchers to acknowledge their positionality, recognising that the resulting theory is a product of both researcher interpretation and participant perspectives. Key features of CGT include relativism, flexibility in data collection and analysis, and a focus on understanding how individuals construct meaning through social interactions (Charmaz, 2006, 2014).

3.5.3. Justification for Using Constructivist GT (CGT)

In this study, CGT is chosen as the methodological approach, guided by several factors. First, CGT aligns with the constructivist epistemological stance that underpins this research. The study seeks to understand the experiences of HCPs in a complex, context-specific process like IPC, where meaning is constructed through interaction. CGT acknowledges that both the researcher and the participants are active in constructing knowledge, which is particularly important for a study examining a phenomenon with a dynamic process such as collaboration (Charmaz, 2014). IPC involves continuous interactions between HCPs, and CGT's emphasis on co-constructed meaning provides a nuanced understanding of these experiences (Charmaz, 2006).

Second, CGT offers a context-sensitive approach that is crucial for exploring the unique cultural and organisational context of MC in Indonesia. By allowing flexibility and responsiveness to the nuances of the data, CGT facilitates an in-depth exploration

of how local cultural, social, and institutional factors shape IPC. This context-specific insight ensures that the research is grounded in the specific realities of the participants, enabling the generation of a theory that reflects the cultural and organisational complexities of the setting (Mills et al., 2006).

Third, CGT's focus on process is particularly well-suited for studying how IPC is implemented, negotiated, and maintained over time. The iterative process of data collection and analysis in CGT allows the theory to evolve in response to emerging patterns, ensuring that the resulting theoretical framework reflects the dynamic and evolving nature of collaboration in MC (Charmaz, 2014).

Additionally, CGT encourages the co-construction of meaning between the researcher and participants. In this study, the researcher actively engages with participants to understand how they make sense of their roles in the collaborative process of community-based MC. The interaction allows for a more nuanced understanding of the subjective experiences of HCPs, as well as the broader social and cultural contexts in which they operate (Finlay, 2002). This aspect of researcher reflexivity is critical in ensuring transparency and grounding the analysis in the data. Reflexivity is an essential component of CGT, as it ensures that the researcher critically examines their role in the research process.

In this reflexive approach, the researcher recognises that their own experiences, assumptions, and interactions with participants can influence the data collection and analysis. Reflexivity involves actively reflecting on these influences to maintain a clear connection between the findings and the data (Charmaz, 2014). This process helps to ensure transparency by documenting how decisions are made throughout the

study, including how interpretations are developed. By engaging in reflexivity, the researcher can enhance the credibility of the research and ensure that the analysis remains grounded in the participants' perspectives, rather than being shaped solely by the researcher's preconceived ideas. Reflexivity is therefore a key practice for producing trustworthy and contextually relevant findings in CGT studies (Birks & Mills, 2015).

Compared to Glaserian GT, which emphasises a positivist and objective approach where the researcher is a neutral observer, CGT offers a more interpretive and flexible approach. Glaser's (1978) method focuses on the emergence of theory without researcher input, which may not fully capture the subjective and co-constructed nature of IPC. Given the contextual and interactive nature of collaboration in MC, CGT's emphasis on subjective meaning-making aligns better with the study's objectives.

In contrast to Straussian GT, which involves more structured coding procedures and guidelines for maintaining rigor (Corbin & Strauss, 2015), CGT provides greater flexibility in how data is analysed. This flexibility allows the researcher to adapt the analytical process as new insights emerge, which is important for a study that explores complex and dynamic social processes like IPC. The structured nature of Straussian GT may constrain the exploration of emergent themes, whereas CGT encourages an iterative and evolving theory that better reflects the participants' lived experiences.

In conclusion, CGT provides the most nuanced, flexible, and contextually sensitive approach for exploring the complex interpersonal dynamics and social constructions that shape IPC in MC in Indonesia.

3.6. Chapter Summary

This chapter has explained the epistemological, theoretical, and methodological foundations that underpin this research. I began by outlining the constructivist framework that underpins my study, followed by an explanation of qualitative research, which seeks to explore and understand participants' experiences in depth. I then discussed different types of GT and presented the rationale and justification for selecting Charmaz's (2006, 2014) CGT as the most suitable approach for this study. The next chapter builds on this foundation by explaining how the research methods were used to develop theory in this study.

CHAPTER 4

Research Methods

4.1. Introduction

Chapter 3 provided an overview of the philosophical foundations underpinning this study and detailed the rationale for selecting CGT as the methodological framework. This chapter shifts the focus to the practical aspects of the research process, offering an in-depth explanation of the methods used to conduct the study in alignment with the CGT approach. I outline the decisions made during the research process, detailing how the methods were implemented and noting any adjustments made between the planning and execution stages.

The data collection process for this study took place during the global COVID-19 pandemic, which significantly impacted the research in several ways. Due to travel restrictions, I was unable to travel to Indonesia to collect data in person, necessitating a shift to online interviews. This adjustment posed additional challenges, as the participants (i.e., HCPs) were heavily occupied with their duties during the pandemic, making it difficult to schedule interviews. Furthermore, the six-hour time difference between the UK and Indonesia required careful coordination to accommodate participants' availability. The challenges and adaptations made to conduct the study are discussed in greater detail in the section 4.8. Reflection on the Impact of Covid-19 on the Study.

This chapter begins with an explanation of the two phases of data collection, describing the specific methods employed in each phase. Following this, I discuss the

ethical principles and considerations that guided the study, detailing how these were addressed to ensure participant welfare and research integrity. I then elaborate on the strategies used to manage and analyse the data, demonstrating how these processes align with CGT methodology. Finally, I present an account of reflexivity, reflecting on my role as a researcher throughout the study and how it influenced the research process and outcomes.

4.2. Theoretical Overview and Justification of Research Methods

4.2.1. Original Plan and Adjustments Due to COVID-19

The original plan for this study was to conduct face-to-face interviews with HCPs in Indonesia. This approach was intended to facilitate rapport-building and provide a deep understanding of participants' lived experiences within their natural work environments. However, during the scheduled data collection period, Indonesia faced a peak in COVID-19 cases, and the UK implemented strict social distancing measures and international travel restrictions. These conditions made in-person data collection impossible, necessitating an alternative approach. Online interviews were selected as the most viable method for continuing the study while ensuring participant and researcher safety. This adjustment allowed data collection to proceed without compromising the study's objectives, aligning with the adaptive nature of qualitative research.

4.2.2. Online Interviews

Despite their advantages, online interviews present challenges, particularly concerning the quality of data compared to face-to-face interviews. Non-verbal cues, such as body language and facial expressions, are harder to observe in online settings, which can

limit the researcher's ability to interpret participants' emotions or nuances in communication (Gray et al., 2020). Technical issues, such as poor internet connections or disruptions, can also interrupt the flow of interviews, potentially impacting the depth of responses. Additionally, the lack of a physical shared space may make it more difficult to establish rapport, which is crucial in qualitative research (Deakin & Wakefield, 2014).

Despite the challenges, conducting interviews online also offered several advantages that positively contributed to the research process. Many participants expressed feeling more comfortable speaking via virtual platforms due to the indirect nature of communication—reduced visual exposure and physical presence made it easier for them to share sensitive or personal views. This sense of distance sometimes encouraged greater openness and honesty, especially when discussing interpersonal dynamics or professional challenges. Additionally, the flexibility of online interviews allowed participants to join from locations they found convenient, reducing the burden of travel or time away from work duties (Lomeli-Rodriguez et al., 2022). **For participants in rural or remote areas, online interviews eliminated geographical barriers, enabling broader inclusion** (Lobe et al., 2020)**. From a logistical perspective, online interviews facilitated easier scheduling and reduced costs related to travel and venue arrangement. Furthermore, interviews could be recorded directly through platforms like Zoom, ensuring accurate documentation and aiding in data management. Overall, online interviews provided a practical and adaptive method for data collection during the COVID-19 pandemic, while still enabling meaningful engagement with participants.**

4.2.3. Document analysis

To address the abovementioned limitations of online interviews and enhance data quality, this study incorporated document analysis as a complementary method. The particulars of the document analysis process undertaken in this study are described in detail in section 4.3.3 (below). By examining relevant policy documents, guidelines, and operational records, the document analysis provided additional context and helped triangulate the findings from interviews. This approach enriched the data by offering insights into the structural and systemic factors influencing IPC, ensuring a more comprehensive understanding of the phenomenon under study. Thus, this study employed interview and document analysis as data collection methods. As Pole and Hillyard (2016) highlight, effective data collection strategies should illuminate the research problem, allowing for an in-depth understanding of how collaboration operates within the community MC setting, and document analysis can help understand the prevailing contextual factors in more detail, which is useful to link research to real conditions on the ground (i.e., to drive EBP adoption in Indonesian MC).

4.2.4. Rationale for Methods and CGT

Given the study's focus on exploring the dynamics of IPC within CHCs in Indonesia, these methods were carefully chosen to align with the philosophical and methodological underpinnings of CGT. The philosophical foundation of CGT, which emphasises building theory from data, calls for flexible and adaptive data collection methods that allow insights to emerge naturally (Charmaz, 2014). Interviews were particularly suited to this study, as they enabled the researcher to access first-hand accounts of HCPs' experiences, perceptions, and challenges related to IPC.

Interviews provided the opportunity to probe deeply into individual perspectives, gaining insights into both the practical and organisational aspects of collaboration (Kallio et al., 2016). Document analysis complemented the interview data by providing an additional layer of understanding, especially regarding formal guidelines and policies surrounding IPC in Indonesia. This method allowed the researcher to review organisational documents, policy guidelines, and any association recommendations relevant to healthcare collaboration.

Charmaz (2014) asserts that grounded theorists can select varied data collection methods based on the research questions and access considerations. Document analysis was therefore crucial in filling knowledge gaps that may not have been captured through interviews alone, such as documented policies or organisational protocols guiding collaboration.

4.2.5. Summary of Data Collection Choices and Process

The combination of interviews and document analysis was essential for generating rich, comprehensive data. Interviews allowed for an exploration of subjective experiences and collaborative practice that might not be officially documented, while document analysis helped uncover any existing frameworks or institutional influences on collaboration practices. For example, when initial interviews revealed that collaboration among HCPs often occurred informally and spontaneously, document analysis was used to investigate whether any formal policies or guidelines on IPC were in place within the healthcare system or in professional association guidelines. This dual-method approach ensured that the data encompassed both the practical realities and formal organisational contexts shaping IPC. The process is summarised in Figure

4.1, and the following sections unpack a more detailed explanation of the interview and document analysis phases.

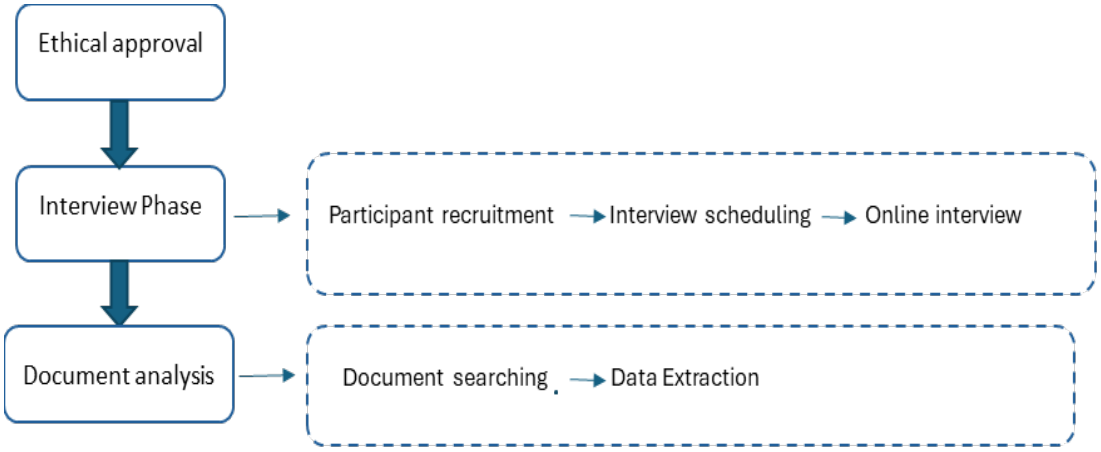

Figure 4.1: Data collection process

4.3. Research Setting

The study was conducted in four Puskesmas (CHCs) in Central Java, Indonesia. Central Java is a province of Indonesia located at the centre of Java Island, with an area of 32.548 km², administratively divided into 29 districts and 6 cities. It represents a mix of urban and rural areas and is known for its strong Javanese cultural values, such as *gotong royong* (mutual assistance), which play a significant role in community life and healthcare delivery. The province has a relatively well-established primary healthcare infrastructure, including a network of Community Health Centres (Puskesmas), similar to those found in other regions of Indonesia. However, variations exist in terms of resource availability, workforce distribution, and access to referral services, particularly when comparing urban and rural areas. In many rural and remote parts of Central Java, limited transportation infrastructure presents significant challenges for healthcare delivery—particularly for referrals and emergency maternal care, as some villages cannot be easily reached by ambulance or public transport. This

geographical barrier can delay timely access to higher-level care, especially in urgent cases involving maternal or newborn complications. By capturing both urban and rural settings in Central Java, the study provides insights that are broadly reflective of the national healthcare context, while also highlighting region-specific challenges that may influence the implementation of interprofessional collaboration in maternity care.

Puskesmas is a technical unit of a District/City Health Office to provide PHC in a sub-district level. There are 881 CHCs in Central Java, 41% of which include inpatient care to provide first aid for emergency cases, while the remainder only have outpatient facilities. Regulations state that a health centre should be staffed by at least: one physician, one dentist, one nurse, a midwife, a public health staff officer, an environmental health staff officer, a medical laboratory technologist, a nutritionist, and a pharmacist (MoH of Indonesia, 2019). However, the distribution of healthcare workers across the province is unequal. Urban areas tend to have better access to medical personnel, including doctors and specialists, while rural Puskesmas often face shortages. In some rural health centres, there were no medical doctors, leaving midwives or nurses as the primary providers of maternal health services. This disparity reflects broader structural issues in Indonesia's healthcare system and highlights the contextual complexities that shape interprofessional collaboration and service provision in community-based maternity care.

4.4. Interview Phase

4.4.1. Sampling Strategy

Sampling strategies in qualitative and quantitative research reflect differing aims: qualitative research emphasises the depth and richness of data, while quantitative

research focuses on representativeness and generalisability. Qualitative studies typically employ purposive or theoretical sampling, where participants are selected for their relevance to the research question and potential to offer insights into specific phenomena (Creswell & Poth, 2018; Patton, 2015). This approach is based on the idea that smaller samples, when chosen strategically, can yield in-depth data that allow researchers to uncover complex meanings, experiences, and social processes in context (Denzin & Lincoln, 2011). In contrast, quantitative research prioritises larger, statistically representative samples that enable generalisable findings across broader populations (Bryman, 2016). While quantitative approaches seek breadth through numbers, qualitative research relies on nuanced insights from smaller, carefully selected samples, aiming to capture the depth and diversity of individual experiences within specific contexts (Silverman, 2013).

In this study, sampling was conducted based on the principles of purposive and theoretical sampling, aligned with GT methodology to support the iterative development of a theory on IPC in community MC in Indonesia. Purposive sampling was initially employed to select the Puskesmas and HCPs for interviews. This sampling approach allowed for the inclusion of diverse perspectives relevant to the study's aims, ensuring that participants, including midwives, physicians, nurses, nutritionists, and health centre managers, could provide insights grounded in their real-life collaborative practice (Creswell & Poth, 2018; Patton, 2015).

As the study progressed, theoretical sampling became instrumental in deepening the emerging categories and refining the theory. Consistent with GT, theoretical sampling facilitated the selection of participants and data sources based on emerging concepts

and gaps identified in the initial coding stages (Charmaz, 2006; Glaser & Strauss, 1967). For example, as initial findings suggested variations in collaborative approaches based on professional backgrounds, further sampling focused on participants who could provide additional insight into these areas. This process helped clarify conditions that supported or hindered collaboration in community maternity settings.

The combination of purposive and theoretical sampling was crucial in balancing the need for comprehensive participant representation and targeted exploration of emergent themes.

4.4.2. Sample Size

In qualitative research, determining sample size is generally less rigid than in quantitative studies, as the focus is on the richness and depth of data rather than achieving a large number of participants. Rather than using statistical formulas or achieving representativeness, qualitative researchers often choose sample sizes that allow for in-depth exploration of the research topic and thorough examination of participants' perspectives. Commonly, sample size in qualitative studies remains small enough to allow detailed data analysis, yet large enough to capture the diversity of experiences related to the research question (Creswell, 2013; Mason, 2010). The precise number can vary widely depending on factors such as the study's focus, methodology, and scope.

An important concept guiding sample size in qualitative research is "data saturation", which refers to the point at which additional data collection (e.g., interviewing more participants) no longer reveals any new information or themes, meaning that further

interviews or observations would likely only repeat what has already been found (Glaser & Strauss, 1967). Achieving saturation can help ensure the data collected provides a full understanding of the phenomena being studied. While saturation is often considered a marker of sample sufficiency, it is also flexible and context dependent. For instance, smaller studies focusing on a specific, homogenous group may reach saturation more quickly, whereas studies with diverse participants may need a larger sample size to cover all relevant perspectives (Guest et al., 2006).

Though saturation is a central guideline, it should not be viewed as an absolute number. Instead, researchers often approach sampling iteratively, adding participants until no new insights emerge from the data. This approach keeps qualitative research adaptive to real-time findings, a hallmark of methods such as GT, where sampling continues based on the emerging needs of theory development (Charmaz, 2006).

However, qualitative research conducted as part of a PhD program is often constrained by the study timeline. To ensure that the research was both achievable and compliant with ethical requirements, I needed to make an initial estimate of the number of participants. Drawing on Charmaz's (2006) suggestion that approximately 25 participants often suffice for medium-sized studies, I aimed for a similar range. Additionally, Stern (2007) indicated that 20 to 30 interviews are typically sufficient for reaching saturation in her work. Given my lack of prior experience with GT, I relied on the insights of Charmaz (2006) and Stern (2007) in setting my initial target of interviewing approximately 25 to 30 participants. Ultimately, I successfully conducted interviews with 29 participants, representing a diverse range of HCPs. The participants included 3 physicians, 7 midwives, 4 nurses, 4 nutritionists, 3 public

health experts, 3 heads of Puskesmas centres, 2 representatives from the Indonesian Midwives Association (IBI), 1 representative from the Indonesian Medical Association (IDI), and 2 representatives from the Indonesian Obstetric and Gynecological Association (POGI).

4.4.3. Participant Recruitment

Due to COVID-19 travel restrictions, participant recruitment for this study was conducted remotely from the UK, as I was unable to travel to Indonesia. Remote recruitment has become a widely adopted strategy in qualitative research under similar conditions, as it allows researchers to continue data collection despite geographic and logistical barriers (Lefever et al., 2007). This approach was particularly beneficial in maintaining participant accessibility and mitigating the health risks associated with face-to-face recruitment (Archibald et al., 2019).

The selection of Community Health Centres (Puskesmas) in this study was based on their geographical location, with two centres situated in urban areas and two in rural areas. This approach aimed to capture variations in interprofessional collaboration practices across different settings and to reflect the diversity of community maternity care contexts in Indonesia. The recruitment process was facilitated by a colleague who worked as an administrative officer at one of the Puskesmas. Given the heightened demands on primary healthcare services during the COVID-19 pandemic, particularly as Puskesmas served as frontline facilities, recruitment was guided by the willingness of Puskesmas to participate in the study. Centres that agreed to allow their staff to be interviewed were included, ensuring that participation did not add extra pressure on health workers who were already very busy. The decision to include four centres was

informed by the availability of healthcare professionals across these sites, which was deemed sufficient to meet the expected number of potential interview participants.

The interview participants recruitment process began by contacting administrative staff at selected Puskesmas. I provided the administrative staff with detailed information about the study, including a proposal and an informational poster (as described in section 4.7.2), to give a clear overview of the research objectives and participation requirements.

As data collection progressed, a snowball sampling technique was employed to recruit additional participants. Snowball sampling, as described by Bryant and Charmaz (2007), is a recruitment method where existing participants refer potential participants, creating a network of contacts that gradually expands. This technique is particularly useful in qualitative research where the target population may be hard to reach or dispersed across various locations (Noy, 2008).

In the context of my study, existing participants were encouraged to share details about the research with colleagues who might be interested. This approach not only increased the participant pool but also fostered a more inclusive recruitment process. By leveraging the established trust and rapport between current participants and their colleagues, snowball sampling helped address potential hesitations about participating in research led by a remote researcher. In remote settings, like this study based in Indonesia, snowball sampling can mitigate access barriers that may arise from distance and help researchers engage participants who are more comfortable joining when introduced through a familiar peer (Biernacki & Waldorf, 1981).

Snowball sampling is especially advantageous in qualitative research where obtaining contextually rich data is critical, as it allows researchers to access a broader range of insights from diverse participants. Additionally, it supports the natural alignment of qualitative methods with iterative data collection, where researchers can adapt their recruitment strategies as patterns emerge (Sadler et al., 2010). In this study, participants who were particularly interested or invested in the research shared the study details with colleagues they felt would contribute meaningfully, thus enhancing the diversity and relevance of the data gathered. However, snowball sampling does have limitations, particularly around sampling bias, as participants may recommend others who share similar perspectives or experiences, potentially limiting the diversity of viewpoints (Atkinson & Flint, 2001). To address this, I encouraged participants to refer colleagues from varied backgrounds and work experiences, aiming to maximise diversity within the sample. This effort aligns with recommendations in the literature to purposefully guide snowball sampling to mitigate homogeneity (Heckathorn, 2011).

As mentioned in section 4.3.2.1, in line with GT principles, I applied theoretical sampling to recruit participants who could provide deeper insights into emerging themes as data collection progressed. During the initial interviews, HCPs revealed that IPC in their workplace often occurred spontaneously and lacked formal regulation. This insight indicated that collaboration was informal, relying on social norm and values rather than being guided by established policies or protocols. Recognising a potential gap in understanding how IPC could be systematically organised, I sought to recruit additional participants who were actively involved in professional health associations such as IDI and IBI. These participants were selected as they could

potentially provide valuable perspectives on regulatory frameworks that impact IPC among HCPs.

By focusing on participants with knowledge of regulatory and professional frameworks, I was able to investigate whether informal collaboration was indeed the norm or if there were underutilised guidelines within professional bodies. Theoretical sampling allows researchers to make targeted recruitment choices based on gaps or new areas of interest identified in ongoing analysis, ensuring that data collection remains responsive to the development of meaningful categories and themes (Charmaz, 2006). By iteratively selecting participants based on emerging concepts, theoretical sampling facilitates a dynamic and focused exploration of themes that are essential to theory development in grounded research (Strauss & Corbin, 1998). Employing a purposive sampling strategy and adhering to the principles of theoretical sampling, this study successfully recruited respondents from diverse health professions, including physicians, midwives, nurses, public health specialists, as well as Puskesmas directors and representatives from professional health associations.

4.4.4. Interview Process

4.4.4.1. Overview

This study used semi-structured interviews as the primary method for data collection, as described below. The interviews were conducted with primary HCPs from different professions who are involved in the provision of ANC (i.e., physicians, midwives, nurses, public health specialists, as well as Puskesmas directors and representatives from professional health associations). Gathering the information from participants from various professions produce a deeper and more comprehensive understanding of

the barriers and facilitators of IPC. Charmaz (2006) emphasises that interview is an appropriate instrument for GT because of its interactional nature, which allows for exchange or sharing of roles, responsibilities, motives, feelings, information, and beliefs and can take into account many characteristics of respondents (Brinkmann & Kvale, 2015).

4.4.4.2. Online interviews

Due to the COVID-19 pandemic, in-person interviews were not feasible. Instead, interviews were conducted online using WhatsApp and Zoom. Online interviewing has become an essential method for qualitative research during the pandemic, offering both convenience and safety for participants and researchers (Lobe et al., 2020). Although online interviews can present challenges in terms of managing rapport and non-verbal communication (Archibald et al., 2019), these platforms enabled a flexible, participant-centred approach to data collection. The majority of participants (n = 25) opted for Zoom, a platform they were comfortable with, and had no reservations about using video for the session. However, four participants, less familiar with Zoom, requested to use WhatsApp, highlighting the importance of flexibility in platform choice to support participant ease in remote research settings (Archibald et al., 2019). The choice of platform was driven by participant preference, ensuring they felt comfortable with the technology used in the interview. This approach aligns with best practices in qualitative research, where respecting participant needs is key to building trust and reducing potential barriers to communication (Thunberg & Arnell, 2022).

The interviews lasted between 30 minutes and 1 hour. All interviews were conducted in Indonesian, the participants' native language, and subsequently translated (by

myself) into English for the purpose of analysis. Prior to beginning each interview, I sought participant's consent for recording and note-taking, adhering to ethical guidelines to ensure transparency and respect for participants' autonomy. Consent was not only verbal but was recorded at the start of each session. I informed each participant of the specific tools that would be used to record. For those using Zoom, I utilised its in-built recording tool, which offered a reliable and clear recording quality that could later facilitate accurate transcription. Meanwhile, WhatsApp users preferred this familiar platform, and as such, I used a secondary mobile device for recording purposes. Asking participants' consent was critical to establish trust and ensure participants felt informed and comfortable with the procedures, aligning with recommendations by Braun and Clarke (2019) regarding ethical considerations in qualitative research. Explicitly asking for recording consent and clarifying how recordings would be stored and used helped assure participants of their privacy and data security.

4.4.4.3. Rapport

Since I had not previously met any of the participants, I began each interview with a simple question to build rapport and ease them into the conversation. For instance, I might ask participants about their current work environment or any recent events that had impacted their work, allowing them to share freely about familiar topics before moving into the study's focal questions. Building rapport is especially vital in online interviews, where physical cues are limited. Studies emphasise the need to start with casual, open-ended questions as it promotes comfort and allows participants to become more relaxed and engaged (Siedlecki, 2022). By establishing rapport, I sought to create a sense of familiarity and warmth that encouraged participants to share their thoughts

openly, which is crucial in qualitative research where in-depth responses are key to understanding complex social phenomena (Siedlecki, 2022).

4.4.4.4. Interview guide

The core of the interview involved open-ended questions about IPC, an area central to the study's research aims. I prepared an interview guide with a list of questions to encourage participants to discuss their professional backgrounds and clinical experiences while remaining focused on the central research topic. The development of the interview guide was an iterative process informed by a comprehensive review of the literature on interprofessional collaboration and community-based maternity care. Initial questions were drafted to align with the study aims and grounded theory methodology. The guide was further refined through regular discussions with academic supervisors, who provided feedback on the relevance and clarity of the questions. To enhance its validity and practicality, three pilot interviews were conducted with health professional colleagues who were not part of the study sample. These pilots helped identify ambiguous wording, improve the sequencing of questions, and ensure that the guide could elicit rich, relevant data. Adjustments were made accordingly before formal data collection began.

Open-ended questions provided participants with the opportunity to share their views and experiences freely, an approach that is crucial in qualitative research as it helps elicit rich, detailed data (Siedlecki, 2022). The interview guide was flexible, allowing for the exploration of relevant themes as they emerged, while maintaining a focus on the research aims. Example questions included:

- "Can you tell me about your role in maternity care at your health centre?"

- “What do you know about interprofessional collaboration?”
- “How do you collaborate with other healthcare professionals, such as physicians, nurses, and midwives, in providing care for pregnant women?”
- “What challenges do you face when working with other professionals in your team?”
- “In what ways could interprofessional collaboration be improved in your setting?”

These questions aimed to encourage participants to reflect on their experiences and perceptions of IPC and relationships with other professionals.

4.4.4.5. Probing

During the interviews, I also used probing techniques to encourage participants to elaborate on their responses and provide deeper insights. Probing are essential strategies in qualitative research as they help clarify participants’ meanings, uncover underlying assumptions, and gather more detailed information (Robinson, 2023). These techniques align with the interpretative nature of qualitative inquiry, where understanding participants’ perspectives in-depth is central to generating meaningful data (Wiesner, 2022). Probing typically involves follow-up questions that seek clarification or elaboration on a point raised by the participant (Robinson, 2023). For example, if a participant gave a brief answer about their collaboration with another professional, I might have used probing questions like:

- “Can you tell me more about that situation?”
- “What do you think made the collaboration successful in that instance?”

These probing questions encouraged participants to reflect more deeply on their experiences, leading to a richer understanding of their perspectives on IPC. This approach is consistent with qualitative methods that prioritise participant-centred data collection, allowing the researcher to interact dynamically with participants while remaining focused on the study's goals (Robinson, 2023).

4.4.4.6. Closing interviews

Each interview was closed thoughtfully, allowing participants to share any additional thoughts and ensuring they felt their input had been valued. To close, I would often ask, "Is there anything else you think is important to add?" This final question offered participants a chance to include additional perspectives they might not have initially mentioned. Closing on a reflective note is a common practice in qualitative interviews, as it reinforces participant autonomy and affirms that their experiences are respected (Seidman, 2019). Furthermore, expressing gratitude for their time and insights helped reinforce rapport, leaving participants with a positive impression of the research process.

4.4.4.7. Memo-writing and reflection

Immediately after each interview, I wrote a memo to document my impressions and any immediate insights or ideas regarding the participant's responses, including any potential distractions or contextual influences. As I noted in a memo:

> "Interviews were conducted during breaks while participants were still at the CHC. The atmosphere is a bit busy, with ambient background noise and the occasional voice of nearby colleagues. These factors appeared to have little influence on participants' comfort, especially when discussing sensitive topics such as interprofessional team conflict". (Researcher memo)

Memo-writing is a critical component of GT, serving as a reflexive tool that allows researchers to document evolving thoughts and theoretical connections (Charmaz, 2014). These memos were instrumental in tracking emerging patterns and themes across interviews, as they provided a space to reflect on potential connections between participants' narratives and the study's overarching research questions. For example, an early memo reflected on the spontaneous nature of IPC described by several participants, noting the lack of formal regulations and the implications this might have for organisational dynamics within Puskesmas. Such insights guided the focus of subsequent interviews.

4.4.4.8. Transcription and data analysis

After completing three initial interviews, I transcribed them in Indonesian to begin the preliminary analysis process. Transcribing interviews early in the process allowed for the identification of emerging themes, which informed the focus of subsequent interviews and ensured the data collection remained aligned with GT principles of theoretical sampling and iterative analysis (Points & Barunch, 2023). Once the transcription in Indonesian was complete, I translated the data into English to facilitate reporting and enable discussion with my supervisors during the analysis process. This two-step process—transcribing in the original language and subsequently translating—helped preserve the cultural and linguistic nuances of participants' responses. The act of transcription also deepened my engagement with the data, as it provided a close examination of participants' exact words, tone, and phrasing, which was invaluable for developing a nuanced understanding of their experiences with IPC.

During the transcription and early coding phases, I engaged in a process of informal member checking to enhance the credibility of the data. This involved following up with several participants to clarify specific responses that appeared ambiguous or contextually complex. These clarifications were carried out via WhatsApp messages or phone calls, depending on the participants' preferences. The purpose was to confirm my interpretation of their statements and ensure that the intended meaning was accurately captured before progressing further in the analysis. For instance, when one participant described "working like a family" in the Puskesmas team, I followed up to clarify whether this referred to emotional closeness, flexibility in roles, or mutual assistance/*Gotong Royong*. Their confirmation that it referred to all three aspects helped solidify the coding under the category of *Value-based Teamwork*. This step supported the accuracy of coding and strengthened the overall trustworthiness of the findings.

Following the constant comparative method, I frequently revisited earlier transcripts, reread notes, and developed memos to explore emerging ideas and identify possible lines of inquiry. This reflective process allowed me to approach each interview with an open mind while maintaining an analytical link to previous data (Charmaz, 2006; Hood, 2007). However, remaining open to new insights while continuously comparing new data with prior analyses presented challenges throughout the data collection process. Balancing the need for flexibility with the requirement to maintain coherence in the analytical process was particularly demanding. These challenges underscored the importance of a systematic and iterative approach to ensure the rigor and depth of the analysis.

As initial interviews were coded and tentative categories began to emerge, these preliminary insights guided the direction of subsequent data collection. For instance, early coding revealed themes around "building trust" as a significant factor in effective IPC. This led me to incorporate more focused open-ended questions in later interviews to further explore and refine this category. Rather than adhering to a rigid interview structure, I adopted a semi-structured approach that allowed me to investigate these emerging themes in greater depth. For example, I would ask, "Others have mentioned building trust as important for collaboration. How does this play a role in your team?" This question invited participants to reflect on their own experiences and contribute nuanced perspectives to the evolving category (Charmaz, 2006; Hood, 2007).

The following section explains the use of document analysis as a secondary data collection tool to enhance conceptual understanding.

4.5. Document Analysis Phase

4.5.1. Overview

Document analysis is a systematic method of reviewing and evaluating documents to extract meaningful data and insights relevant to a research question. It involves analysing documents such as reports, policies, guidelines, meeting notes, and other written or digital records, which serve as valuable sources of secondary data (Bowen, 2009). In qualitative research, document analysis is often used alongside other methods, such as interviews, to provide additional perspectives and context to the study findings (Merriam & Tisdell, 2016). By triangulating data from multiple sources, researchers can enhance the credibility and depth of their analysis.

In this study, document analysis was included as a complementary data collection method to enrich and validate the findings derived from interviews. This decision was driven by the need to understand the broader systemic and organisational factors influencing IPC in MC within the Indonesian context. Documents such as national health policies, professional association guidelines, and PHC centre (Puskesmas) operational reports were analysed to provide insights into the structural, cultural, and procedural elements shaping collaborative practice. These documents offered an institutional and policy-level perspective that supplemented the individual and practice-level insights obtained from the interviews. Glaser and Strauss (1967) highlighted the value of documents in developing theories. This is in line with the GT methodology principle stated in "The Discovery of Grounded Theory" that "all is data". This principle acts as a guideline that offers the grounded theorist a wide range of prospective data sources to draw from when conducting GT research.

The document analysis process aims to collect documents from a variety of sources in order to generate a clear understanding of the supportive policies and the implementation of IPC in Indonesia. The findings of this document analysis contributed to the previous semi-structured interview data in creating a more nuanced understanding of:

1. The policies regarding IPC in MC in a community setting in Indonesia

2. The meaning of IPC in the particular context of community MC in Indonesia.

In this study, document analysis was conducted after completing the interviews, allowing the interview findings to guide the selection and focus of the documents

analysed (Bowen, 2009). For instance, as the concept of "community empowerment" emerged from the interviews, participants highlighted the crucial role of CHWs in providing MC. However, the specifics of how tasks were divided between CHWs and HCPs remained unclear from the interviews. Through document analysis, I examined the Posyandu Guidelines, which clarified the distinct roles and responsibilities of both CHWs and HCPs. This analysis deepened my understanding of how community empowerment functions as a strategy to improve IPC by actively involving CHWs.

Document analysis is a complementary data collection procedure to support triangulation and theory formation. Data triangulation involves using multiple data sources to improve the credibility and validity of research findings (Carter et al., 2014). In this study, triangulation was achieved by integrating interview data with documentary analysis. This combination allowed for cross-verification of findings, ensuring that the conclusions drawn were robust and grounded in multiple perspectives. Triangulation also enhances the trustworthiness of qualitative research by reducing reliance on a single data source and uncovering deeper insights (Flick, 2018). For example, any inconsistencies between the interviews and documents in this study highlighted gaps between policy and practice, offering a more nuanced understanding of interprofessional collaboration in community maternity care. This approach aligns with grounded theory methodology, which emphasizes iterative comparisons to refine emerging categories and theories (Charmaz, 2014).

4.5.2. Selection criteria

The selection of documents for analysis was guided by their relevance to the research aim of exploring interprofessional collaboration in community maternity care in

Indonesia. Documents were purposively chosen to represent multiple perspectives and levels of influence, including national and regional policy documents, professional association guidelines, health centre operational manuals, and community-based program reports. The inclusion criteria required that documents (1) addressed maternal or primary healthcare services, (2) were produced by or for relevant stakeholders (e.g., Ministry of Health, professional associations, or local government), and (3) were publicly available or provided through professional networks.

The process began with a review of national policies and frameworks, such as the Guidelines for Antenatal Care and the Ministry of Health's Integrated Referral System. Additional documents were obtained through contacts at Puskesmas and professional bodies, and included internal protocols and local implementation reports.

Data collection contextually situated the text to prepare it for analysis. In order to determine the crucial "who, what, when, where, why, and how" of context, I approached the available facts with contextual positioning. This is accomplished through targeted questioning, which offsets the reduced sensory participation and symbolic interactions when employing documents as data (Billups, 2020). The establishment of contextual positioning related to this study is shown in Table 4.1.

Table 4.1: Establishing contextual positioning

Questions	Responses
Who?	
Who participated in conceiving, supporting, shaping, writing, editing, and publishing the text?	Producing by MoH, HCPs in CHCs, or regulatory bodies
Who was its production intended to benefit?	Government, stakeholders, patients, HCPs

Table 4.1: Establishing contextual positioning

Questions	Responses
What?	
What stated or assumed purposes does it serve?	To manage collaborative practice
What specific value does this text bring to the current study?	Facilitates understanding of multiple perspectives from various stakeholders about IPC
What are the parameters of the information?	Statement or evaluation about healthcare services that involved various health professions
When?	
When was the document conceived, produced, updated?	The process informing conception, production, updating was established as a part of the national or local registration
What is the document's intended lifespan?	Limited to the contracted life of the institution or until the regulations/document are amended
To what extent are the issues that influenced and informed the production of this document relevant to the temporal context of the current study?	The relatively recent production of the documents ensures that they are contemporaneously relevant
Where?	
Where was the document produced?	Originally at the registering authority's head office for completion by institutions and health professions organisations.
Where is the document intended for use?	In the MC in community context in Indonesia
Where is the document positioned in respect of sociological context?	Inform the relationship between different health professions in providing care
Why?	
Why would the text be used?	Provides an understanding of the implementation and evaluation data in respect of the studied phenomenon
Why, if at all, is the text unique, reliable, and consistent?	The material was obtained for a specific purpose. The source of the material is credible and validated by the registering authority

Table 4.1: Establishing contextual positioning

Questions	Responses
How?	
How (if at all) do the authors of the text propose it be used?	To inform, manage, and evaluate the implementation of maternity IPC in Indonesia
How is the text written?	Involving all parties (or representative) related to the service
How is the document achieving its purpose?	Provides important feedback from those affected by the regulation or statement. Serves to support collaborative environment

4.5.3. Types of documents

Types of documents included in this study are local policies, guidelines, clinical protocol/ pathway, report, evaluation, regulations, official statement and declaration. Document searching took place by online searches of the MoH archives, official websites of professional organisations, and official websites of health offices and health centres.

4.5.4. Data extraction

Each document included was labelled as per "institution_subject_year". A rubric was used to organise the data into categories, enabling interpretation and corroboration with other data (i.e., interviews) (Billups, 2020), as depicted in Table 5.2 (see section 5.3. Characteristics of included document in document analysis).

4.6. Integrated Data Analysis

4.6.1. Overview of data analysis process

As explained previously, the data analysis process in this study was guided by the principles of CGT, emphasising the co-construction of meaning between the researcher and participants. This iterative and flexible approach allowed for a deep exploration of the complex dynamics of IPC in community MC settings. Data from interviews and document analysis were systematically examined using the constant comparative method, which involves comparing data with data, codes, categories, and emerging concepts to identify patterns and relationships. The goal of the analysis was to develop a theoretical understanding of IPC grounded in the lived experiences of HCPs while considering the broader cultural and systemic contexts influencing their interactions.

The process involved multiple stages of coding, supported by memo-writing, which allowed for continuous reflection on emerging ideas and refinement of theoretical insights. To illustrate this process, Figure 4.2 visually represents the data analysis procedure. This section elaborates on each stage, showing how the data analysis process systematically informed the development of the theory.

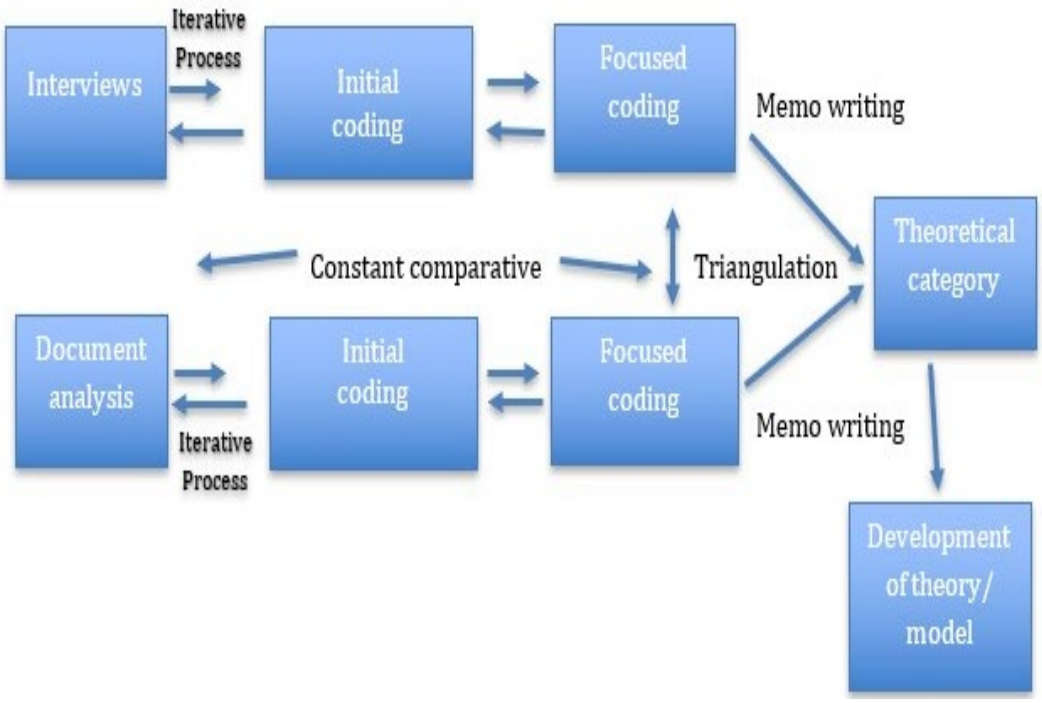

Figure 4.2: Data analysis process

As seen in Figure 4.2, the data analysis process for this study, followed Charmaz's (2006) GT approach, an iterative, systematic process designed to construct theory from the data collected through interviews and document analysis. This approach involved four key stages: initial coding, focused coding, theoretical categorisation, and the development of a theoretical model. Additionally, the analysis was guided by the principles of constant comparison, memo-writing, and theoretical sensitivity, which were critical in shaping the emerging theory on IPC within community MC.

According to Charmaz (2006), the data analysis process in GT is a systematic, iterative approach that builds theory directly from the data, moving from descriptive codes to a cohesive theoretical framework. A core principle in this approach is constant comparative analysis, where data, codes, and emerging categories are continually compared against one another throughout the analysis. This process allows the researcher to refine insights and ensure that the developing theory remains deeply connected to the data. Data were initially collected through interviews with HCPs,

allowing for a first-hand understanding of IPC practices. These interviews provided rich, descriptive data on participants' experiences, insights, and perceived challenges in collaboration, especially in resource-limited environments.

Following the interviews, document analysis was conducted to examine organisational policies, professional guidelines, and procedural documents related to healthcare practices within Puskesmas and relevant health associations. The documents provided a secondary layer of context by offering insights into the formal frameworks, guidelines, and policies that shape IPC in community MC. They helped ground the participants' lived experiences within the structural and institutional realities of the healthcare system.

For example, analysing national health policies and Puskesmas operational guidelines revealed the intended goals and procedures for collaboration among HCPs. This allowed for a comparison between the documented expectations and the actual practices described by participants, highlighting gaps, inconsistencies, and areas where formal policies either supported or hindered collaborative efforts.

Additionally, the documents contextualised the socio-cultural environment in which IPC occurs. Policies emphasising community engagement, such as those related to Posyandu programs, highlighted the formal inclusion of CHWs, aligning with participants' discussions about the role of community empowerment in their work. By situating participants' narratives within this policy and structural context, the documents enriched the analysis and helped explain how systemic factors—such as resource allocation, role definitions, and cultural values—interact with daily practices.

The analysis begins with initial coding where data were examined line-by-line to identify significant words, phrases, actions, and patterns. This phase ensured that the

analysis remained grounded in participants' experiences by avoiding preconceived categories. Next, focused coding was conducted to refine and organize the most frequent or analytically significant codes into broader themes, guiding the development of emerging concepts through an iterative process.

In the initial stages of data analysis, I used NVivo software to assist with the organization and management of interview transcripts. NVivo enabled me to store, sort, and apply initial codes systematically across the dataset, providing a structured environment for early familiarisation with the data. However, as the coding process progressed and themes began to emerge more inductively, I found it more effective to shift to a manual approach that allowed greater flexibility and reflexive engagement with the data.

The manual coding process involved printing transcripts and conducting line-by-line coding on paper. I also developed coding matrices and theme charts using Microsoft Excel to organise and visualise categories, patterns, and relationships. This hands-on, iterative method supported the constant comparative analysis central to grounded theory and facilitated deeper immersion in the data. It allowed me to physically move coded segments, compare them side by side, and refine the emerging conceptual categories more intuitively.

Memo-writing played a central role throughout the analysis, capturing observations, insights, and theoretical ideas. This reflexive practice enhanced theoretical sensitivity, allowing the researcher to recognize subtle patterns and relationships within the data and track the development of concepts.

In the theoretical categorization stage, focused codes were grouped into abstract categories that explained broader patterns and meanings in the data. Finally,

theoretical integration involved synthesizing these categories into a cohesive theoretical framework or model. This framework, developed through constant comparison and iterative refinement, provides both a practical and theoretical understanding of interprofessional collaboration in the context of this study. The next section details how Charmaz's GT approach was applied practically in the study.

4.6.2. Initial Coding

The analysis began with initial coding, where interview transcripts were examined line-by-line to identify significant words, phrases, and actions. This stage required coding closely to the data, capturing participants' experiences and perspectives without imposing preconceived ideas. It was done by reading and analysing the data line by line while asking analytical questions such as: "What is the participants main concern?" (Glaser, 1998, p. 140), "How can I define it?" (Charmaz, 2006, p. 51), "What does the data suggest?", "from whose point of view?" (Charmaz, 2014, p. 116).

Coffey and Atkinson (1996) emphasise that coding should not be seen merely as a set of rigid procedures; rather, it should serve as a tool for actively engaging with and reflecting on the data. Saldaña (2016) echoes this approach, advising researchers to "code smart, not hard" (p. 18). In line with this perspective, I approached coding in my study with flexibility, applying different levels of detail as needed, and adapting the process to capture the nuances within each piece of data. Instead of adhering to strict rules, I focused on understanding the underlying dynamics of IPC, refining my focus as new insights emerged. This flexible coding approach allowed me to interact deeply with both interview and document data, guiding the development of a middle-range theory that accurately reflects the complex realities within Puskesmas.

Initial coding in GT emphasises staying grounded in participants' language, allowing unexpected themes to emerge naturally (Charmaz, 2006). Table 2.2 displays an example of how initial codes included phrases like "collaboration is a teamwork", "having a good relationship", and "working as a family", which reflected the participants' descriptions of collaboration was reliant on personal networks. For instance, one participant described how "We work as a family, just incredible with all professions" (Nurse 2B), leading to the initial code of "work as a family". Document analysis also contributed to initial coding by providing a comparative basis to explore discrepancies between formal expectations and practitioners' descriptions of real-world practices. For instance, in documents where guidance for collaboration was either vague or entirely absent, codes like "protocol absence" helped highlight gaps in formal structures supporting teamwork.

Table 2.2: Example of line-by-line initial coding

INTERVIEW 1 Participant ID: M01 Interviewee category: Midwife Interview tool: Zoom video meeting Date of Interview: 24 April 2021 Interviewer ID: E01 Transcriber: Endah	
Transcript	**Initial codes**
(…….) ##E01## Related to antenatal care, what's the scope of service? And is there collaboration with other health professions? ##M01## We do the antenatal examination and encourage pregnant women to visit Puskesmas at least four times during their pregnancy. We have to make a monthly report covering the data of K1 (first ANC visit), K4 (pregnant women who have visited ANC 4x), pregnant women, 3x neonatal visits, 4x postpartum visits, and high-risk pregnant women. Like other health centres, there is an integrated ANC program where we collaborate with other professions. This is included in the accreditation indicators. Every K1 pregnant woman is carried out integrated ANC, including consultation with a dentist, general examination (7 kinds of laboratory examinations), consultation with a nutritionist, which is carried out in one service. So, it includes midwives, analysts, nutritionists, and dentists. If there are health problems for pregnant women, we consult a GP in the general dept.	Expecting the active role of pregnant women Regularly reporting all the services provided The need for collaboration in providing integrated ANC Collaboration as an indicator in accreditation Doing integrated ANC at the first visit Working together with other professions in integrated ANC Working with GP in complicated cases
##E01## Can you tell me your thoughts about IPC? ##M01## I have never heard of that term. I was googling this term when I read your research topic. I think that is a new term, but we have applied that in our services, especially in integrated ANC. So what we know is that the concept is the same as IPC.	Not familiar with the term IPC Feeling have applied IPC Perceiving IPC as integrated ANC

Table 2.2: Example of line-by-line initial coding

INTERVIEW 1 Participant ID: M01 Interviewee category: Midwife Interview tool: Zoom video meeting Date of Interview: 24 April 2021 Interviewer ID: E01 Transcriber: Endah	
Transcript	**Initial codes**
##E01## In your opinion, what does this collaboration include? Does it only work together? ##M01## Collaboration is a teamwork. This is an innovation to reduce maternal mortality. We detect the risk as early as possible; we cannot work alone, must collaborate with other professions. For example, from the laboratory results, there are abnormalities with pregnant women, let say there are cases of chronic lack of energy and anaemia. To prevent childbirth bleeding, we collaborate with a nutritionist to explain to patients their nutritional needs.	Collaboration is a teamwork Identifying the aim of IPC- to decrease maternal mortality Feeling the need for other professions Collaborating with a nutritionist
##E01## Are there meetings or discussions between, for example, midwives and nutritionists discussing the patient's condition from the cases found? ##M01## After an internal referral, there must be feedback from whom I refer noted in the patient's medical record. He must have returned the patient to us again. There is no particular discussion about the patient. We have a meeting between professions at the Puskesmas at the end of the month. We discuss the problems faced in providing services and find solutions, e.g. difficulties in service and cases experienced by patients.	Communicating through medical records No particular discussion General discussion in a regular meeting

Table 2.2: Example of line-by-line initial coding

INTERVIEW 1 Participant ID: M01 Interviewee category: Midwife Interview tool: Zoom video meeting Date of Interview: 24 April 2021 Interviewer ID: E01 Transcriber: Endah	
Transcript	**Initial codes**
##E01## So far, have there been any obstacles in collaboration between professions? For example, between midwives and physicians? ##M01## Internally, so far, there have been no problems. We have good communication because the work system is solitary, the teamwork is good, there is no professional ego. We work as a family, just incredible with all professions. However, there are some obstacles when collaborating with the community (e.g., time). Some of the patient's family are less cooperative, and some patients have high mobilisation. We found that many high risk pregnant women are not monitored because sometimes they go for a long time to visit their husbands who work and live outside the city (……)	Having a good relationship with staff Good teamwork Working as a family No professional ego Having collaboration problem with community: scheduling and communication

Throughout the initial coding, the principle of constant comparison was applied, involving continuous comparison of data, codes, and emerging categories to refine insights and reveal connections across both interview and document data (Glaser & Strauss, 1967). This iterative process allowed the analysis to inform ongoing data collection, adjusting questions to probe deeper into emerging themes. For instance, as initial codes highlighted a lack of formal collaboration guidelines, subsequent participants were asked specifically about their awareness of organisational policies to explore this theme further. This approach allowed themes from the interviews to guide document analysis, where I could look specifically for any documented policies on collaboration.

4.6.3. Focused Coding

4.6.3.1. Overview

In the focused coding stage, the most frequent and analytically significant codes from the initial phase were refined into broader themes, helping to move from descriptive detail to conceptual understanding (Charmaz, 2006). In this stage, I employed Scott's (2008) "Conditional Relationship Guide" (CRG) to deepen the analysis of key categories that emerged during initial coding. This tool facilitated a structured examination of the conditions, actions, and consequences associated with each category, aligning well with the iterative and interpretive approach of CGT, involving a co-construction of meaning from the data while remaining sensitive to the participants' context (Charmaz, 2006).

The CRG aligns well with this paradigm by structuring the analysis without imposing rigid procedures, allowing categories to emerge naturally through iterative questioning. As Scott (2008) emphasises, this guide helps ground the analysis in the lived realities of participants, while also allowing the researcher to develop theoretical sensitivity, an awareness of the implicit meanings within the data.

By using the CRG, I was able to maintain a reflexive stance throughout focused coding, which is essential in CGT. This tool facilitated a dynamic interaction with the data, prompting me to consider how conditions like limited resources or situational demands influence collaboration practices and to explore the participants' interpretations of these influences. This approach reflects the constructivist emphasis on building theory that is not only rooted in data but also shaped by the researcher's interpretive engagement with the contextual elements present in the participants' experiences (Charmaz, 2006; Scott, 2008).

In focused coding, my aim was to identify and refine broader themes around IPC by asking questions central to the CRG, such as “what”, “how”, “when”, and “with what consequence” (Scott, 2008) to contextualise and relate categories. Filling in the CRG table begins by placing the categories which have been selected from the initial coding process of interviews and document analysis data in the far-left column. The columns to the right of the category column are answers to the relational questions (“what, when, where, why, how, and with what consequence?”) (Scott, 2008). Table 4.3 shows the application of this guide in the focused coding stage.

Table 4.3: Scott's (2008) "Conditional Relationship Guide" (CRG) applied to the study

Category	What	When	Where	Why	How	Consequence
Cultural value as the basis of IPC	IPC in health program or policy constructed by the cultural value of *Gotong Royong*	Collaboration Decision-making process Academic level Professional level	Community PHC Maternity community services Village Posyandu MoH Strategic Plan	National philosophy of *Gotong Royong* Collectivist society Principle of the national vision	*Gotong Royong* as the principal of national health insurance program Interdependence Community involvement Motivation to collaborate	IPC characterised by *Gotong Royong* values Informal IPC and communication Professional flexibility Adaptable practice
Working together as a family	Feel a strong sense of belonging to the group, similar to being part of a family	Get along Work in a team Outreach activity	Puskesmas Neighbourhood Posyandu	Shared common values and beliefs Small working space Small number of staff Constant interactions	Interdependence Mutual trust	A family-like work environment Interprofessional closeness Flexibility and adaptability Conflict resolution Building family-like teamwork Broad collaboration

Table 4.3: Scott's (2008) "Conditional Relationship Guide" (CRG) applied to the study

Category	What	When	Where	Why	How	Consequence
IPC as a core HCP competency	HCPs have to be able to work together with other HCPs in a collaborative team Collaboration skill is a requirement to be an HCP	Academic level Professional level Providing care	Guidelines for the Development of Performance Management for Nurses and Midwives Midwife Professional Standards Obstetrician Professional Standards Law of The Republic of Indonesia No. 36 (concerning HCPs) Health profession associations	The importance of IPC Enhanced communication To achieve comprehensive care Accreditation and standard Improve patient outcome	IPE Interprofessional training Joint seminar and workshop Institution accreditation Competency assessment	Integrate IPC into the health education curriculum Encourage IPC Same perception towards IPC Eliminating health professional hierarchies

Table 4.3: Scott's (2008) "Conditional Relationship Guide" (CRG) applied to the study

Category	What	When	Where	Why	How	Consequence
The importance of IPE in encouraging effective IPC	The role of IPE in fostering the implementation of IPC in the health system	Academic level Professional level Student placement Joint program	Healthcare institutions Health education policy	Accreditation and regulatory requirements Adapting to changing healthcare models Interprofessional conflict Develop teamwork skills Different professional backgrounds	Shared learning experiences Problem-solving and critical thinking Simulation and real-life scenario Stakeholder involvement	Reduce interprofessional conflicts Eliminating health professional hierarchies Patient outcome improvement
MC as a complex system	MC involves various interconnected components, stakeholders, and processes aimed at providing healthcare services to pregnant women	Adverse event Referral process Dealing with social problem Working across organisations	CHC Hospital Community	Involves various parties Different backgrounds and skills Many relationships Complex conditions	Complex cases Complex services Complex relationships	Complex problem Need C-SC Flexible practice Adaptive team

Table 4.3: Scott's (2008) "Conditional Relationship Guide" (CRG) applied to the study

Category	What	When	Where	Why	How	Consequence
IPC as a useful approach to improve maternity service	IPC leads to good outcomes for women and HCPs	Providing integrated ANC Manage high-risk pregnant women Referral process Working with CHWs	MC Community Puskesmas Hospital Posyandu	Comprehensive care Patient-centred care Patient safety Improved continuity of care	Problem-solving process Increasing confidence and job satisfaction Closing communication gaps Promoting comprehensive & patient-centred care Facilitating learning from each other Community empowerment	Quality maternity services IPC implementation in MC Government support
Integrated care through community empowerment	Encourage the active participation of the community to support integrated care	Home visit Health promotion Outreach activity	Community Puskesmas Posyandu	Complex services Lack of staff Important role of CHWs Focus on promotive and preventive care	Patient active involvement in collaborative team Active role of CHWs Mutual trust Close to community	Improve community health outcomes Strengthen community collaboration Close the gap between HCPs and community

Table 4.3: Scott's (2008) "Conditional Relationship Guide" (CRG) applied to the study

Category	What	When	Where	Why	How	Consequence
Inter-professional tension	Involvement of various professions and backgrounds results in dynamic relationships among them	Internal referral External referral Get along Outreach activities Data collection	C-SC Inter-professional collaborative team Home visit Posyandu Puskesmas Community	Different professional backgrounds Different philosophies of care Different educational and training backgrounds Shared common values and beliefs	Power relation Rejection Working as a family	Interprofessional conflict Interpersonal conflict Team closeness Need for formal rules Importance of interprofessional education

4.6.3.2. Applying the Conditional Relationship Guide

Using the CRG allowed me to systematically analyse each category identified in initial coding within the context of IPC in community MC. For example, a focused code like **"**Working together as a family" was interrogated through the guide's relational questions:

What is "working together as a family"?

This category is defined as "feel a strong sense of belonging to the group, similar to being part of a family". The category and definition use original words from a participant. This sentence often appears from participants' statements, even though it is in a different structure but has the same meaning.

When does "working together as a family" occur?

The question of "when" refers to a condition evoking a response. I used this perspective consistently when answering the question "when". To answer this question, I used "during" to help form the answer. The category of "working together as a family" was found to occur during "Get along", "Work in a team", and "Outreach activity".

Where does "working together as a family" occur?

Working together as a family occurs in Puskesmas, Neighbourhood, and Posyandu. Sometimes it was difficult to distinguish between the question "when" and "where" as they had the same answers, for example, "working together as a family" could occur during outreach activity (when), or in an outreach activity (where). The researcher asked herself what do participants really mean? to overcome this. Maintaining a consistent participants' reality perspective, helps distinguish the two questions.

Why does "working together as a family" occur?

"Working together as a family" develops due to several interconnected factors that foster close bonds and a supportive work culture: "Shared common values and beliefs", "Small working space", "Constant interactions", and "Small number of staff".

How does "working together as a family" occur?

"Working together as a family" occurs through a dynamic interplay of interdependence, mutual trust, and a collective working environment. Team members rely on each other's unique skills, fostering interdependence that strengthens bonds and encourages collaboration. This interdependence builds mutual trust, enabling open communication and confidence in each member's commitment to the team's goals.

With what consequence does "working together as a family" occur or is "working together as a family" understood?

"Working together as a family" leads to interprofessional closeness, fostering empathy and adaptability, while encouraging flexible roles and effective conflict resolution. This teamwork approach builds a strong, supportive environment that enhances broad collaboration across roles, creating a unified and cohesive approach to care.

This questioning allowed for an in-depth exploration of each code's context and meaning, and also facilitated a nuanced understanding of the relationships among codes, supporting the development of theoretical categories.

4.6.4. Theoretical Categorisation

Theoretical categorisation involved organising focused codes into more abstract, theoretically significant categories that connected patterns in both interview and document data (Charmaz, 2006). In this study, theoretical categories such as "From

IPC to C-SC: a spectrum of maternity IPC in the community"; "Value-based teamwork: IPC reflecting the national cultural value of *Gotong Royong*"; and "Dynamic relationships: the complex interaction within inter-professional teamwork" were developed. The "CRG" by Scott and Howell (2008) provided a structured approach to examine relationships within each emerging category, enriching the theoretical categorisation process.

For example, when developing the category of "Intersectoral Collaboration", the CRG helped clarify why this approach was necessary and how it functioned as a response to complex healthcare demands. Similarly, by examining V-BT through this guide, I could assess how cultural values of *Gotong Royong* contributed to team cohesion and QoC, distinguishing this category as foundational for effective collaboration. The guide's structured questions enhanced the interpretive depth of these categories, ensuring they were not merely descriptive but also explanatory, shedding light on the underlying mechanisms of collaboration.

Theoretical categorisation enabled both interview and document data sources to contribute to a more holistic view of IPC in community maternity services. For instance, the category of V-BT emerged as a central aspect of effective collaboration, where shared cultural values of *Gotong Royong* such as respect and mutual trust were seen as foundational to cohesive teamwork across different professional roles. Interview data revealed that HCPs consistently highlighted the importance of working together based on aligned values, which fostered trust and respect in their interactions.

Practitioners described that, even in the absence of formal policies or protocols, shared values acted as an informal guide for collaboration behaviour. Document analysis provided a complementary perspective, underscoring the importance of the national

value of *Gotong Royong* as value-based principles within the implementation of national health development programs, as stipulated in the MoH Strategic Plan document. By integrating findings from both interviews and documents, theoretical categorisation of V-BT revealed it as a foundational category that informs and sustains collaborative efforts.

This synthesis of data sources allowed a more nuanced understanding, positioning V-BT as both an organisational ideal in formal documentation and a practical experience among HCPs. Together, these insights highlight how V-BT operates as an informal, adaptive framework within community maternity services, fostering a collaborative culture that is critical for navigating complex care environments.

4.6.5. Theoretical Integration and Model Development Using the Reflective Coding Matrix (RCM)

The final stage, theoretical integration, involved synthesising the theoretical categories into a comprehensive model that explains the form of collaborative practice and conditions influencing IPC within community MC. This integrative process was greatly supported by the use of the RCM (Scott & Howell, 2008), which provided a structured way to relate categories, define core relationships, and ensure coherence within the model. The RCM allowed me to systematically explore each theoretical category in relation to the core problem of complexity in maternity services. It enabled me to articulate how each category interacts with and reinforces others to create a collaborative response that adapts to the dynamic challenges in community MC.

The first step involved identifying the primary categories that emerged from data analysis ("C-SC", "V-BT", and "Dynamic relationships") and defining the specific properties of each category. Guided by the RCM, I examined the unique features and

roles each category played in collaborative practice. For instance, C-SC was characterised by cross-sector teamwork involving HCPs, CHWs, and village leaders to address the diverse needs of maternity patients. Defining these properties provided a foundational understanding of each category and helped clarify their distinct contributions to the overall model.

With the core categories established, I used the RCM to outline the dimensions and contextual influences shaping each category. This step involved analysing how specific factors (e.g., the complexity of MC, resource constraints, and the cultural value of *Gotong Royong* (mutual cooperation) affect collaborative practice. For example, the RCM revealed that V-BT was influenced by the cultural emphasis on mutual respect and collective responsibility, which drove spontaneous, supportive teamwork even in the absence of formal policies. This analysis helped situate each category within its broader context, capturing the adaptive and culturally rooted nature of collaboration in this setting.

In the next stage, the RCM was used to identify and map the actions and interactions between categories, emphasising how each category contributes to collaborative practice within community. The RCM facilitated the analysis of how C-SC, V-BT, and Dynamic relationships interact to manage complexity, where HCPs adapt practices in response to patients' needs. Actions such as spontaneous collaboration, mutual problem-solving, and adaptive practice were documented, illustrating how practitioners work together in flexible, situational ways. This relational mapping helped create a cohesive framework where categories are not isolated elements but interconnected processes.

The RCM guided the analysis of outcomes associated with collective-oriented collaboration, linking each category to specific consequences for community MC. By examining each category's role and impact, I was able to articulate outcomes such as Improved resource allocation and utilisation, enhanced ability to meet varied patient and community needs, and Increased adaptability to changing demands. For example, "Cross-sectoral collaboration" was linked to "Improved resource allocation and utilisation", as HCPs, local government representatives, and community leaders coordinated efforts to share resources and address community health needs collectively. These outcomes highlighted the practical effectiveness of the collaborative approach, reinforcing the model's applicability in resource-limited settings.

Finally, the RCM was instrumental in synthesising relationships among the categories, leading to the development of the COCM. This model demonstrates how complexity in community MC is managed through an adaptive system characterised by intersectoral collaboration, V-BT, and community empowerment. The RCM helped position complexity as the core context that necessitates collaboration, with each category representing a strategic response to specific challenges. Through this synthesis, the RCM ensured the model was cohesive, depicting collaboration as a responsive, culturally grounded framework that evolves based on local needs and circumstances. The application of the RCM in this study is displayed in Table 4.4.

Table 4.4: Scott and Howell's (2008) "Reflective Coding Matrix" Applied to Studied Context

Core category	Properties	Dimensions & contextual influences	Action & interaction	Outcomes
Cross-sectoral collaboration	Involvement of healthcare, local government, and community actors Coordinated efforts across sectors	Complexity in addressing diverse community health needs Necessity for shared resources Policy support for collaboration	Joint planning and shared initiatives with community leaders and other sectors Collaboration with local government and CHWs to address patient and community needs (Posyandu)	Improved resource allocation and utilisation Enhanced ability to meet varied patient and community needs Stronger community support
Value-based teamwork	Emphasis on mutual respect and shared values Responsibility to serve the community Spontaneous support	Cultural norms emphasising *Gotong Royong* (mutual cooperation) Community trust in HCPs Values-driven approach to care delivery	Informal, flexible support among team members Open communication and shared decision-making based on mutual respect Collaboration guided by collective responsibility for patient outcomes	High team cohesion and morale Strong trust and rapport within the team and with the community
Dynamic relationships	Flexible roles and adaptive practices Relationship-building across professions Trust as foundational	Trust-building influenced by frequent interactions Adaptability based on shifting healthcare needs Balancing individual roles with team flexibility	Professionals adapt roles and responsibilities as needed Open communication to negotiate role boundaries Continuous relationship-building efforts to ensure cohesive team functioning and to adapt to evolving situations	Increased adaptability to changing demands Stronger interprofessional trust Smooth collaborative practice even in complex situations

4.6.6. Memoing

Memoing is a complementary technique for data analysis that represents the researcher's involvement in the research process. According to Lampert (2007), a memo is a collection of narrative notes from a researcher's analytical conversation with himself about research data. During the data collection and analysis process, the researcher writes down analytic questions and ideas about the data, code, or the relationship between their codes. This helps them find links between codes and other data and codes, as well as raising significant codes to categories. In other words, memos provide an opportunity to interrogate data with the aim of developing concepts for theory construction (Glaser, 1978; Strauss & Corbin, 1998).

At the stage of open coding, memos are often less conceptualised, and consist of questions. During the axial coding, categories are compared with data, codes, and other categories and memos are compared with other memos to help produce tentative conceptual categories. Categories are integrated together, and memos are compared, sorted and integrated (memo sorting) to generate final theory (Charmaz, 2014).

In analysing my data, I found memoing to be essential in building and refining my understanding of IPC within the community maternity setting. By consistently writing memos throughout the stages of initial and focused coding, I could reflect on emerging ideas, raise critical questions, and draw connections between codes and categories. This process aligned with Lampert's (2007) notion of memos as a researcher's internal dialogue: a conversation with myself that allowed me to explore and clarify thoughts about the data and deepen my understanding of potential theory.

At the open coding stage, my memos were largely exploratory and filled with questions. For instance, when I encountered the idea of *CHC as a complex system* in

my data, it became evident that participants frequently described situations where they faced multiple, often overlapping, challenges in community MC. In one memo, I noted:

> "Participants mention various sources of complexity, ranging from limited resources to unpredictable patient needs and documentation and reporting issues. Does this complexity differ by professional role or by context (e.g., urban vs. rural settings)? How do HCPs perceive and navigate these layers of complexity? I wonder if complexity is more than just a barrier; could it actually shape how they approach collaboration?" (Researcher memo)

This memo prompted me to consider complexity not simply as a background challenge but as a core aspect influencing IPC. During focused coding, I expanded on this by connecting it with factors like "case complexity" (e.g., high-risk pregnancies), "relational complexity" (e.g., interprofessional dynamics), and "service complexity" (e.g., external referral). I wrote another memo:

> "Complexity seems to be a defining characteristic of their work environment, influencing how professionals interact and share responsibilities. Are there strategies or adaptations unique to this context? What practices arise specifically to manage these layers of complexity?" (Researcher memo)

These memos helped me build the idea that complexity was not just a contextual element but a driver of both individual and team behaviours, further supporting the eventual conceptual category of "Managing Complexity through C-SC". This reflective process allowed me to stay curious about the depth of complexity in my data, ultimately shaping my theory's focus on adaptive, context-sensitive collaborative practice.

4.6.7. Theoretical Sensitivity

CGT considers a literature review as a stimulus for theoretical sensitivity (Denzin & Lincoln, 2018). This acknowledges that the researchers require a general awareness

about the study phenomena before starting the research. However, they should avoid any preconception both from literature or their experiences about what might be discovered (Straus & Corbin, 1998). In analysis process, the literature might encourage questions and provide concepts and relationships that can be compared with collected data.

In analysing my data, I was mindful of CGT's balanced approach to the literature review, using it as a source of theoretical sensitivity while striving to remain open to participants' unique insights. I treated the literature as a reference point rather than a roadmap. As I moved through initial and focused coding, I returned to the literature sparingly, using it to compare and contrast my findings, identify gaps, and formulate new questions. For example, when themes related to the complexity of community MC emerged, I revisited the literature to explore related concepts. Instead of forcing my data to fit existing models, I used these references as lenses to deepen my understanding and ensure my interpretations remained grounded in participants' actual experiences.

This approach helped me stay flexible and iterative, respecting the constructivist principle of co-constructing meaning with participants while remaining cautious of any influence from existing literature or my own professional experiences. This balance between being theoretically sensitive and empirically grounded allowed my analysis to remain open and adaptive. The development of theory is guided by constant comparison between data, codes, categories, memos, and literature through iterative process until data saturation is achieved (Straus & Corbin, 1998).

4.7. Reflexivity

Reflexivity is a critical aspect of qualitative research that requires researchers to continuously reflect on their own role, assumptions, and influence throughout the research process (Berger, 2015). In CGT, the researcher's position, beliefs, and interactions with participants are not viewed as separate from the research but are integral to the co-construction of knowledge (Charmaz, 2014). This reflexive practice involves acknowledging the ways in which a researcher's background, values, and experiences shape both the data collection and analysis processes.

To provide a comprehensive exploration of reflexivity, this section first addresses my positioning as a researcher, including the potential influence of my professional and personal background on the study. Following this, I will discuss the reflexive practices employed throughout the research process, such as memo-writing and peer debriefing, as well as the strategies used to minimise bias and ensure the analysis remained grounded in the participants' perspectives.

4.7.1. Researcher's Positioning

As the researcher in this study, my personal, professional, and academic experiences have deeply shaped my engagement with the research process. I am a midwife and a lecturer in a midwifery program, which has given me extensive insight into both the practical realities of maternal healthcare and the challenges and opportunities of IPC. This dual role as both practitioner and educator has equipped me with a nuanced understanding of healthcare delivery, particularly in MC, and has shaped my approach to examining IPC in Indonesia.

My involvement in a national research of HPEQ (Health Professional Education Quality) project in 2010 was a pivotal experience that significantly influenced my

interest in this topic. This project exposed me to the concept of IPE and its potential benefits for healthcare teams, which inspired me to explore further how IPC can be implemented in maternal healthcare settings. My long-term goal has been to integrate IPE principles into the healthcare training programs at my institution, as I strongly believe that collaboration across professions can improve maternal care outcomes.

However, my dual roles as a HCP and an academic have influenced my research process in complex ways. Professionally, I hold certain values about the importance of IPC, which may shape how I approach and interpret discussions with HCPs. As a midwife, I am embedded in the healthcare system and understand its hierarchical structures, which helped me navigate and analyse the challenges of collaboration among different HCPs. Yet, this familiarity also posed challenges in maintaining neutrality during data collection and analysis, as I needed to be cautious of letting my professional biases influence how I interpreted participants' experiences.

4.7.2. Insider-Outsider Perspective

In qualitative research, the concept of *insider* and *outsider* status is key to understanding the researcher's positionality. The insider perspective refers to the researcher's identification with the study participants, often sharing similar cultural, professional, or personal backgrounds (Dwyer & Buckle, 2009). On the other hand, the outsider perspective allows for a degree of distance from the participants, enabling the researcher to approach the data from a more objective stance. As a midwife, educator, and Indonesian Muslim from Central Java, I occupy a unique space where I simultaneously hold insider and outsider positions in relation to my study participants.

As an *insider*, I share many cultural and professional values with my participants, most of whom are HCPs working in maternal care in Indonesia. This shared background

helped establish rapport and trust during the interviews, as participants may have felt more comfortable discussing sensitive or complex issues with someone who understands their context (Mercer, 2007). For example, being familiar with the hierarchical nature of healthcare in Indonesia allowed me to empathise with participants' frustrations about interprofessional dynamics without needing extensive explanation. However, my insider status also introduced the risk of bias. As someone who strongly believes in the value of IPC, I had to remain vigilant about not imposing my own views on the participants' experiences. While my professional identity helped facilitate access to participants and a deeper understanding of the subject matter, it also necessitated critical reflection to ensure that I was not projecting my own values onto the data (Carter, 2004).

In contrast, my *outsider* status emerged in several ways. While I share professional experiences with many participants, I occupy a different academic space as a PhD student and a researcher. This distance allowed me to critically engage with their narratives from an analytical standpoint, identifying patterns and themes that may not be as evident to someone fully immersed in their professional context. My role as an outsider to some participants' specific workplace dynamics or regional contexts also offered a more detached perspective, enabling me to question underlying assumptions that insiders might take for granted.

Navigating this insider-outsider duality required ongoing reflexivity, a process of critical self-awareness throughout the research journey (Berger, 2015). While conducting interviews, I had to consciously balance my insider knowledge with the need to remain open to participants' perspectives, even when they challenged my own beliefs. For example, while I anticipated that most HCPs would view collaboration as

beneficial, some participants expressed scepticism about its feasibility within the existing system. Rather than interpreting these responses through the lens of my own assumptions, I reflected on how their differing professional experiences might shape their perspectives.

Furthermore, my shared religious and cultural background with many participants as a Muslim from Central Java added another layer of complexity. While this commonality fostered trust and familiarity, it also necessitated careful reflection on whether I was interpreting participants' narratives based on shared cultural assumptions. For instance, in discussing V-BT, I had to ensure that I was not overemphasising the role of religious and cultural values in collaboration without solid grounding in the participants' narratives.

To mitigate potential biases, I engaged in reflexive practices such as memo-writing and journaling, where I documented my thoughts and evolving interpretations throughout the research process. These reflexive activities helped me continually examine my position within the research, challenging myself to identify moments where my insider perspective might have influenced my interpretation of the data. I also engaged in peer debriefing, where I discussed my findings with colleagues who offered alternative viewpoints, helping me to further detach from my personal biases.

4.8. Reflection on the Impact of COVID-19 on the Study

The COVID-19 pandemic posed significant challenges to this study, affecting various aspects of the research process, including study timeline, participant recruitment, and data collection. This section reflects on these challenges, their impact on the study, and the mitigating strategies implemented to address them.

4.8.1. Travel Restrictions and Study Timeline Adjustment

Global travel restrictions during the pandemic prevented me from traveling to Indonesia, presented significant challenges in preparing and conducting this study. These restrictions began in March 2020 as the virus spread widely, creating challenges for conducting in-person research activities. By November 2020, a dual approach was finalized in the Proposal Confirmation Review, outlining plans for face-to-face interviews if restrictions eased and online interviews as a mitigation strategy should COVID-19 conditions worsen. Ethical approval was obtained from the University of Nottingham in February 2021, enabling the research to commence as scheduled in April 2021. Unfortunately, in April 2021, a significant surge in COVID-19 cases occurred in Indonesia, prompting stricter travel and social restrictions (Permana, 2022). These developments required me to conduct the research entirely online from the UK and further delayed the process of ethical clearance which was submitted to the Research Ethics Committee of Universitas Gadjah Mada and the local Health Office in Indonesia in March 2021. The ethical approval in Indonesia was not granted until July 2021. As a result, the data collection phase began three months later than originally planned.

4.8.2. Participant Recruitment Challenges

In the context of my research, recruiting participants for interviews during the COVID-19 pandemic presented unique challenges that required adapting strategies to comply with health protocols and maintain engagement with potential participants. I initially planned to conduct the study across three Puskesmas; however, as the recruitment process began, two Puskesmas who had initially signalled their interest subsequently declined to participate, due to the intense workload associated with COVID-19. The

facilities expressed concern about disrupting their staff, who were already under pressure due to the pandemic. Recognising the potential difficulty in securing a sufficient number of respondents across diverse professions, I amended my protocol to include four additional Puskesmas centres as study sites. This amendment was an adaptive response to recruitment challenges encountered during the remote recruitment process, as described in Section 4.4.3. Expanding the number of study sites increased the likelihood of obtaining an adequate sample size and capturing a broader range of HCP perspectives. This aligns with principles in qualitative research where flexibility in sample site selection is often necessary to address unforeseen recruitment challenges (Creswell & Poth, 2018).

Recruiting participants during the pandemic posed significant challenges due to the extraordinary pressures faced by healthcare professionals. These individuals, who were central to this study, were overwhelmed by the demands of managing the COVID-19 response, leaving them with limited availability for research participation. In some cases, potential participants withdrew due to personal health concerns, further reducing the pool of eligible candidates.

Adding to these difficulties, two of the three targeted Puskesmas declined to provide research approval, citing extreme workload pressures and staff shortages caused by a significant number of healthcare workers contracting COVID-19. This required adjustments to the recruitment strategy and the inclusion of additional Puskesmas to ensure adequate participation.

To overcome these barriers, I received assistance from colleagues in Indonesia who helped approach Puskesmas and facilitate communication with key personnel. Additionally, a snowball sampling method was employed to streamline the

recruitment process (see section 4.4.3). This approach involved participants recommending other potential participants, which proved effective in identifying and engaging healthcare professionals who were willing and available to contribute to the study.

The virtual nature of the recruitment process further complicated efforts to build rapport and establish trust, which are often more effectively achieved in face-to-face interactions. As a result, the recruitment phase was prolonged, requiring significant flexibility in scheduling interviews to accommodate participants' demanding schedules. Despite these challenges, the adjustments made ensured the successful recruitment of a diverse group of healthcare professionals, enabling the study to proceed.

4.8.3. Time Zone Differences

Scheduling was an additional challenge once potential participants agreed to join the study. As the frontline in managing public health responses to the pandemic, HCPs faced overwhelming workloads and unpredictable schedules. Several participants had to reschedule interviews multiple times due to urgent, unexpected tasks, and some even had to withdraw from the study after contracting COVID-19. Additionally, the time difference between the UK, where I was located, and Indonesia (six to seven hours) added complexity to scheduling, as finding mutually convenient times for both me and the interviewees required careful coordination. This situation extended the recruitment process from the originally scheduled timeline.

To manage these challenges, I adopted a flexible scheduling approach, prioritising participant availability and convenience. This adaptive approach aligns with

suggestions from qualitative research literature, which underscores the importance of flexibility in interview scheduling, especially when engaging with participants in high-stress or unpredictable work environments (King & Horrocks, 2010). In crisis conditions, such as healthcare settings during COVID-19, researchers must consider participants' workload and well-being, as it can impact both their availability and willingness to participate (Vogt et al., 2022). Qualitative studies highlight that prioritising flexibility in scheduling not only improves participation rates but can also foster rapport and trust, showing respect for participants' time and responsibilities (Rubin & Rubin, 2011).

Adjusting interview schedules according to participant needs also resonates with practices identified in previous research on remote and international qualitative data collection. De Viliers et al. (2022) emphasised that time zone differences, though often overlooked, can add substantial complexity to remote research, requiring researchers to approach scheduling with sensitivity and adaptability. In my study, accommodating the time difference meant negotiating interview times that were convenient for participants, often during non-traditional working hours for myself, reinforcing the idea that participant-centred scheduling enhances the data collection process.

4.8.4. Internet Connectivity

Conducting interviews online during the pandemic presented several technical challenges, particularly in rural areas of Indonesia where internet connectivity was often unstable. Many participants relied on mobile data rather than Wi-Fi, resulting in frequent disruptions such as unclear audio, sudden disconnections, and interruptions that sometimes required participants to repeat their responses. In some cases, participants had to relocate during interviews to areas with better connectivity, which

disrupted the flow of conversation and occasionally impacted the depth and richness of their responses, ultimately affecting the quality of the data collected.

To mitigate these connectivity issues, online interviews were conducted using multiple platforms, including Zoom and WhatsApp. Providing participants with platform options allowed for greater flexibility and helped accommodate their varying levels of familiarity and access to technology. This approach ensured that interviews could proceed despite technical challenges, minimizing disruptions and enabling the continuity of data collection. By adapting to participants' circumstances and using multiple tools, the study was able to navigate the limitations of online interviews while still capturing valuable insights.

These technical challenges demanded flexibility and patience on my part. For instance, I allowed extra time during interviews with participants in rural areas, waiting for them to reconnect as needed. When disruptions happened, I would revisit my notes and ask follow-up questions to ensure we had not missed anything important. I also found that allowing participants time to refocus after moving locations or rejoining a call helped them settle back into the conversation. This adaptability reflects the guidance provided by Seidman (2019), who emphasises the importance of creating a comfortable, flexible interview environment to accommodate participants' needs and allow for richer responses.

4.8.5. Data Quality and Methodological Adjustments

The use of online interviews brought significant methodological challenges, particularly related to the quality of data. As mentioned in section 4.8.3, technical issues such as unstable internet connectivity, unclear audio, and disconnections

disrupted the flow of interviews and occasionally limited the depth of participants' responses. Building rapport, a key aspect of qualitative interviews, was also more difficult in a virtual setting, potentially impacting participants' comfort levels and openness during discussions. These challenges introduced concerns about data completeness and richness, which are critical in qualitative research.

During the interview process, I encountered several challenges that shaped the flow and quality of the data collection, often requiring quick adjustments to maintain focus and comfort for my participants. One of the first issues I noticed was that some participants struggled to concentrate on the interview questions. It became evident from their responses and body language that many were under significant work-related stress. Participants confided that their heavy workload was impacting their focus, particularly as they were juggling additional COVID-19 duties alongside their regular responsibilities.

High-stress work environments, as Kvale and Brinkmann (2015) discuss, can compromise a participant's ability to fully engage in research, as constant pressures and demands shift their focus elsewhere. Most participants chose to conduct the interviews at the Puskesmas during break times, despite my suggestion that they could find a quieter, more private place—like their homes—where they might feel less distracted. However, many explained that after their workday, they had additional duties related to COVID-19 that often extended into evenings and weekends, leaving them with very little time at home. They wanted to reserve that time solely for rest, which I fully understood and respected. This choice, though practical for them, reflects Denzin and Lincoln's (2011) observation that participants experiencing intense work pressures often prioritise convenience over ideal settings for interviews, even if this

impacts the interview quality. Such work-related stress, therefore, required me to be especially flexible and understanding.

To address these limitations and mitigate potential gaps in data quality, document analysis was incorporated as a complementary method. This approach allowed for a deeper exploration of the research topic by providing additional context and triangulation, enhancing the credibility and depth of the findings. By examining policies, guidelines, clinical protocols, and reports, document analysis offered a systemic perspective that supplemented and contextualized the individual experiences shared during interviews. This methodological adjustment ensured that the study maintained its rigor and produced a comprehensive understanding of interprofessional collaboration in community maternity care.

In summary, the challenges posed by the COVID-19 pandemic required significant adaptations to the timeline, participant engagement, and research methodology. Despite these difficulties, the study was able to collect valuable data through flexibility, persistence, and methodological adjustments. These challenges and their impacts highlight the importance of resilience and adaptability in conducting qualitative research during global crises.

4.9. Evaluating the Quality of the Research

In qualitative research, the concepts of trustworthiness and rigour are essential to ensuring that the findings are credible, meaningful, and valuable. GT, particularly CGT, emphasises the importance of generating theories that are closely grounded in the data. For this study, Charmaz's (2014) evaluative criteria—credibility, originality, resonance, and usefulness—were used to assess the quality of the research. These

criteria provide a robust framework for evaluating qualitative studies and ensuring the rigour and trustworthiness of the research process.

Credibility refers to the confidence that the research findings accurately represent the participants' experiences and the studied phenomenon (Charmaz, 2014). To establish credibility, this study employed several strategies, including iterative data collection and analysis, triangulation of data sources (interviews and documents), and member checking. The use of rich, detailed descriptions and direct participant quotations throughout the findings ensures that the interpretations are grounded in the data and reflect the participants' lived experiences. These methods enhance the transparency and trustworthiness of the findings, demonstrating a strong link between the data and the emerging theory (Lincoln & Guba, 1985).

Originality is concerned with the novelty and significance of the research findings. According to Charmaz (2014), GT should offer new insights or challenge existing theories, providing a fresh understanding of the phenomenon under study. This research contributes originality by examining IPC in the underexplored context of community MC in Indonesia. By integrating cultural and systemic influences, such as *Gotong Royong* (mutual cooperation), into the conceptual model, this study provides a context-specific framework that advances the understanding of collaborative practice in resource-limited settings. This not only fills a gap in the literature but also offers theoretical contributions that may challenge and refine existing IPC frameworks.

Resonance refers to the extent to which the research findings make sense to participants and others with similar experiences, providing a meaningful and insightful interpretation of the studied phenomenon (Charmaz, 2014). To ensure resonance, this

study engaged participants in a reflexive process, inviting their feedback on key themes and interpretations during follow-up interviews. The findings were also presented to HCPs familiar with the setting to confirm their relevance and validity. This approach ensures that the emergent theory captures the essence of participants' experiences and offers a meaningful understanding of the processes involved in IPC.

Usefulness pertains to the practical implications of the research. GT, according to Charmaz (2014), should not only contribute to academic knowledge but also offer insights that are relevant and applicable to real-world contexts. This study achieves usefulness by providing actionable recommendations for strengthening IPC in community MC, particularly in Indonesia. The findings address critical challenges, such as communication barriers and resource constraints, offering strategies to improve collaboration among HCPs. Additionally, the conceptual model developed through this study has the potential to inform policy and training programs aimed at enhancing collaborative practice in similar settings globally.

The strategies employed to meet these criteria—credibility, originality, resonance, and usefulness—will be further discussed and critically reflected upon in Chapter 6, where their contributions to the rigor and impact of this research will be evaluated in detail.

4.10. Ethical Considerations

Ethical considerations are integral to ensuring the rights, dignity, and well-being of research participants, especially in qualitative studies where personal and professional experiences are shared openly (Orb et al., 2001). This section outlines the steps taken to address key ethical issues in this study, including informed consent, confidentiality, data storage and handling, and the necessary ethical approvals obtained.

4.10.1. Ethical Approval

The ethical approval for this research was obtained from multiple institutions to ensure adherence to ethical standards across different contexts. The study was approved by the Faculty of Medicine and Health Sciences Ethics Committee at the University of Nottingham, the Faculty of Medicine Ethics Committee at Universitas Gadjah Mada, and the Health Office Ethics Committee in Indonesia. The ethical approvals and research permits are shown in Appendix 5. These approvals ensured that the research complied with ethical requirements at both the international and local levels, addressing the cultural and institutional norms of the study's context.

4.10.2. Informed Consent

Informed consent is a foundational ethical principle in research, ensuring that participants are fully aware of the study's purpose, their role, and any potential risks before agreeing to participate (Wiles, 2013). For this study, participants were provided with detailed written information about the nature and objectives of the research, their role in the study, the identity of the researcher, and how the findings would be disseminated and published. The information for participants, including the recruitment poster (Appendix 6), participant information sheet (Appendix 7) and consent form (Appendix 8) were written in Indonesian, to ensure clarity and understanding, considering the participants' linguistic and cultural context (Orb et al., 2001).

The participants were informed that their participation was entirely voluntary and that they were free to withdraw from the study at any time without penalty. To respect participants' autonomy and ensure they were informed about the study, written consent was obtained from all participants before the interviews. This process allowed

participants to make a voluntary and informed decision to participate. This consent included permission to record the interviews for transcription and analysis purposes. Participants were given a mobile data voucher worth £8.00 (GBP) as compensation for the internet costs they incurred during the online interviews.

4.10.3. Confidentiality

Maintaining participant confidentiality is essential for protecting their privacy and encouraging open and honest communication during interviews (Saunders et al., 2015). In this study, pseudonyms were used in any reports or publications to anonymise participants. All participants in this study were assigned unique identifier codes. These codes were designed to protect participant identities while providing contextual information for analysis. The identifier format used is as follows:

Profession - Order of the Interview within the Profession - Study Site.

For example:

The first nurse interviewed from Puskesmas A is identified as (Nurse 1A).

The second midwife interviewed from Puskesmas B is identified as (Midwife 2B).

The first physician interviewed from Puskesmas C is identified as (Physician 1C).

This coding system was consistently applied throughout the study to ensure clarity while maintaining participant anonymity. It also allowed for easy reference to specific interviews during data analysis and presentation of findings.

Confidentiality was further ensured by securely storing all data on a password-protected PC or laptop. Only the researcher had access to this data, and it was handled in strict compliance with ethical guidelines.

Assurances of confidentiality were clearly communicated to participants before the interview, emphasising that their contributions would remain anonymous and their identities protected. This approach enabled participants to express themselves freely without fear of personal or professional repercussions.

4.10.4. Data Storage and Handling

In line with ethical research practices, all data collected from the interviews was securely stored to protect participants' privacy and ensure data integrity (Corti et al., 2019). Audio recordings and transcripts were stored on a password-protected computer and uploaded to a secure password-protected server, both of which were accessible only to the researcher. Anonymisation procedures, including the use of pseudonyms, were applied to all transcripts to safeguard participant identities.

Data will be retained for the required period as stipulated by the ethical guidelines of the institutions involved (cf. Appendix 5), and will then be securely deleted. Throughout the study, best practices in data security were followed to prevent unauthorised access and ensure that sensitive information remained protected.

Throughout the research process, the ethical principles of respect, beneficence, and justice were upheld to protect participants' well-being and ensure ethical integrity in the study (Orb et al., 2001). However, a few ethical issues were encountered and carefully managed. One potential challenge was the implicit power dynamic due to the involvement of gatekeepers during recruitment, which could influence participants' decisions to take part. To address this, the researcher ensured that participation was entirely voluntary by providing clear information about the study and emphasising that declining or withdrawing would have no consequences for participants' professional relationships.

Another concern was maintaining confidentiality, particularly given the close-knit nature of the HCP community in the study context. The researcher took rigorous measures to protect participants' identities, including using pseudonyms and removing identifying details from the transcripts and findings. Additionally, discussions occasionally involved sensitive topics, such as interprofessional challenges, which required creating a safe and non-judgmental interview environment. Participants were regularly reminded of their right to withdraw at any time without explanation.

Finally, the remote nature of recruitment and data collection during the COVID-19 pandemic posed challenges in building rapport and ensuring informed consent. To mitigate this, the researcher maintained clear and ongoing communication with participants, addressing any concerns and confirming their understanding of the study. These strategies ensured that ethical challenges were effectively managed, maintaining the integrity of the research process.

4.11. Chapter Summary

This chapter has detailed the research methodologies and ethical considerations employed throughout this study. Adhering to constructivist principles, I have positioned myself as a researcher actively involved in the study, collaboratively constructing data alongside the participants. To enhance the credibility and trustworthiness of the research, I have transparently articulated the decisions and advancements made during the data collection and analysis processes, supplemented by numerous examples. Furthermore, I have presented how I addressed quality issues, aligning with Charmaz's (2006) evaluative criteria. The subsequent chapters will explore the research findings.

CHAPTER 5

Findings

5.1. Introduction

This chapter presents the key findings from the integrated analysis of interview data and documentary evidence, highlighting how HCPs, community members, and local authorities collaborate to address the challenges of maternity care in Indonesia. First, it outlines the characteristics of interview participants—ranging from physicians, midwives, and nurses to public health practitioners, nutritionists, and health centre managers—whose diverse perspectives illuminate various facets of interprofessional and cross-sectoral collaboration. Next, the chapter details the documents included in the document analysis, illustrating how policies, guidelines, and local program reports complement the interview data and provide a broader context for IPC.

Subsequently, the chapter delves into the findings from the integrated analysis of interview and document analysis, exploring the three core categories that emerged through this analytical process. The first category, "From inter-professional collaboration to cross-sectoral collaboration: A Spectrum of Maternity IPC in the Community", examines how collaboration extends beyond professional boundaries to include community actors and local government. The second category, "Value-Based Teamwork: IPC Reflecting the National Cultural Value of '*Gotong Royong*,'" explores how cultural and religious values drive a collective ethos of teamwork. The third category, "Dynamic Relationships: The Complex Interaction within Inter-professional Teamwork", addresses the intricate ways in which HCPs negotiate roles, communication styles, and power dynamics in a constantly evolving healthcare environment.

Building on these categories, the chapter concludes by describing the development of the Collective Oriented Collaboration model. This model synthesises the emergent themes, depicting how the interplay of community, culture, and adaptive collaboration processes shapes the delivery of integrated maternity services. By providing a comprehensive view of both the contextual factors and the relational aspects of collaboration, this chapter lays the groundwork for discussing the implications of these findings and how they inform best practices in interprofessional and cross-sectoral teamwork to drive EBP improvements in the context of Indonesian MC services.

5.2. Characteristics of Interview Participants

These interviews were conducted from 30th July 2021 until 7th January 2022 with participants from four Puskesmas centres: two located in rural areas (Puskesmas A and B), and two in urban areas (Puskesmas C and D). Puskesmas A is located in a rural area, employs approximately 15 HCPs with 1 physician and serves a population of around 20,000 to 25,000 people. It covers several villages and faces challenges such as limited transportation access and dispersed settlements. Similarly, Puskesmas B, another rural facility, operates with about 19 staff and serves an estimated 15,000 to 20,000 people. The terrain in this area is hilly, and the population is scattered, which can impact service delivery and outreach efforts. In contrast, Puskesmas C, an urban health centre, has a larger workforce of approximately 30 to 35 staff members and caters to a dense population of around 35,000 to 40,000 people. This centre benefits from better infrastructure, integration with referral hospitals, and more efficient service delivery systems. Likewise, Puskesmas D, located in the urban setting, employs around 40 to 45 staff and serves between 30,000 and 35,000 residents. It operates in a high-demand environment with easier access to transport and digital health systems that support patient management. These distinctions in staffing levels,

population coverage, and service environments provide essential background for understanding the contextual differences that may influence healthcare service delivery and outcomes across rural and urban Puskesmas.

A total of 29 participants from various healthcare professions were interviewed, providing diverse perspectives on IPC in community-based MC. The participants represented key professional roles within the Puskesmas, including midwives, nurses, physicians, public health practitioners, nutritionists, and the head of Puskesmas. The majority of participants were Muslim, reflecting the predominant religion in the study area, with only three participants identifying as Christian. In addition to healthcare workers from Puskesmas, the interviews also included representatives from professional health organisations (IBI, IDI, and POGI). Their contributions offered valuable insights into broader systemic and organisational factors influencing collaborative practices among healthcare professionals.

The socio-demographic characteristics of the interview participants, including their professions, years of experience, and workplace settings, are summarised in Table 5.1. This information highlights the diversity of the participants and the range of expertise that informed the findings of this study.

Table 5.1: Characteristics of interview participants

Participant code* (anonymous)	Gender	Study site	Working experience (years)**
Head of Puskesmas 1	Female	Rural area	15-20
Physician 1	Female		10-15
Nurse 1	Female		10-15
Midwife 1	Female		15-20
Nutritionist 1	Male		15-20
Public Health Practitioner 1	Female		<5
Head of Puskesmas 2	Female		20-25
Public Health Practitioner 2	Female		<5
Nurse 2	Female		5-10
Nurse 3	Female		15-20
Midwife 2	Female		5-10
Midwife 3	Female		10-15
Nutritionist 2	Male		10-15
Physician 2	Male		15-20
Midwife 4	Female	Urban area	15-20
Midwife 5	Female		15-20
Nutritionist 3	Female		10-15
Physician 3	Female		10-15
Head of Puskesmas 3	Female		10-15
Midwife 6	Female		<5
Midwife 7	Female		15-20
Nutritionist 4	Male		5-10
Nurse 4	Female		10-15
Public Health Practitioner 3	Female		5-10
IBI 1	Female	Representative of Health Profession Associations	20-25
IBI 2	Female		15-20

Table 5.1: Characteristics of interview participants

Participant code* (anonymous)	Gender	Study site	Working experience (years)**
IDI 1	Male		15-20
POGI 1	Male		20-25
POGI 2	Female		10-15

Abbreviations:

IBI: Indonesian Midwives Association

IDI: Indonesian Medical Association

POGI: Indonesian Obstetric and Gynecological Association

*The sequence of interviews within a professional group.

** Length of time participant had been working at Community Health Centre. Presented in a range to accommodate pseudonyms

5.3. Characteristics of included documents on document analysis

In addition to interviews, this study incorporated document analysis to provide a contextual and structural understanding of IPC in community-based MC. The documents included in the analysis were purposively selected to complement and triangulate the findings from the interviews, ensuring a more comprehensive understanding of the phenomenon under study.

This study included a total of 14 documents for document analysis. These documents were selected based on their relevance to IPC in community-based MC. The documents comprised a diverse range of materials, including local policies, guidelines, clinical protocols/pathways, reports, evaluations, regulations, and official statements or declarations. These sources provided critical insights into the structural, operational, and contextual factors influencing IPC practices.

The characteristics of the included documents are summarised in the Rubric of Data Extraction of Document Analysis presented in Table 5.2, which provides an overview

of the materials analysed in this study. Each document is presented with its title, source, level (local or national), purpose, and findings relevant to IPC. This structured summary ensures clarity and transparency, highlighting the role of each document in providing contextual insights into IPC within community-based MC.

Table 5.2: Rubric of data extraction of document analysis

Document level	Original purpose	Key findings related to IPC
Document Label (institution_subject_year) and source		
1. Ministry of Health_strategic plan_2020 Source: Official website of MoH: https://farmalkes.kemkes.go.id/2021/03/rencana-strategis-kementerian-kesehatan-tahun-2020-2024/		
National	To achieve national development goals in the health sector following the mandate of the Act No. 25 of 2004 (concerning "Planning Systems"). National development necessitates the MoH preparing a Strategic Plan/	The complexity of the duty of CHC The limited number of HCPs in CHC One of Indonesia's health development strategies is community empowerment through increasing partnerships and participation across sectors, community institutions, community organisations, and the private sector. However, so far, problems of coordination, synergy and integration have become obstacles to the implementation of health programs, one of which is caused by weak regulations.
2. CHC_SOP antenatalcare_2021 Source: CHC Archive		
Local	As a reference in providing services to pregnant women regarding antenatal examination and monitoring.	Standard operating procedure (SOP) contains instructions or work steps for a service. In ANC services, midwives are the main service providers. Internal referrals to dental and laboratory services are made to all pregnant women at the first ANC visit. This SOP also regulates internal referrals to physicians and nutritionists for pregnant women with certain conditions.
3. CHC_SOP Hypertension in Pregnancy_2021 Source: CHC Archive		

Local	As a reference in providing services to pregnant women for early management of hypertension in pregnancy.	SOP contains work steps in patient care. In each SOP there is a related unit column, namely HCPs who have the potential to work together in patient management. Collaboration can be in the form of referrals or consultations. However, the role of each profession in patient care is not explained.
4. MoH_Guidelines for Integrated Antenatal Services_2020 Source: Official Website of MoH: https://perpustakaan.kemkes.go.id/inlislite3/opac/detail-opac?id=11864		
National	Provide guidelines for all HCPs in providing integrated antenatal care for all pregnant women in Indonesia.	Physicians and midwives are professions that are responsible for the implementation of quality ANC. The establishment of policies and regulations regarding the implementation of ANC in Indonesia involves all related HCPs. ANC is carried out at least 6 times with a minimum of 2 visits to the physician for screening risk factors/complications of pregnancy in the 1st trimester and screening for risk factors for delivery in the 3rd trimester. This rule replaces the previous guidelines, namely 4 ANC visits by midwives and referrals to physicians if pregnancy complications occur.
5. MoH_Midwife professional standards_2020 Source: Official website of MoH: https://ktki.kemkes.go.id/info/sites/default/files/KEPMENKES%20320%20TAHUN%202020%20TENTANG%20STANDAR%20		
National	Availability of documents that describe the characteristics of knowledge, skills and behaviour of midwives; as a reference for all parties who need to know and understand midwife competencies.	Midwives are required to have the competence to communicate effectively and build cooperation and collaboration with fellow midwives, other HCPs, patients and families, and the community. This competency is to support midwifery services provided by midwives independently, in collaboration and/or through referrals.
6. Indonesian Medical Council_obstetrician professional standards_2020 Source: Official website of Indonesian Medical Council: https://www.kki.go.id/		

National	To produce medical specialists who have academic and professional skills in providing services in the field of obstetrics and gynaecology	Competence to work in a healthcare team: Work effectively as a member of a team; Respect and appreciate the contributions of other medical professionals in daily interactions; Work effectively and efficiently within a healthcare organisation; Establish professional relationships with members of the healthcare team; Demonstrate a professional attitude both personally and interpersonally; and Contribute to interdisciplinary team activities. The educational process can be carried out using a comprehensive IPC-based interprofessional health education approach.
7. MoH_ CHC_ 2019 Source: Official website of BPK: https://peraturan.bpk.go.id/Home/Details/138635/permenkes-no-43-tahun-2019		
National	To realise an effective, efficient, and accountable public health centre in implementing quality and sustainable primary health services by paying attention to patient and community safety.	Puskesmas integrates and coordinates the implementation of public health and individual services across units (health professions) and sectors and implements a Referral System supported by Puskesmas management. To provide first-level public health services in their working areas, the Puskesmas collaborates with first-level Health Service Facilities and hospitals by coordinating health resources in the Puskesmas working areas.
8. Law of The Republic of Indonesia Number 36 Concerning HCPs_2014 Source: Official website of MoH: https://pgds.kemkes.go.id/filesa/peraturan/4.pdf		
National	To meet the community's need for HCPs; utilise HCPs in accordance with the needs of the community; provide protection to the public in accepting the implementation of health efforts; maintain and improve the quality of the implementation of health efforts provided by HCPs; and provide legal certainty to the community and HCPs	In carrying out practice, HCPs must adhere to the authority and competence they have. However, under certain conditions, HCPs can delegate authority to other HCPs with the condition that the actions delegated include the capabilities and skills possessed by the recipient of the delegation. Every HCP in practicing is obliged to comply with the Professional Standards and Professional Service Standards set by each professional organisation and the Standard Operating Procedures developed by the healthcare institution.

9. MoH_Minister of Health Decree no.836 concerning Guidelines for the Development of Performance Management for Nurses and Midwives_ 2005		
National	Improving the performance of nursing and midwifery professional services in hospitals and health centres	The development of performance management is not only aimed at nurses and midwives but also encourages group collaboration/teamwork between HCPs (nurses, physicians, midwives and other HCPs). Teamwork is one of the determinants of the success of health services.
10. MoH_ General guidelines for Posyandu management_2011		
National	Supporting the accelerated reduction of the MMR, infant mortality rate, and under-five child mortality rate in Indonesia through community empowerment efforts.	Posyandu is part of the implementation of Village Community Health Development. This is a health development strategy that applies the principles of G*otong Royong* (mutual cooperation) and community self-help, aiming that people can help themselves by identifying and resolving health problems carried out with HCPs across programs and across related sectors.
11. MoH_Mother and Child Health Book_2023 Source: CHC Archive		
National	As a means of information and documentation of examinations for pregnancy, childbirth, postpartum, newborns, and toddlers.	The direct involvement of physicians in ANC services, namely preeclampsia screening at the initial ANC visit and preparation for delivery in the third trimester, has the potential to strengthen collaboration between midwives and physicians in ANC services.
12. Sustainable Development Program: Quick Win Project POGI		
Profession organisation	Increasing government and public awareness about the importance of efforts to reduce maternal mortality.	Obstetricians, through professional organisations initiate community service programs with physicians, midwives, and nurses and involve health cadres. This program includes efforts to accelerate maternal mortality reduction, improve contraceptive services' quality, and use innovation and technology in reproductive health. Interdisciplinary collaboration is essential in achieving SDGs.
13. Health Office_Guideline of Integrated Development of Puskesmas_2021		
National	To provide a reference for district/city and provincial regional health offices in carrying out integrated development of the Puskesmas in stages according to their authority.	The principles applied in the development of the Puskesmas include: The development of the Puskesmas encourages teamwork between HCPs (nurses, midwives, physicians and other HCPs) and non-HCPs. Collaboration is one of the determinants of the success of Puskesmas development.

14. Puskesmas accreditation instrument_2021 Source: CHC Archive		
National	To foster Puskesmas in an effort to continuously improve service systems and performance that focuses on community needs, safety, and risk management.	Efforts to improve public health status cannot be carried out by the health sector alone but must be supported by sectors other than health. The head of the Puskesmas is responsible for building communication and coordination between HCPs and across sectors. Communication and coordination across programs and sectors are necessary for the success of achieving performance and need to be established with clear procedures through a mini-monthly workshop mechanism for cross programs, a quarterly mini workshop for cross sectors, or other coordination mechanisms.

5.4. Findings from integrated data analysis

In this study, the integration of interview data and document analysis was guided by the principle of triangulation. The triangulation process involved comparing findings identified in the interview data with findings from the document analysis. This comparison allowed for identifying alignment or discrepancies between what was prescribed in documents and what was experienced in practice, as described in the table 5.3. The table highlights key themes emerging from the interviews alongside corresponding references from document analysis, illustrating areas of consistency and divergence between formal guidelines and real-world implementation. This approach provides a clearer understanding of how interprofessional collaboration (IPC) is enacted in community maternity care and where systemic gaps may exist. The findings indicate that interprofessional collaboration (IPC) in community healthcare in Indonesia is deeply embedded in the cultural value of *Gotong Royong* (mutual cooperation), which fosters teamwork and spontaneous collaboration rather than being driven by formal structures. Both interview and document analysis findings highlight the significance of this collectivist culture in shaping IPC, along with the role of interprofessional education (IPE) in preparing healthcare professionals for teamwork, despite challenges in its implementation. While national policies emphasize community empowerment and integrated care, IPC remains largely informal due to the absence of specific regulations and structured training. This divergence suggests a gap between cultural practices and formal competency development. These findings will be elaborated into three key categories to provide a deeper understanding of the dynamics of IPC in the context of community healthcare services in Indonesia.

Table 5.3: Comparing document analysis and interview findings

Sub-categories	Convergence with interview findings	Divergence from interview findings	Researcher's interpretation
National cultural values as the basis of health policy and program implementation	There are no specific rules that regulate IPC, but it comes from the motivation of each individual to work together which - according to participant statements - is built by the value of *Gotong Royong* which is strongly held in social life and is brought into the work environment.		The findings of the document analysis strengthen this concept because it turns out that the culture of mutual cooperation is not only a normative value, but is formally the basis of the state's vision in carrying out national development programs. Thus, IPC in Indonesia is rooted in the national cultural value of mutual cooperation. *Gotong Royong* acts as the guiding principle in this strategy, reflecting the cultural values of Indonesia. Given the fact that there are no specific rules governing IPC, the value of mutual cooperation can be a big capital for Indonesia to implement IPC. The collaborative practice driven by a cultural value will tend to be normative and informal.

Table 5.3: Comparing document analysis and interview findings

Sub-categories	Convergence with interview findings	Divergence from interview findings	Researcher's interpretation
IPC as one of the HCP's core competencies.		The concept of spontaneous collaboration in the interview findings shows that most of the collaboration that exists between health professions at the Puskesmas just happens because they are used to working together. Collaboration is not a competency that must be learnt and mastered by each individual, but is a value that is the identity of the nation which has automatically been internalised in each individual.	Within the collectivistic culture that characterises Indonesian society, there may be a stronger emphasis on teamwork and consensus building. Healthcare professionals may be more inclined to work together harmoniously and make decisions collectively, thus fostering the natural nature of IPC environments. These findings can also be an indication of how HCPs interpret IPC in maternity services in the community. IPC is a form of cooperation that departs from same shared values, and believes that each profession has a unique contribution to make towards patient care and community well-being. This is a recognition that the strength of the healthcare system lies in the collective efforts of all healthcare professions to ensure the highest QoC. This finding indicates the lack of understanding of IPC as a formal competency for HCPs. This relates to the lack of implementation of interprofessional education (IPE) at the educational level.
The importance of IPE in encouraging effective IPC	From interviews it was found that IPE plays an important role in realising effective collaborative practice. Integrating IPC in the higher health education curriculum is considered an effort to prepare prospective HCPs to be able to work in health teams effectively.	The implementation of IPE curriculum in healthcare education is still limited	Through IPE, students learn to work together from the start of their education. When they enter the clinical environment, they have a strong foundation in IPC and have experienced working in a multidisciplinary team. IPE helps HCPs develop a better understanding of each profession's role and contribution to the care team. This helps overcome stereotypes or prejudice against other professions, thus promoting respect for different roles within the team. Integrate IPE in education curriculum is challenging in terms of funding, scheduling, facilities, and human resources

Table 5.3: Comparing document analysis and interview findings

Sub-categories	Convergence with interview findings	Divergence from interview findings	Researcher's interpretation
Integrated care through community empowerment	Interview participants emphasised the importance of patient, family, and CHW involvement in a maternity team collaboration.		The need for active involvement of the community, especially CHWs, in community health efforts is a characteristic that differentiates health services in CHCs/CHCs and hospital settings. This condition is driven by the main role of the CHC as a provider of prevention and health promotion services which often interact directly with the community. Community engagement is further strengthened by government policy on community empowerment as a strategy to achieve national health development targets. This strategy will encourage collaboration between HCPs and the community.
Complex interaction within Inter-professional teamwork	In achieving community health service goals, CHCs need to build partnerships with external parties such as hospitals, independent midwives, health offices, HCP organisations, CHWs and agencies outside the health sector such as local governments, village offices and the community.		Different from the hospital context, IPC in the context of maternity services in the community creates a broad scope of collaboration, including inter-professional and cross-sectoral teamwork. This cannot be separated from the complexity of primary care in the community, which is at the forefront of health services. The active participation of the community is the key to the success of the national health program.

As displayed in Table 5.4, three categories emerged from an integrated analysis of the data collected through interviews and document analysis: (i) From Inter-professional Collaboration to Cross Sectoral Collaboration: a spectrum of maternity IPC in the community; (ii) Value-Based Teamwork: IPC reflecting the national cultural value of *Gotong Royong*; (iii) Dynamic relationships: the complex interaction within inter-professional teamwork. Each category is presented in detail, supported by evidence from both data sets. Participant quotes from the interviews are used to highlight personal experiences and reflections, while information from the document analysis is incorporated to situate these experiences within broader systemic and cultural contexts. These findings provide the foundation for the conceptual model developed in the subsequent discussion, linking the data to the broader theoretical and practical implications of the study.

Table 5.4: Categories and sub-categories identified in the integrated analysis of interviews and document analysis

Categories	Sub-categories
From Interprofessional Collaboration to Cross-sectoral Collaboration: a spectrum of maternity IPC in the community.	Maternity community care as a complex system
	Cross sectoral Collaboration as a strategy to deal with complexity
	Community empowerment as a strategy to improve collaborative participation
Value based Teamwork: IPC reflecting the national cultural value of *Gotong Royong*	Cultural values construct the meaning of community IPC
	Integrated antenatal care: The form of Value based teamwork
Dynamic relationships: the complex interaction within inter-professional teamwork	Inter-professional tension
	Transforming tension into connection

This chapter unpacks the three identified categories and their sub-categories in more detail, including the convergence and divergence of the findings from the interviews

and document analysis. Following this, the emergent theory of Collective Oriented Collaboration as a conceptual model of IPC in maternity care in the community context is presented.

5.4.1. Category 1. From Interprofessional Collaboration to Cross-sectoral Collaboration: A Spectrum of maternity care IPC in the Community

This category describes the forms of collaborative practice in the context of community MC, aligned with Indonesia's health development goals. As discussed in Chapter 1, national health goals, in alignment with the SDGs, emphasise improving maternal and child health outcomes through strengthened healthcare systems and enhanced IPC. The data shows the complexity of PHC in the community. The complexity described by interview participants refers to a complicated and dynamic health system that creates uncertain conditions that require various interventions to resolve them.

Document analysis supports and provides context to this finding, by highlighting the government's strategy for community healthcare. This strategy addresses the complexity of services by involving multiple sectors and promoting community empowerment. These efforts make community-based health services distinct from those provided at secondary or tertiary levels, such as hospitals or specialised private clinics, where services are often more centralised and less integrated with local community initiatives. This approach creates a broader spectrum of collaboration, involving HCPs across organisations, even involving parties outside the health sector (i.e., C-SC).

5.4.1.1. Maternity community care as a complex system

The findings of this study suggest that maternity services in the community occur as a complex system. In this context, the system consists of human resources, buildings, health services, health facilities and equipment, and a network forming a unified whole that supports the implementation of quality maternity health services. These then becomes a complex system where each component has diversity, giving rise to so many interacting parts that it is difficult to predict the behaviour of the system. Document analysis revealed that CHCs have various tasks and functions, and to carry out their duties, especially those related to public health efforts, CHCs need to collaborate with parties outside the CHC:

> "In carrying out the function of organising first level public health efforts in its work area as intended in Article 5 letter a, the CHC has the authority to:
>
> ... collaborate with first level Health Service Facilities and hospitals in its work area, through coordinating health resources in the work area Public health centre;
>
> ...encourage and mobilise the community to identify and resolve health problems at every level of community development in collaboration with regional leaders and other related sectors…". (Minister of Health Regulation No. 49 of 2019 concerning CHCs)

This means that the complexity of care provided by the CHC need the involvement of various external parties, giving rise to the complexity of relationships:

> "(3) The CHC network as intended in paragraph (1) consists of community-based health efforts, school health efforts, clinics, hospitals, pharmacies, laboratories, independent practice places for HCPs, and other Health Service Facilities". (Minister of Health Regulation No. 49 of 2019 concerning CHCs)

This is supported by the interview findings. Participants viewed maternity health services in the community as a complex system in terms of conditions of pregnant

women with varying needs (complexity of case), variations in tasks and responsibilities (complexity of service), and various professions that must be involved (complexity of relationship) to meet the needs of pregnant women. Limited resources in PHC are faced with system complexity causing uncertain and unpredictable conditions.

According to interviewees, the "complexity of case" refers to the pregnant woman's condition with multiple health issues or needs, and aspects of the individual woman that challenge the HCPs to provide care. A midwife participant described the term complex case as the high-risk pregnant women who required involvement of multiple health professions for their care. As described:

> "Here [CHC] sometimes we also deal with complex cases. Usually, I consult a physician if I find a high-risk pregnant woman with certain conditions. I convey the results of my examination and laboratory results for diagnosis by the physician. After that we make a plan of action for the patient. If needed, we refer patients to the hospital". (Midwife 4, Urban)

Apart from the woman's health condition, participants construed cases as "complex" in relation to problematic socio-cultural aspects pertaining to women. The patriarchal culture that predominates makes pregnant women depend on their husbands for decision making. This culture of patriarchy places husbands in a dominant position in terms of decision-making power, while women lack autonomy in determining their reproductive health decisions.

> "...before making a referral to the hospital, I asked for informed consent from the patient. Usually, the patient leaves the decision to her husband. Even if she is not with her husband, the pregnant woman will ask for time to contact her husband and ask for his permission". (Midwife 2, Rural)

In some cases, as the husband is the final decision maker, complex and emergency treatment for complicated pregnancy issues can be delayed, which hampers timely delivery of care and which can lead to a worsening of the health condition of pregnant women. The dependence of women on their husbands in making decisions about their health was also found to be a barrier to HCPs seeking to provide optimum care.

> "... they [pregnant women] must leave the decision to their husbands. I once had a patient whom I would refer to the hospital because she was diagnosed with preeclampsia and had a history of caesarean section. She refused to be referred that day because she wanted to discuss it with her husband first. Until now she has not come back to check. If it's like this, I can't do anything". (Midwife 3, Rural)

Complex cases were found to result in complex services which were defined by interview participants as a specialised or advanced maternity service that involves multiple specialists, technologies, and procedures to diagnose, treat, or manage a particular pregnancy condition. For example, in the case of pregnant women with HIV (Human Immunodeficiency Virus) who require referral procedures for periodic laboratory examinations, antiviral therapy, and elective birth control planning to reduce the risk of HIV transmission from mother to baby, one participant described her experience:

> "...if the pregnancy is classified as low risk, the mother will be fully managed by a midwife. But it is different for pregnant women with high risk, as I found several months ago. Midwives reported cases of pregnant women with HIV. The treatment given is different to low-risk pregnant women. There is special management for this case, such as periodic blood checks, HIV therapy, and the delivery will be carried out via CS [caesarean section]. Of course the service is more complicated". (Physician 3, Urban)

Interview participants also emphasised the existence of complex relationships that develop from the provision of complex services. Management of high-risk pregnant women include various experts with certain specialisations according to the mother's

needs. In addition, referrals are made to higher health facilities to meet the mother's need for more adequate facilities and technology. This means that HCPs at the CHC must liaise with various health professions not only at the CHC, but also at the hospital. One participant shared the following experience:

> "We once received a pregnant woman with mental disorders and complications from bartholinitis. She had no husband or family and no health insurance. For me, this case was an unforgettable experience. My team and I had to refer the mother to the hospital and deal with the social office regarding with financing. The process is quite long and time-consuming, it's not easy to connect with other agencies. Very complicated". (Midwife 1, Rural)

Furthermore, a midwife suggested that to achieve quality public health services, CHCs need to build cooperation and good relationships with related parties, considering the complexity of services and the diversity of characteristics of the communities served:

> "In the regular monthly meeting, I proposed to the head of the CHC to establish good cooperation with regional hospitals, village heads and related agencies so that when we get complex cases it will be easier if we have to deal with other parties". (Midwife 2, Rural)

To conclude, maternity services in the community are a complex system that includes case complexity, service complexity and relationship complexity. The three are interconnected, whereby one complexity will subsequently give rise to other complexities. To deal with this complexity, the findings of this research suggest that there is a need for collaboration with various related parties. Complex systems and the need to collaborate with many parties, form a specific context for community maternity services. The next sub-category will explain C-SC as a strategy for dealing with system complexity in maternity services.

5.4.1.2. Cross-Sectoral Collaboration (C-SC) as a strategy to deal with complexity

Puskesmas is the spearhead of PHC facilities in Indonesia that provides preventive, promotive, and curative care at the sub-district level, focusing on both the community and individual:

> "…the function of the Puskesmas is to provide comprehensive basic healthcare (promotive, preventive, curative and rehabilitative), community empowerment in the health sector (community involvement and empowerment), and multi-stakeholder involvement in the context of joint action". (MoH_strategic plan_2020).
>
> Article 49
>
> (1) Apart from having a working relationship with the district/city regional health service as intended in Article 48 paragraph (1), the Puskesmas has a working relationship with hospitals, as well as other Health Service Facilities, community-based health efforts, and other related cross-sectors in the region. works as a network of CHCs.
>
> (2) The working relationship between the Puskesmas and the hospital is in the nature of coordination and/or referral in the field of health efforts.
>
> (3) The working relationship between the Puskesmas and other Health Service Facilities and community-based health efforts is in the form of guidance, coordination, and/or referral in the field of health efforts.
>
> (4) The working relationship between the Puskesmas and other related sectors as a network is coordinated in the field of health efforts.
>
> (5) Coordination in the field of health efforts as intended in paragraph (2), paragraph (3), and paragraph (4) is carried out in the context of implementing complete health efforts". (Minister of Health Regulation No. 49 of 2019 concerning CHCs)

To achieve the envisioned "comprehensive care", CHCs implement integrated care approach, one of which is in maternity services, namely integrated ANC. Integrated ANC does not only involve several HCPs in the CHC, but also involves the community and other health sectors to meet the health needs of pregnant women according to the

unique conditions of each woman. Figure 5.1 illustrates the involvement of various health sectors in the provision of ANC services.

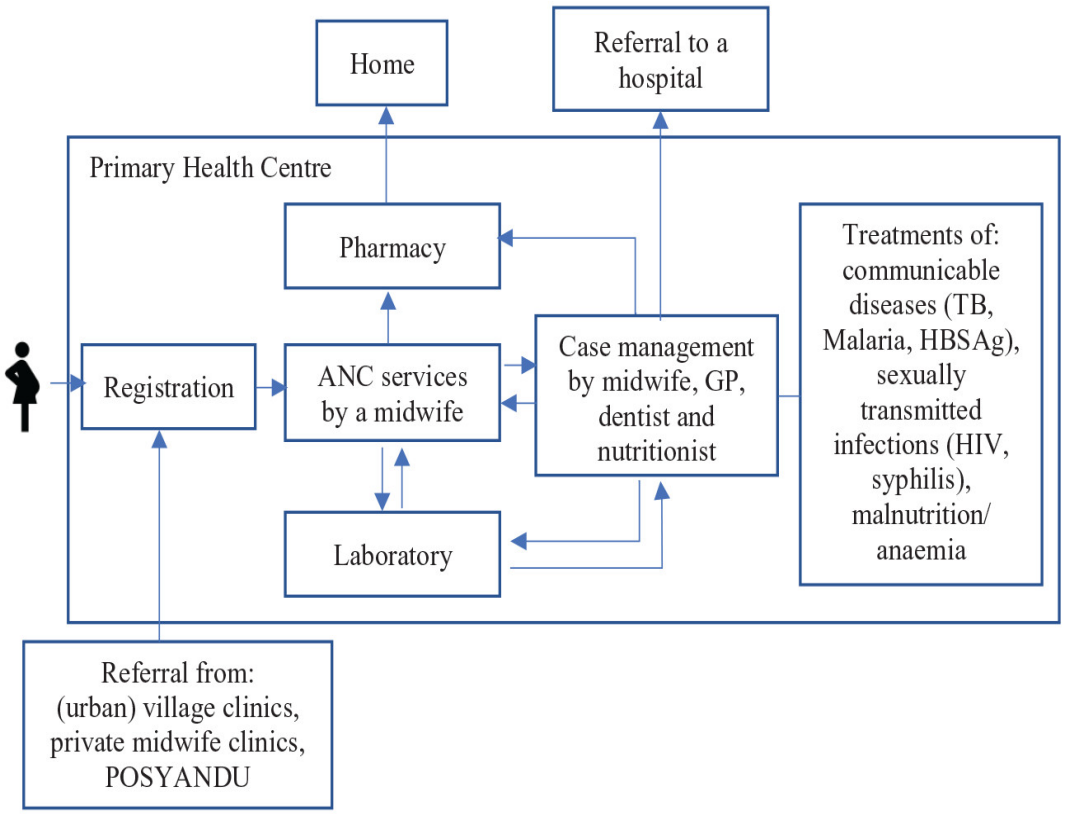

Figure 5.1: The involvement of various health sectors in the provision of ANC

Source: MoH_Guidelines for Integrated Antenatal Services_2020

Institutional collaboration between CHCs and hospitals is very important. ANC services are inseparable from the hospital referral system, especially for pregnant women with complications that cannot be handled by the interprofessional team in PHC. The government supports improving the quality of referral services through the PONED-PONEK Collaborative Improvement program in 2013. This program is a collaboration between the PONED health centres (Basic Emergency Obstetric Neonatal Services) and PONEK (Comprehensive Obstetric Neonatal Emergency Services) hospitals to create an integrated referral system by building a network of

emergency services and wireless communication at each CHC and village midwife in the area of the hospital:

> "Comprehensive on PONEK, should be interpreted as a service without walls and must be proactive. How the hospital as static medical institutions can also provide services for the people within the coverage area of their work area. The management of patients who are referred to the hospital does not start from the moment the patient enters the emergency department or functional service unit Obstetrics or Perinatal Unit, but rather since the patient is recognised and treated by HCPs at the community level. Conditions like this can only be done if HCPs or primary health facilities are part or network of hospital services". (Guidelines for Implementing CHCs Capable of PONED)

The PONED-PONEK "Collaborative Improvement" program supports the establishment of collaborative institutions and continuity of care for patients to promote good outcomes from ANC services. In line with the findings in the document analysis, interview participant stated that the complexity of services at the Puskesmas differentiated it from other health services such as hospitals. Community health efforts of the Puskesmas were geared towards preventive and promotive care, while the primary care focused more on outpatient and inpatient services as well as home care. The complexity of the functions and duties of the Puskesmas made the Puskesmas a health facility that engaged multiple stakeholders to achieve service goals. For example, in carrying out Posyandu activities, the Puskesmas cooperated with village officials, the health office and CHWs, as stated by a participant:

> "I think everyone agrees that IPC is collaboration between several health professions to produce quality services. This collaboration is very much needed, especially in Puskesmas as primary health service providers that include promotive, preventive, and curative efforts. In contrast to hospitals that focus on curative efforts, Puskesmas have a major role in disease prevention efforts, such as screening pregnant women at the initial ANC visit. There are also health promotion efforts by holding health education in the community. To realise all these efforts, Puskesmas need to cooperate with relevant external parties". (Head of Puskesmas 1, Rural)

Participant midwives shared their experiences working with GPs and obstetricians in dealing with high-risk pregnant women. Participants emphasised that the level of complexity of the problem affected the form of collaboration between professions. In the context of maternity services, the more severe the complications experienced by the patient, the higher and more diverse professional expertise is needed. This opened the opportunity to collaborate with higher health system or agency.

> "Services at the Puskesmas also make it possible to collaborate with hospitals to get services with more adequate facilities. Like the case I'm working on. A pregnant woman who three days ago had moderate anaemia. given iron tablets. This morning she was brought by her family in a state of unconsciousness. After blood tests, the diagnosis was severe anaemia. I made an external referral to the hospital". (Physician 2, Rural)

The government facilitated a communication system, such as the technology-based X (SISRUTE) application, which was designed to simplify the referral process between health facilities. However, its use has not been effective or efficient, and HCPs at CHCs still face many obstacles when referring patients to hospitals. It turned out that the referral process was complicated in some locations, leading to a manual referral process. HCPs who had difficulty using this application to refer pregnant women chose an interpersonal approach by directly contacting the obstetrician on duty at the destination hospital. As experienced by participants:

> "The government has released the SISRUTE application to accelerate patient referral services to hospitals. But we actually find it difficult to use this application. In addition to the internet network, which is sometimes unstable, we have to wait quite a long time to get referral approval from the hospital through this application, even though in certain cases we must immediately refer the patient. Finally, we choose to contact our partner obstetrician directly". (Physician 1, Rural)

Even though an integrated referral system has been established, cases of rejection of referrals still frequently occurred due to inadequate hospital bed facilities. Moreover,

communication via the system was also often hampered by unstable internet connections in certain areas. This condition can certainly harm the outcome of emergency patients.

> "I am quite familiar with this system [integrated referral system/ SISRUTE]. But sometimes it's not effective. It takes quite a long time to wait for a response from the hospital, it is often rejected on the grounds that the room is full". (Midwife 1, Rural)

This finding showed that the success of collaboration was not only determined by the HCPs involved, but also determined by the availability of facilities.

Apart from hospitals, integrated ANC services at CHCs also collaborate with HCP associations. Another participant added that to achieve the goal of optimal ANC services, the Puskesmas collaborated with outside parties to create joint health service programs, such as the Preeclampsia screening program in collaboration with POGI. The midwife at the Puskesmas invited obstetricians to conduct examinations and consultations for pregnant women.

> "Actually, it's already stated in the KIA (Mother and Child Health/MCH) book 2020 that we have to collaborate. One of the national program listed in the MCH book is the Pre-eclampsia screening. We (POGI) have trained GPs, midwives and nurses in PONED health centres in managing pre-eclampsia facilitated by the MoH. This program is a bit limping during the pandemic because everyone is focused on dealing with Covid". (Obstetrician) (POGI 1)

In addition, there was the "*Jantung Hati*" ("X") program, which assisted high-risk pregnant women involving village officials and CHWs. The Puskesmas midwife created a WhatsApp group as a means of communication and information to monitor the condition of pregnant women, and made home visits with CHWs. Midwives also reported data on high-risk pregnant women to village officials so they could assist pregnant women (especially providing transportation) if the patient has an emergency.

> "In our work area, there are quite a lot of cases of high-risk pregnant women. We created an innovation called 'Jantung Hati', which is based on the principle of not letting high-risk pregnant women go unchecked, resulting in death. So, if it is found that high-risk pregnant women are approaching delivery, collaboration is immediately carried out with the local village head and local CHWs. we make home visits, monitor through WhatsApp groups, and do planning that includes preparation for referrals, going to the hospital, preparing for delivery until going home. Subsequent home visits were conducted by CHW. Village officials will also provide assistance". (Midwife 2, Rural)

In addition, the midwife participants agreed that good coordination between the CHC (HCPs) and the local government (village heads) could create appropriate health programs for the community to improve community health. One participant described her experience:

> "... Apart from that [regular meetings at Puskesmas], I also often attend meetings in sub-districts with village heads, CHWs, and community representatives. It's called the Village Community Deliberation. Together we identify maternal and child health problems in the community, find solutions, and create a priority scale in solving the problem. The results of this meeting will be one of the bases for creating a village health program". (Midwife 3, Rural)

Findings suggest that different sectors have unique resources, including funding, expertise, technology and infrastructure. Cross-sectoral collaborative efforts enable the efficient collection and utilisation of resources, making it possible to address complex problems that may require a higher level of service.

5.4.1.3. Community empowerment as a strategy to improve collaborative participation

Collaborative practice in ANC services can also include community IPC, in which the community is actively involved in improving health service quality. Community health services are provided in the home, CHCs, outreach locations and clinics. Community participation is in accordance with Indonesia's health development strategy, namely community empowerment with a family approach. The

community is not only the object of health services but also partners with HCPs in finding health problems, planning treatment, and evaluating health services.

> "The National Health System will function optimally if it is supported by a community empowerment sub-system that empowers individuals, families, and communities. The community, including the private sector, is not solely the target of health development, but also the subject or organiser and actor of health development. With the family approach implemented, the community empowerment subsystem must be strengthened by developing activities that reach out to families, groups and communities". (Regulation of the Minister of Health of the Republic of Indonesia Number 39 of 2016 About Guidelines for Implementing the Healthy Indonesia Program with a Family Approach)

"Community empowerment" encourages collaboration between HCPs and various sectors which can help build health awareness and active community participation to achieve Public Health goals, as mandated by the MoH:

> "For community empowerment efforts, HCPs are needed who are able to mobilise the active participation of various parties, namely across related sectors, HCP organisations, community and religious figures, the private sector, Non-Governmental Organisation/concerned communities, mass media in their work areas so that they are willing to play a role in efforts to mobilise target demand, so that the community knows, wants and is able to utilise the emergency maternal (pregnant women)/neonatal (newborn babies) health services provided". (Guidelines for Implementing PONED Capable CHCs) (MoH, 2013)

One of the community empowerment-based maternal and child health programs is Posyandu (Integrated Service Post), which is a form of Community-Based Health Efforts (UKBM) managed and organised from, by, for, and with the community in implementing health development to empower and facilitating the community in obtaining basic health services. Puskesmas facilitate Posyandu in collaboration with Kader (CHWs) who work voluntarily, with the principle of *Gotong Royong*:

> "Community health workers are community members willing, able and have the time to organise Posyandu activities voluntarily". (General Guidelines for Posyandu Management, 2013)

The general guidelines for Posyandu management include dividing tasks between HCPs and CHWs in implementing Posyandu:

> "In Posyandu, the healthcare team (usually midwives and physicians/nutritionists/public health experts) is tasked with supervising and serving as counsellors for pregnant women with certain conditions, while *kaders*, who have been previously trained, will check blood pressure, height, and weight". (General Guidelines for Posyandu Management, 2013)

Still, there is no explanation about the position of CHWs and other parties in the collaboration team, considering that many parties are involved in program implementation, including village officials, community leaders, health offices, and the private sector.

CHWs are individuals selected by members of their own community to serve as frontline HCPs. This process ensures that CHWs have a deep understanding of the community's cultural norms, needs, and challenges. Their selection by the community itself fosters trust and acceptance, enabling them to act as effective intermediaries between formal healthcare systems and community members. It reduces the communication gap socially as well as culturally.

> "The presence of CHWs greatly helped me. Once a CHW reported that several pregnant women had not visited and were not registered at the Puskesmas, even though I had already carried out health promotions regarding ANC examinations in that area. Then the CHW approached the pregnant woman to check her pregnancy at the Puskesmas, and she was successful". (Midwife 5, Urban)

Participants really appreciate the important role of CHWs in helping the task of HCPs to improve public health. Participants suggested giving rewards to CHWs as a form of appreciation for their invaluable work. This is considered to be able to strengthen cooperation between HCPs at the Puskesmas and CHWs.

> "The CHWs work voluntarily, even though it is not an easy task. I want to propose to the head of the Puskesmas to give rewards to CHW, for example by giving priority to services for them when they need Puskesmas services". (Nutritionist 1, Rural)

Participants also added that CHWs are typically an intrinsic part of their communities, living in the villages they serve, making it easier for them to assist and respond quickly to the needs of community members. This condition gave rise to great trust from community members in CHWs, even exceeding their trust in HCPs. This seems to be a concern for HCPs, especially midwives as the person in charge of community-based maternity services who feel that their professional role is threatened:

> "It can be said that CHWs play a very important role in the community. Starting from Posyandu activities, distribution of vitamin A for toddlers, child immunisation, assisting the referral process, assisting pregnant women, to recording public health data. Their health promotion is also very easily accepted by the community, because they are part of the village community, they often interact with villagers... so it's easier to influence the community. But I always remind them to tell me everything related to the health of mothers and children in this village because I am in charge and responsible for that here". (Midwife 1, Rural)

> "Services in the community usually involve midwives, nutritionists, nurses, and public health experts, assisted by CHW. But it is CHW who are more intense in interacting and providing health services in the community. Sometimes I also remind midwives who often delay patient home visits or supervision of Posyandu activities, that you (midwives) must appear and build trust with the community, don't lose to CHW". (Head of Puskesmas 3, Urban)

Participants emphasised the importance of training and supervision from HCPs to CHWs in carrying out their duties. The training facilitated by the local health office provides skills and knowledge to CHWs so that they can carry out their duties with confidence. However, they still have to get supervision from the health centre staff. This leads to the better integration with the health system.

> "They [CHWs] receive regular training from the health department. In my opinion, this is very important considering they do not have a health background. This is also related to public trust in CHWs services". (Nutritionist 3, Urban)

> "...for example, the collaboration of midwives with CHWs in Posyandu activities. CHWs check blood pressure, weigh weight, and measure height. They have received this training before. Midwives serve as supervisors and counsellors for pregnant women who have problems". (Midwife 5, Urban)

Recognising the importance of the role of CHWs in society, participants agreed that CHWs are entitled to a salary as compensation for the time, thought and effort they expended in efforts to improve community health. However, in reality, not all CHWs get a salary, depending on local government policies.

> "CHWs are recruited voluntarily by the local government, they do not receive a fixed salary, only cash incentives for Posyandu activities". (Midwife 6, Urban)

> "There are about six CHWs in this village, each month they get an incentive of one hundred thousand rupiah". (Midwife 2, Rural)

Overall, the findings reveal that the strategic position of CHWs, situated between the formal health system and the community, highlights their potential to address relationship complexity in community-based MC. CHWs act as bridges, facilitating communication and collaboration between HCPs and community members. The findings suggest that engagement with community members, responsiveness to their needs, and the ability to foster public trust are critical for CHWs to navigate relationship complexity effectively.

Public trust serves as a foundation for teamwork and collaboration, enabling CHWs to mediate and align the goals of HCPs with the needs of the community. Additionally, the willingness of HCPs to collaborate with CHWs is influenced by their understanding of CHWs' roles and contributions, underscoring the importance of role

clarity in managing relationship complexity. The findings also emphasise the role of local government in supporting CHWs through training and incentives, which are crucial for equipping them to manage complex relational dynamics.

Interview findings also demonstrate the importance of woman and family involvement in community collaborative teams. Some of the participants even felt that collaborative practice was more meaningful while working in and with the community, because collaboration between health professions occurred simultaneously, and service users were also actively involved. The simultaneous presence of the health team with service users made it easier for the health team to plan follow-up actions and pregnant women get complete information.

> "We also collaborate on home visit activities. I examined pregnant women, the nurse gave health education regarding the condition of pregnant women, then the three of us planned our next visit". (Midwife 7, Urban)

Participants suggested that service users must be actively involved in the IPC team. Women were not only objects of health services, but they had a responsibility to take ownership of their health and care, which included knowing about their health conditions, expressing needs, and making decisions for appropriate care. The active role of the patient as a team member in synergy with HCPs supported the achievement of comprehensive services with the principles of woman-centred care:

> "I think IPC is not only about the relationship between HCPs, but also between HCPs and patients. They are also part of the team. The goal of this integrated ANC will be achieved if they have the awareness to routinely carry out ANC at the Puskesmas, they actively ask and give input in every decision making. It's about their health. They must have awareness to strive for themselves and their baby". (Physician 1, Rural)

Knowledge level and socio-economic status also seem to influence the woman's role in the IPC team. Women with low health literacy tended to leave the decision to HCPs.

They believed that HCPs knew what was best for them. In contrast, women with a high level of knowledge and socioeconomic status were more critical in advocating for their healthcare rights, questioning every procedure of action, and asking for options/alternative services. As the following experienced participant recalled:

> "... during my eight years working here I don't think there are any significant technical problems. I feel comfortable working with cooperative colleagues. For services in the community, I think health education needs to be improved. I noticed the patients here are very passive. and tend to leave all decisions to HCPs. Maybe because the average villager is in the middle to lower socioeconomic and educational status. This is different from when I work in the city, patients tend to be active". (Nutritionist 2, Rural)

5.4.1.4. Summary

To conclude this category, community MC is found to be a complex system so that it forms a wider collaborative team. The study findings suggested that cross-sector involvement and community empowerment were needed as strategies to achieve primary service goals in the community. In the policy document regarding Posyandu, the government demonstrates its commitment to involving the community not merely as passive recipients of health services (objects) but as active participants and contributors (subjects) in efforts to improve public health notably through the role of CHWs. However, interview participants highlighted the need for the government to facilitate CHWs more effectively in carrying out their duties, particularly by providing appropriate training and incentives. The findings suggest that recognising and valuing CHWs' contributions to society through proper support not only enhances their motivation but also strengthens their collaboration with HCPs, ultimately contributing to improved public health outcomes.

5.4.2. Category 2. Value-Based Teamwork: IPC Reflecting the National Cultural Value of Gotong Royong

This category explains HCPs' understanding of collaborative practice in community services, including the meaning of IPC, the character of IPC in maternity services in the community and the importance of implementing IPC in the health system. Participants interpreted IPC in a community context as collaboration between HCPs and communities based on the social value of *Gotong Royong*, characterised by a sense of mutual need, reciprocal relationships, and volunteerism to achieve common goals.

Indonesia's *Gotong Royong* philosophy promotes collective, cooperative, and consensual social interaction. *Gotong Royong*, which literally means "mutual assistance", denotes social solidarity inside the smaller social networks of the community. *Gotong Royong* is understood as a duty owed by a person to society with the goal of shared burdens among community members, which leads to trust building, friendships, and conflict prevention. In its application in society, *Gotong Royong* is an activity of community cooperation in various fields of development aimed at strengthening community unity and integrity and increasing the community's active role in the nation's development. This culture has played a significant role in various aspects of life in Indonesia, including the health sector. Moreover, the value of *Gotong Royong* then builds upon and gives meaning to the practice of collaboration between HCPs in Indonesia as described in the following sub-categories.

5.4.2.1. Cultural value constructs the meaning of community IPC

This sub-category explains the definition and character of IPC in community services, which is based on national cultural value, informed by the policy document analysis findings, and strengthened by the participants' statements.

Indonesia is a highly diverse country in terms of its rich ethnic and cultural composition, yet it also reflects common national cultural attributions that span the local wisdom of particular constituent areas to reflect the national character. One of the common, unifying features of Indonesian culture is *Gotong Royong*. Indonesian society has adopted a mutually cooperative way of life to survive and grow since ancient times, in the face of challenging natural phenomena such as earthquakes, tropical flooding, and volcanic eruptions.

This is also evident in approaches to daily living, whereby every person understands that many tasks are too complex to complete independently. Therefore, the solution to such demanding tasks is mutual cooperation, which allows everyone to participate voluntarily and receive fair rewards. For the sake of all, mutual cooperation will provide a solution to shared problems. The principle of mutual cooperation is not only applied in social life but also in state administration. Based on the document analysis findings, in the government context, the fundamental value of *Gotong Royong* forms the basis for implementing state development in all sectors. As the President's vision stated in the MoH's "Strategic Plan":

> "The realisation of an advanced Indonesia that is sovereign, independent and displays attributes, based on *Gotong Royong*". (MoH Strategic Plan, 2020)

This vision is broken down into health service programs implemented with the *Gotong Royong* principle in national health development. The cultural values of *Gotong Royong*, inherited from ancestors and attached to them from generation to generation, are considered to play a significant role in supporting development for the welfare of society or community. Mutual cooperation encourages participation and shared responsibility of the citizens concerned in every development effort, both physical and

non-physical, and of local community life areas. On this basis, the government has made mutual cooperation a principle in one of its community health policies:

> "… The MoH of the Republic of Indonesia in 1975 established the Village Community Health Development (PKMD) policy. What is meant by PKMD is a health development strategy that applies the principles of mutual cooperation and community self-help with the aim of allowing the community to help itself, through the recognition and resolution of health problems carried out with HCPs across programs and across related sectors. The introduction of PKMD in 1975 preceded international agreement on the same concept, known as PHC, as stated in the Alma Atta Declaration in 1978". (General Guidelines for Posyandu Management, 2011)

The document statement above also indicates policies that encourage collaboration between related parties. The principle of mutual cooperation has implications for the involvement of various parties to work together to support the achievement of policy objectives. This can also be seen in the implementation of the National Health Insurance (JKN) program.

With a population of 262 million people spread across 17,744 islands, Indonesia presents a unique challenge to the health and insurance system. The current JKN system is focused on increasing equity of health and access to services, which is managed by a public agency called the Health Social Security Administration Agency (BPJS Kesehatan). In its implementation, BPJS applies the principle of *Gotong Royong* in accordance with the mandate of the national development vision set by the President.

The *Gotong Royong* principle in the JKN program includes financing and providing health services. In terms of financing, all citizens must become members of the BPJS and pay contributions according to their monthly income. With a cross-subsidy system, the rich will help the poor, the healthy will help the sick:

> "…Through this principle of *Gotong Royong*, social security can foster social justice for all Indonesians". (Presidential Regulation No. 82 of 2018 concerning Health Insurance)

In terms of health facilities, BPJS requires IPC by involving various HCPs as collaborators across sectors in providing health services in health facilities. This is an effort to provide comprehensive and quality health services:

> "Article 3
>
> (1) First-level health facilities that cooperate with BPJS Health must provide comprehensive health services.
>
> (2) Comprehensive health services as referred to in paragraph (1) in the form of promotive, preventive, curative, rehabilitative health services, midwifery services, and Medical Emergency Health Services, including supporting services which include simple laboratory examinations and pharmaceutical services in accordance with the provisions of laws and regulations invitation.
>
> (3) In implementing comprehensive health services as referred to in paragraph (1), for Health Facilities that do not have supporting facilities, it is obligatory to build a network with supporting facilities.
>
> (4) In the event that supporting services other than supporting services as referred to in paragraph (2) are needed, they can be obtained through referrals to other supporting facilities". (Regulation of the Minister of Health of the Republic of Indonesia No. 71 of 2013 concerning Health Services and National Health Insurance)

In the context of maternity services, BPJS encourages the integration of MC services, which involves multiple maternity HCPs working together to provide comprehensive care. This integration can include collaboration between midwives, GPs, obstetricians and other HCPs to ensure that pregnant women receive holistic care.

The findings of the document analysis above show the strong influence of the cultural philosophy of mutual cooperation in social and state life. This value is the basis for implementing national development programs, including in the health sector. The implementation of a culture of mutual cooperation in national health programs

encourages collaboration between all parties involved. Even though it is not written explicitly, Indonesia's health policies and programs lead to collaborative practice based on the nation's cultural values, namely *Gotong Royong*.

These document analysis findings support and explain the findings of interviews with several HCPs from various professions regarding definitions and their perceptions of IPC. In the interviews, when asked about the definition of IPC, most participants stated that the collaboration between health professions had occurred spontaneously, driven by social values internalised in each individual. Participants considered collaborative practice as a work culture, namely cooperation and helping each other. They tended to use a social perspective by seeing all HCPs at the CHC where they work as one community unit even though they consisted of different professions, as illustrated in the following statement:

> "I think we have implemented this [IPC] in the Puskesmas...it's like...spontaneously. We are used to helping each other, working together. as has become the work culture here, regardless of profession. Maybe it's because of our society's culture of [*Gotong Royong*]". (Nutritionist 1, Rural)

> "I don't understand the exact definition of IPC. Simply put, several different health professions work together to treat a patient's health problem. If you ask about how it is implemented in the Puskesmas, I think the staff here are used to working together. As social and religious beings, of course, we realise that in living our lives we need the help of others, as well as in the context of work. Especially at the Puskesmas, which are very busy with a limited number of staff, we automatically help each other". (Public Health Practitioner 3, Urban)

Interview participants realised that as social creatures, they would need each other. They viewed their relationship as interconnected and complementary and suggested that this interdependence fosters a sense of shared responsibility and commitment to common goals in collaboration.

> "…. for example, when I had a coordination meeting in the Health Office while at the same time I had a schedule of providing additional food for pregnant women. I asked the midwife to help me with the additional food. On other occasions, I help the midwife with her tasks". (Nutritionist 3, Urban)

Participants implied good communication in their collaboration practices. Although they had formal meetings held regularly every month, most participants felt that they communicated informally more often, and it was found that informal communication approaches tended to be effective in building closeness for IPC in the CHC setting.

> "We have regular monthly meetings to discuss services in general. But more often talk casually during breaks. We often have lunch together during breaks, or if there are many patients, we eat together after the service hours are over". (Nurse 4, Urban)

Participants revealed that working environmental conditions influenced the interpersonal closeness of HCPs, which impacted communication between them. The number of staff tended to be small; they met almost every day in a small building, making it easy for them to get to know each other and foster interpersonal closeness. This can support effective communication.

> "Yes, because every day we meet… at the office. Moreover, the Puskesmas building isn't that big, right, our rooms are close together, so it's easy to meet up. If he [the nutritionist] is not in his room, I usually make a phone call". (Nurse 2, Rural)

Several participants stated that they saw each other as colleagues at the Puskesmas, or as "neighbours" because their houses were all nearby. The intensity of these frequent encounters made it easy for them to communicate and feel comfortable working in the local Puskesmas.

> "There is no [communication] problem, sometimes we chat directly at the office, sometimes via WhatsApp. Sometimes we also meet at community gathering events. I am neighbours with Mrs. H. Mr. J's house is also only five houses away from mine. Yes, all the staff live in K Village. Our home is close to the Puskesmas. At the office, I meet

> them and sometimes meet them again as a neighbour after work". (Physician 2, Rural)

The interview data suggested that the closeness built between individuals created a sense of fraternity in the relationship between professionals at the CHC. The limited number of HCPs in CHCs (which was considered a challenge in providing services in the community) was seen positively by participants by fostering closer rapport. They thought that the number of staff was not too large, making it easier for them to get to know one another and build interpersonal closeness. This condition then created an atmosphere of brotherhood in the work environment, regardless of professional differences, so that it can be analogous to a family:

> "I think this [the limited number of staff] actually made us very close personally to each other. I personally feel happy if I can help my colleagues, because I am also often helped by them. Like this morning, I was overwhelmed by the number of pregnant women patients. Then I was assisted by a nurse who was on duty at the general polyclinic which happened to be quiet there". (Midwife 5, Urban)

> "We're like a big family here. When we gather, it's as if there are no professional barriers, whether it's a physician, head of the Puskesmas, midwife, or nurse, everyone can get along comfortably". (Physician 1, Rural)

However, the strength of the influence of cultural values on relationships between HCPs was found to differ between rural and urban areas. In villages, the culture of mutual cooperation was stronger than in cities. In line with the close collaboration between HCPs in village health centres compared to regency/city health centres, as experienced by one of the participants:

> "It's good (the relationship). So far, everything has been fine. There were small problems, but they were resolved quickly. We are used to being open to each other. I feel that the working atmosphere at this Puskesmas is full of a sense of kinship. Maybe because it is in a rural environment, '*Gotong Royong*' is still very strong. I compare it to where I used to work in urban areas. Cooperation and interpersonal

> closeness are not as strong as here". I feel that the habit of '*Gotong Royong*' in my neighbour's environment, such as cleaning the neighbourhood, building houses, and helping the neighbour who will hold a wedding party, has carried over to the work environment at the Puskesmas. So, if a job requires a team, everyone is happy to participate. I think this is the capital to be able to collaborate well between HCPs at the Puskesmas". (Physician 2, Rural)

Although the participants acknowledged that interpersonal closeness was an important asset in building an interprofessional team, they suggested that there should be formal rules or policies regarding the roles and responsibilities of each profession in the collaborative team. Participants believed that this rule could help them get to know each other professionally, understand the duties and roles of each profession, create a sense of formal collaborative relationship, and strengthen and maintain IPC.

> "So far, cooperation just happens, I know who to ask for help, this is more of an informal collaboration. But for IPC teams, if a clear division of roles can be made for each profession in the team, and there are special policies governing IPC, the collaboration will be stronger and more sustainable. Informal cooperation does not have a binding force so that HCPs are free to be involved or not". (Public Health Practitioner 3, Urban)

In addition to the cultural value of *Gotong Royong*, participants also interestingly interpreted the practice of collaboration from a religious perspective, namely as applying religious values in the work environment. Participants considered that the practice of collaboration was the same concept as "*ukhuwah*" (brotherhood, fraternity) in their teachings of Islam. Therefore, they believed that collaboration was a good thing to apply in life, including carrying out their HCP duties.

> "…ahh I see. I think we as Muslims really appreciate this concept of IPC as we are taught about *ukhuwah* in Islam". (Nurse 1, Rural)

> "In Islam there is the term '*ukhuwah*' (brotherhood) which forms the basis of mutual benevolence in the society. I think this is the same concept as collaboration. *Ukhuwah* values like respect, trust and justice are to be adopted in engaging with one another in order to create the

> sense of kinship needed to ensure a good IPC. I see colleagues who practice Islam well, can work well in teams and are easy to be asked for help". (Head of Puskesmas 2, Rural)

This finding was something that emerged spontaneously from participants' accounts, and which was not initially foreseen when planning the research. This encouraged a deeper exploration to probe more about the influence of religion on the collaborative practice of health professions.

Indonesian society is a heterogeneous society consisting of various tribes, cultures and religions. All citizens are officially designated in one of the categories of religious affiliation: Buddhist, Confucian (i.e., traditional Chinese religion), Catholic, Hindu, Muslim, and Protestant. The majority (86.7%) of the Indonesian people are Muslim, comprising the largest Muslim population in the world. Diversity in Indonesia is united by the national slogan: "Bhinneka Tunggal Ika" ("Unity in Diversity"), which implies that even though they are different, they are still one and the State guarantees the freedom of citizens to choose their religion.

Religion plays an important role in social life in Indonesia. The official state ideology, developed as Indonesia adopted its postcolonial identity, is known as "Pancasila" (five principles), the first of which is "Belief in the one and only God" (as understood in each of the official religions adumbrated above). Therefore, the influence of religious teachings is quite strong in building a moral foundation that shapes people's behaviour in social interactions, including for HCPs in their work environment. This is reinforced by the statement of Christian participants:

> "...of course I will apply the teachings of my religion in all aspects of my life, including when I work. Moreover, my work is related to humanity. In the Christian faith I am taught to be compassionate and help each other, very closely with the cooperation of the health team to provide best service for patients". (Public Health Practitioner 1, Rural)

This shows that religious values become a motivation for several HCPs to be able to work collaboratively in order to provide excellent service to patients.

In conclusion, *Gotong Royong* is a cultural value that strongly underlies the social interactions of Indonesian society. Data from document analysis and interviews show that cultural and religious values form and give meaning to the practice of collaboration between HCPs in community services as V-BT, which is characterised by interdependence, flexibility, and tends to be informal. In the context of community health services, integrated care is a form of collaborative practice implementing the values of *Gotong Royong*, as explained in the next sub-category.

5.4.2.2. Integrated antenatal care: The form of V-BT

As stated in the 2020 MoH Strategic Plan document, Indonesia's national health development program is based on the principle of mutual cooperation. One of these national health programs is integrated ANC. This sub-category describes ANC as a form of value-based collaboration, which-as mentioned in the previous sub-category-was characterised by interdependence, flexibility, and tends to be informal. This will be followed by an explanation of the importance of IPC for improving MC. Interviews and document analysis data suggested that integrated ANC included various patterns of collaborative interaction between HCPs, both direct and indirect coordination.

The coordination of services tended to be adaptive and flexible as a strategy for dealing with complexity in community services. This flexibility included resource allocation, modes of communication, and professional roles. Findings from document analysis and interviews showed that the collaborative approach in integrated ANC positively impacted the quality of maternity services in the community.

Based on the MoH's "Strategic Plan" for 2020-2024, Indonesia's health development is currently focused on improving the quality of primary health services, especially health promotion and preventive services without neglecting curative and rehabilitative services. As mentioned previously, CHCs are expected to spearhead primary health services, providing comprehensive and quality services:

> "…the function of the Puskesmas is to provide comprehensive basic healthcare (promotive, preventive, curative and rehabilitative), community empowerment in the health sector (community involvement and empowerment), and multi-stakeholder involvement in the context of joint action". (MoH_strategic plan_2020)

To achieve this goal, CHCs implement an integrated care approach in maternity services, namely integrated ANC. Integrated ANC is a series of activities carried out for all pregnant women from conception to before the start of the labour and birth process provided by HCPs in a comprehensive and quality manner. This is essential so that pregnant women get positive experiences during pregnancy and childbirth and can give birth to healthy babies. Integrated care in ANC services includes pregnancy monitoring, screening for congenital diseases and pregnancy complications, dental examinations, nutritional counselling for pregnant women, and psychological support. This service encourages the involvement of various HCPs in the delivery of ANC services. As stated in the Integrated Antenatal Service Guidelines:

> "One of the recommendations from WHO is for low-risk pregnant women to do ANC at least 8 times. After adaptation with related professions and programs, it is agreed in Indonesia, ANC is carried out at least 6 times with a minimum of 2 visits with a physician for screening risk factors/complications of pregnancy in the 1st trimester and screening for risk factors for delivery in the 3rd trimester". (Integrated Antenatal Service Guidelines, 2020)

The involvement of various health professions in integrated ANC encourages the establishment of IPC, which is one of the philosophies in maternity services for both

midwives and obstetricians, as stated in the professional standard documents for each profession:

> "In carrying out its role, midwives have beliefs that are used as a guide in providing care. These beliefs include:
>
> ....
>
> 6. Beliefs about collaboration and partnership. Midwifery practice is carried out by placing women as partners with a holistic understanding of women, as one of their physical, psychological, emotional, social, cultural, spiritual and reproductive experiences. Midwives have full autonomy in their practice in collaboration with other health teams". (Indonesian Midwife Association Philosophy)

> "Practicing as a specialist in obstetrics and gynaecology requires effective management skills in setting priorities, making decisions, allocating resources and minimising risks. They realise the important role of every health service member, because effective healthcare is produced by collaboration with professionals who each bring knowledge and other necessary resources". (Profession Standard of Obstetricians)

Given the importance of IPC as a MC philosophy, it is indeed considered one of the core competencies for HCPs. It reflects the ability of professionals from different healthcare disciplines to work together effectively, communicate openly, and contribute their unique skills and expertise to provide patients with the highest QoC. Table 5.5 summarises some key points from the analysed professional standard documents for midwives and physicians.

Table 5.5: Professional standards documents for midwives and physicians

Midwifery professional standard	Medical competency standard
2. Competency Area 2: Effective Communication	5. Behave professionally
Basic concepts of communication and counselling	Show character as a professional physician
The principle of human relations	Be polite and helpful
Inter Personal Communication/Counselling (KIP/K) in midwifery practice	Prioritise patient safety
Effective communication with women, families, communities, colleagues and other professions	Able to work together intraprofessionally and interprofessionally within the healthcare team for patient safety
Communication with therapeutic approaches to midwifery practice	Carry out health service efforts within the framework of the national and global health system.
Education for women, families and communities	
Communication in group activities (planning, managing groups/leadership, coordinating group activities)	
Communication skills in midwifery practice	
Development of science and technology in midwifery communication and counselling practices (using IT)	
Providing information about options and giving informed consent in midwifery practice	
Building cooperation and collaboration (IPC)	
Advocacy to relevant stakeholders	

These documents suggest that government and health profession organisations recognise the importance of collaboration. Professional standards of maternity HCPs support the implementation of integrated ANC, which requires all the professions involved to work together effectively, leading to improved patient outcomes. Unfortunately, in Indonesia, no policies and regulations specifically regulate collaboration practices and provide clear definitions and boundaries regarding IPC.

This finding is reinforced by interview findings, which described integrated ANC as a form of IPC in ANC services and the benefits of IPC.

When asked about their understanding of IPC, all participants stated that they had already implemented IPC in integrated ANC; in other words, they considered integrated ANC as a form of IPC.

> "Collaboration means that services are not only carried out by one person from one profession, but there is the involvement of other professions. like in the integrated ANC, there are physicians, midwives, nutritionists, laboratory analysts, and dentists". (Nurse 1, Rural)

In integrated ANC, midwives, physicians, dentists, nutritionists, and laboratory assistants will examine pregnant women comprehensively at the first visit. The midwife will manage the next ANC visit if the pregnant woman is in a healthy condition. However, if the mother is identified as having a high-risk pregnancy or is experiencing pregnancy complications, In that case, the midwife will make an internal referral to the physician and related units according to the woman's condition. In this case, the collaboration between midwives and physicians aims to establish the correct diagnosis and determine the woman's plan of action or treatment so that pregnant women get quality services.

> "Usually, I consult a physician if I find a pregnant woman with certain conditions. I convey the results of my examination and laboratory results for diagnosis by the physician. After that we make a plan of action for the patient". (Midwife 7, Urban)

If the mother's condition worsens and requires obstetrician treatment, an external referral will be made to a hospital on a physician's recommendation. This leads to coordination between Puskesmas (physicians/midwives) and hospitals (obstetricians) to provide services for pregnant women with complications. Participants saw this

process as a IPC because of communication and handing over of service responsibilities from physicians at the Puskesmas to obstetricians. After the patient has received treatment, the obstetrician writes the examination results and therapy given to the woman in the "Mother and Child Health" (MCH) book and then sends a referral back to the Puskesmas so that HCPs can monitor the woman. According to interview participants, this coordination allowed continuity of care for patients.

> "Apart from that [internal referral], we also have external referral to hospitals. Usually, after being treated by an obstetrician, the patient will be returned to the Puskesmas for monitoring. We just had to read the patient's MCH book to make a follow-up plan". (Physician 3, Urban)

The internal and external referrals of the Puskesmas that the midwife and physician participants considered a form of IPC showed the process of changing service responsibilities influenced by the woman's condition. The condition of high-risk pregnant women required midwives to collaborate with physicians through consultation or internal referrals. If external referrals were needed, the midwife would communicate with obstetricians at the hospital. This process shows that a professional has limited authority, including expertise, knowledge, and skills, to provide a service that can completely meet the woman's needs according to the patient's condition.

Therefore, HCPs with specific expertise are essential to complement each other in delivering comprehensive services tailored to meet women'**s** needs effectively. This mutual need encourages collaboration between professions which, in relation to antenatal services, can be in the form of referrals or consultations. Besides, internal and external referrals presented interaction of direct and indirect coordination between midwives and physicians in integrated ANC services.

Direct coordination was described in complicated pregnancy cases, where midwives carried out consultations or internal referrals to physicians. In this process, midwives and physicians had in-person meetings to discuss the treatment for pregnant women. This process differs from the coordination between the health centre midwife and the obstetrician when referring pregnant women to the hospital. The collaboration occurred indirectly, where midwives delegated the responsibility for caring for pregnant women entirely to obstetricians, and obstetricians made back referrals to midwives so that woman's care was carried out separately. This is reflected in the document of SOP hypertension in pregnancy:

> "Procedure:
>
> ….
>
> c. Midwife examines the patient's general condition including whether there is oedema on the feet, legs, and face.
>
> d. Midwife consult a physician. midwife collaborate with laboratory analyst to check urine protein". (CHC_SOP Hypertension in Pregnancy_2021)

Recognising the limitations of each profession in providing comprehensive and patient centred care, collaboration between HCPs is needed. Participants suggested that building a team in IPC was not as simple as bringing together individuals from various health professions, but there were multiple dimensions underlying the collaborative process in uniting diversities to achieve common goals. Participants saw negotiation as a form of communication as an important part of building a solid team.

> "Before starting a home visit for pregnant women, the midwife and I usually have a discussion to determine the time of the visit. usually midwives who find it difficult to determine the time because they are busier. We have visited several times on holidays because we are busy on weekdays". (Nutritionist 4, Urban)

> "We have regular monthly meetings, but only discuss the problem of service at the Puskesmas in general. do not discuss case by case, unless there are major cases that must be resolved together. However, for me, regular meetings are quite important for the health team to meet and discuss formally". (Head of Puskesmas 1, Rural)

Furthermore, the participants acknowledged that a clear common goal encouraged them to jointly achieve it by contributing according to their respective roles. They agreed that integrated ANC aimed to provide comprehensive and quality ANC services. They were also of the same opinion that comprehensive services emphasise services that are focused and in accordance with the needs of pregnant women. To make this happen, it requires the involvement of various related HCPs. For that, they were moved to work together, gathering their expertise to meet the complex needs of women.

> "Our service [integrated ANC] aims to provide comprehensive services for pregnant women, We have to work together to make this happen". (Physician 2, Rural)

> "yes...it's true that sometimes there are differences of opinion, but I personally think that our focus is on providing quality services for pregnant women...so in my opinion, it's okay to have different point of view, but when you work you have to be professional and back to our goals". (Public Health Practitioner 1, Rural)

Considering the complex services of the community health services and the limitations it faces, participants suggested that having collaborative interactions that were adaptable and flexible will help HCPs in achieving the health service goals. Collaboration teams were open to changes in plans and approaches if they encounter unexpected situations and challenges. Flexibility includes resource allocation, open communication channels, and role flexibility. Teams may need to redistribute resources, including time, personnel, and materials to respond to changing demands

or seize new opportunities. Flexibility in resource allocation ensures that the team can optimise its capabilities.

> "collaboration in the community was quite flexible. During this time, we just take turns, sometimes exchanging counselling materials. The problem that arises most often is scheduling home visits. The solution is, we reschedule if there are concurrent agendas or swap shifts with other colleagues". (Nurse 3, Rural)

Team members were willing to take on different roles or responsibilities as needed to support the team's objectives. This encourages individuals to contribute their skills and expertise wherever they can be most effective. The delegation of authority between HCPs is supported by legislation and evidenced in Law No. 36 of 2014:

> "Article 63 (1): In certain circumstances HCPs can provide services outside their authority
>
> Article 65 (1): In providing health services, HCPs can receive delegation of medical treatment from medical personnel". (Law No. 36 of 2014)

This adaptability can lead to more efficient and effective task allocation, especially in health facilities with limited resources such as CHCs.

> "The high-risk pregnancy rate in the working area of our Puskesmas is quite high. I see that midwives are confused about determining the schedule for home visits. Sometimes I offer to replace the midwife to make home visits for pregnant women if the midwives here are busy". (Nutritionist 3, Urban)

The dynamic situations faced in community service create unique communication patterns. HCPs emphasised the importance of informal communication, such as personal *WhatsApp*, telephone calls and informal meetings to exchange information and make decisions in collaborative teams. Open communication channels facilitate quick decision-making and the ability to pivot when necessary.

> "I also sometimes consult with a physician via telephone if the physician is not here [Puskesmas], especially if I have to provide immediate action to a patient who needs a physician's advice". (Midwife 4, Urban)

Informal interactions, such as casual conversations and socialising, can help build rapport and trust among HCPs from different disciplines. Trust is essential for effective collaboration, as it encourages open communication and the sharing of critical information. However, relying solely on informal communication can lead to communication breakdowns when critical information is not conveyed to all relevant team members. This can result in misaligned care plans or errors in treatment.

> "I once received a referral back from an obstetrician. He just stuck the printed ultrasound image on the patient's MCH book without any notes. So it was difficult for me to plan a patient follow-up, wasn't it? When I wanted to ask for more information, he was difficult to contact". (Midwife 6, Urban)

However, healthcare teams must strike a balance between informal and formal communication, ensuring that critical information is documented, shared, and acted upon appropriately to maintain high-quality care and patient safety.

Participants believed that the integrated ANC service has brought about changes in the way of service and had an impact on better maternal and infant outcomes compared to fragmented services. They noted that integrated ANC promoted comprehensive and woman-centred care by combining expertise from various professions to provide services according to pregnant women's needs, allowing them to get quality services. In other word, the structure of the service enabled the dominant values to be fully expressed and realised to maximum benefit.

> "ANC services are now integrated, there is collaboration from several HCPs". (Public Health Practitioner 2, Rural)

> "Since this program had been run in 2017, there is no maternal death in our area even though we have the highest number of high-risk pregnant women in XX [name of the city]. Probably, the collaboration between health professions in this innovation program contributes to the prevention of maternal deaths". (Midwife 7, Urban)

Participants emphasised the benefit of joint decision-making in a collaborative team as a promising solution in dealing with maternity health problems and the complex needs of pregnant women. Joint decision-making involved knowledge, experience, information, and authority from various health professions to find solutions to the problems at hand. More professions engaged in the shared decision-making process means that more information was gathered to analyse the problems, thereby increasing the quality of solutions to solve the problems. In other words, IPC is a problem-solving process—for inventing new ways of understanding the root causes of maternity problems and designing novel solutions to address those problems. As explained by the participants:

> "Several times we held meetings between professional organisations. I invited IBI, IDI, and PERSAGI (Indonesian Nutritionists Association) to discuss some of the latest maternal and child health issues. We consider the results of this discussion for making organisational policies related to several issues. You can check some maternal health innovations in several cities in Indonesia, such as 'SAMPER BUMILA', 'Makin Lancip', and 'Kemilau Cinta'. They were born from the policies of professional organisations". (Obstetrician) (POGI 2)

The benefits of joint decision-making were also felt directly by HCPs. Involvement in joint decision-making made HCPs feel recognised that their expertise was needed in a team. This increases the confidence and job satisfaction of HCPs, impacting the quality of health services provided. As stated by the participants:

> "Being part of the team in the preeclampsia early detection program gave me invaluable experience. I had the opportunity to meet Dr. X [obstetrician] and I was happy to be actively involved in the discussion on diagnosis, Dr. X has asked my opinion several times. As a junior

> midwife I felt acknowledged and needed in the team". (Midwife 5, Urban)

Participants perceived that involvement of CHW together with midwives in community maternity services was a bridge that closed the communication gap between HCPs and the community so that health information and education was well received by the community. This increased awareness of the importance of ANC examinations in health facilities among pregnant women was perceived by participants to improve maternal and infant health quality.

> "We are in community service assisted by CHWs. They are local people who are recruited voluntarily by the village head. In my opinion, involving cadres is a good strategy to help the task of HCPs in the community. They are part of the community so they are more flexible in disseminating health information in the community". (Nutritionist 2, Rural)

> "Public awareness of the importance of prenatal care is increasing. It is proven by the increasing number of ANC coverage in our Puskesmas. We have to thank CHW who played a big role in helping the success of maternity services in the community". (Head of Puskesmas 1, Rural)

Participants explained further that working together in teams might bridge the gap between different professionals. They considered that if disparate professional groups worked together in teams rather than in separate units, each HCP might learn from the others, and this would also make it easier for them to coordinate their efforts and strive together for common goals.

> "Actually, nurses do not have much role in ANC services, because it is the midwife's authority. But for certain cases, I can collaborate with nurses, such as the case of pregnant women with HIV. Nurses at our Puskesmas have received special training in HIV management and they have become HIV counsellors. The nurse and I once made home visits to pregnant women with HIV. I did a pregnancy test while the nurse gave counselling about HIV. I got a lot of up-to-date information about HIV management in pregnant women from the nurse". (Midwife 4, Urban)

> "Another joint program that we do is the annual scientific meeting. We invite representatives of HCP organisations to present updates on maternal and infant health science. In this forum, we can discuss and exchange the latest information to upgrade our knowledge". (Midwife IBI 2)

5.4.2.3. Summary

To summarise this category, data from document analysis clearly shows that IPC is a competency that HCPs must possess, and IPC is one of the philosophies of maternity services adhered to by midwives and obstetricians. However, interview findings indicated that participants viewed collaborative relationships within a care team more as spontaneous actions informed by their cultural and religious values, rather than as competencies and professional practices that HCPs must undertake. The distinction clearly showed the cultural value of mutual assistance and religious belief are strong assets for Indonesia to integrate IPC into the health service system.

The position of the culture of mutual cooperation as the basis for implementing national health programs and strengthened by participant perspectives on collaborative practice, forms an understanding of IPC in the context of maternity services in communities in Indonesia, characterised by interdependence, mutual trust, fraternity, flexibility, and tends to be informal. Added to this is the awareness of the importance of IPC in improving maternity services by promoting comprehensive and PCC, joining decision making, increasing self-confidence and job satisfaction for HCPs, and improving communication. The findings show that strong motivation and awareness of the significance of the IPC in maternity services can result in safer, more patient-centred, and higher-quality care experiences for pregnant women, mothers, and newborns.

5.4.3. Category 3. Complex Interactions: The Dynamic Relationship Within Inter-Professional Teamwork

As explained in the previous category, the complexity of the Puskesmas' duties as the front guard of public health creates a broad collaboration that not only involves HCPs but also stakeholders who support the goals of public health services. C-SC (i.e., between the health system, local government, and community) enables comprehensive services to be provided by gathering various expertise and facilities according to patient needs. However, the implementation is not easy as the involvement of many parties gives rise to complex interactions, namely collaborative relationships that are dynamic and sometimes less predictable. Complex interactions can lead to collaboration conflicts but can also lead to changes in improving and strengthening collaborative practice.

This category consists of two sub-categories that describe complex interactions in IPC in the community: inter-professional tension, and transforming conflict into connection, which covers the obstacles and facilitators in implementing IPC.

5.4.3.1. Inter-professional tension

"Inter-professional tension" highlights the team's diverse backgrounds, skills, and perspectives and explores how these differences contribute to potential tension/conflicts. As explained in section 5.4.1, Category 1 emphasises that the cultural value of mutual cooperation is able to encourage the formation of harmonious collaborative teams. These cultural values are shared values accepted by society as national identity. However, it seems that applying this value in IPC is not always easy in terms of professional relations. Despite having shared cultural values, collaborative teams are faced with various differences brought by each member which can influence

their social attitudes. For example, in Posyandu activity, the relationship between midwives and CHWs is a subordinate cooperation where the CHW acts as a technical implementer and reports on Posyandu activities while the midwife acts as a CHW supervisor and supervises the implementation of activities. As stated in the document:

> "Duties of CHWs in Posyandu activities:
>
> Carry out registration of Posyandu visitors.
>
> b. Carry out weighing of toddlers and pregnant women who visit Posyandu.
>
> c. Record the results of the weighing in the KIA or KMS book and fill in the Posyandu register book.
>
> d. Measurement of upper arm circumference in pregnant women and women of childbearing age.
>
> …
>
> Updating Posyandu target data: pregnant women, postpartum women and breastfeeding mothers as well as infants and toddlers.
>
> …
>
> Puskesmas HCPs are mandatory at the Posyandu once a month. The roles of HCPs on Posyandu open days include the following:
>
> Supervise CHWs in the implementation of Posyandu". (MoH_ General guidelines for Posyandu management_2011)

The subordinate relationship illustrates the existence of a power relation which emphasises the differences in background between midwives as HCPs and CHWs as non-HCPs. If individuals focus on these differences, individuals will tend to build distance with collaborative team members which will hinder the collaboration process. This finding is in line with interview findings that highlighted power relation conflicts

that occurred in collaborative practice and originated from differences between team members.

Physician participants viewed CHWs as lay workers and treated them as assistants who can be delegated to perform tasks related to the community. This perspective creates a power imbalance between HCPs and CHWs that can strain the relationship between them.

> "We also have to collect numerical data that records the number of pregnant women, offered ANC care, TB and HIV cases, child immunisations, etc. to be reported to the health office. Due to busy work in patient care, I asked CHWs for help in recording data". (Midwife 2, Rural)

> "They [CHWs] receive training from the health office, but only short training for limited skills. For that, they still need supervision from HCPs in task-shifting to CHWs". (Head of Puskesmas 3, Urban)

In addition, some midwife participants shared their experiences of how obstetricians acted arrogantly towards them. Participants attributed this behaviour as a feeling of superiority of obstetricians to them.

> "After completing the screening of one patient, I presented the results of my examination. instead of discussing the diagnosis, I was lectured by the obstetrician like a lecturer to his students, then he ordered me to do this and this". (Midwife 5, Urban)

> "I think it's been fine so far. [silence]. hmm… but… ya… honestly, I've personally been offended by the attitude of the physician when I consulted to refer a patient to the hospital. The physician blamed me in front of the patient, patronising as if he was the best has the authority to make decisions. But… well… he was the boss… I try to act normally". (Midwife 1, Rural)

Feelings of superiority and inferiority arose from differences in the level of education or skills possessed by HCPs. The participants shared their view:

> "The difference in the level of education might be a problem. But this is very individual. Usually, the problem is from them (midwives), not from us. Sometimes they feel uncomfortable with us and end up interrupting communication". (Obstetrician) (POGI 1)

> "I think this can be a barrier to IPC. I am not sure that I can work in a team that is not confident to work according to their professional competence". (Physician IDI 1).

In the same vein, differences in educational background and training were considered by the participants to be a trigger for inter-professional conflict. These differences led to different philosophies of care which in turn resulted in differences in the way of assessing patient conditions and treating patients with certain conditions. The fundamental dichotomy between the midwifery and medical philosophies of care (as described in Chapter 2) were clearly known to and were expressed by participants, who opined that midwives viewed pregnancy as a natural and normal process, while obstetricians viewed it as a risky condition. In this case, interprofessional teams struggled to work together with different profession-specific traditions to achieve common goals.

> "I once had a patient who was pregnant in the second trimester, not registered at the Puskesmas, who had a minor accident. She admitted that all this time she checked in at a private obstetrician practice. When she asked if he should check with the midwife too, the obstetrician said it was unnecessary because an ultrasound examination was done every month, which was more accurate than checking at the midwife. I really regret this". (Midwife 7, Urban)

> "All pregnancies are risky, no pregnancy is without risk... and we [obstetricians] are trained to deal with problems of pregnancy and childbirth". (Obstetrician) (POGI 2).

Using a symbolic interactionist lens, researchers are aware that individuals act towards others according to the meaning they believe, based on their thoughts and perspectives (Blumer, 1969; Charmaz, 2006). From the results of the interviews, participants

exhibited two perspectives pertaining to inter-professional teams, namely the professional and the social perspectives.

The professional perspective encourages HCPs to focus on their role as individuals who provide certain services and how they use their professional skills to serve patients. This perspective can be applied in collaborative relationships, for example, from the interview data, nurse participants shared updated knowledge about the management of HIV/AIDS (Acquired Immunodeficiency Syndrome) patients with midwife participants, highlighting how such knowledge sharing is highly beneficial when treating pregnant women with HIV/AIDS. However, when a single professional perspective becomes too dominant within a collaborative team, differences between members can become more pronounced, creating distance and hindering effective teamwork. This dynamic was evident in a conflict case described by the interview participant above, where the lack of balance and mutual respect among team members disrupted collaboration.

In contrast, the social perspective identifies individual HCPs as part of a team consisting of various experts, prioritising inter-professional team functions above their specific profession to achieve common goals. This perspective can arise from the collection of social interaction experiences of individual HCPs in an organisational group. For example, the CHC staff members include several HCPs who interact together every day. Every individual considers himself to be part of the health team, regardless of professional differences. as the participant admitted:

> "We're like a big family here. When we gather, it's as if there are no professional barriers, whether it's a physician, head of the Puskesmas, midwife, or nurse, everyone can get along comfortably". (Physician 2, Rural)

This finding indicates that individual interaction experiences can determine the perspective used, whether professional or social, and this will influence individual attitudes in a team. One participant emphasised that the opportunity to get along in a team made it easier for team members to build closeness that strengthens collaboration. On the contrary, a lack of closeness will actually build gaps between professions.

> "Compared to hospitals, Puskesmas have far fewer staff. But in my opinion, this can be a positive thing. We can get to know each other closely. Here there is only one physician, three midwives, three nurses, one pharmacist, one nutritionist, one laboratory analyst, and one public health expert. Unlike in a hospital, where the number of each health profession is quite large, so they tend to mix with their own professional colleagues, resulting in a gap where the group of physicians is more dominant than other professional groups. Luckily this didn't happen at this health centre". (Nurse 4, Urban)

Interviews in this study showed that interprofessional conflict was experienced when professionals were not in the same work environment or had few opportunities to interact directly. For example, there was a conflict in power relations between the CHC midwife and the hospital obstetrician. Apart from that, there was a subordinate relationship between CHC physician and CHW in the community, as previously mentioned. However, based on the interviews, the relationship between CHC midwives, nurses, and CHWs was found to be different. Although the Posyandu Guidelines document implied a hierarchical relationship in the division of roles between midwives and CHWs, in practice, midwife participants considered CHWs as a partner in providing services in the community. The presence of CHWs with midwives in Posyandu activities and home visits made the midwives feel confident and accepted by the community. Nurses also admitted that they learned a lot from CHWs about how to build closeness and trust with the community:

> "Besides inviting nutritionists, I also collaborate with CHWs for outreach activities. The atmosphere of the event becomes more conducive. Sometimes I ask CHWs to speak in the forum, this is quite successful in getting participants to focus". (Midwife 1, Rural)

> "In fact, I learned a lot from them [CHWs]...I got to know the typical people here [community] who are a bit difficult to accept new things". (Nurse 2, Rural)

Regardless of profession, interview findings indicated that conflict occurred because of poor individual character or personality. Individual character plays a role in determining how someone thinks and acts in a collaborative team. Participants considered that collaboration among team members is needed to be able to separate personal issues from professional-related issues, so that problems do not escalate into conflicts between professions.

> "This is very personal, depending on the character of each person. Like not all obstetricians are arrogant. And if someone is arrogant, it might not be because of their profession, but their character as an individual". (Obstetrician) (POGI 2).

In dealing with team conflicts, each person needs to have conflict resolution skills including negotiation, problem-solving, and compromise, for finding mutually acceptable solutions. However, in reality not all individuals have this character. There are some who choose to hide interpersonal conflicts, acting as if they are in a good relationship. It is feared that a problem that is not resolved will cause bigger problems in the future which will hamper collaborative relationship.

> "I think, generally, the relationship between staff is good. They interact well with each other. Although I know there are some of my staff who have problems with other staff but try to cover up. some want to confide in me if something makes them uncomfortable. I will try to help. What worries me sometimes is that they seem to get along well even though they have interpersonal problems. What I fear is that this condition will have an impact on poor working relations between staff". (Head of Puskesmas 1, Rural)

Interestingly, participants felt that the challenges of collaboration in the community came more often from the community (pregnant women) than between healthcare teams involved. Challenges related to pregnant women included a lack of awareness about the importance of accessing ANC services. One of the reasons was the persistence of myths and ancestral culture in several rural areas of Indonesia, which believed more in "*Dukun Beranak*" (traditional birth attendants [TBAs]) than HCPs. Some women refused to have a pregnancy check in the Puskesmas. A midwife shared her experience:

> "I have run out of ways to get my pregnant neighbour to visit the Puskesmas. She always refuses. The reason is that she wants to give birth at a traditional birth attendant". (Midwife 2, Rural)

This was different from the problem of pregnant women in urban areas. A nurse participant stated that some high-risk pregnant women were difficult to meet for home visits, even though they had made an appointment. Sometimes the mothers were not at home when they were visited. Apart from being busy, pregnant women prefer to visit private obstetrician clinics, which were quite widely available and easily accessible:

> "For home visits, the challenge is time. sometimes it is difficult to make an appointment with a working pregnant woman. maybe they are very busy". (Nurse 4, Urban)

> "Some of them [pregnant women] also go to obstetrician clinics to get scans every month. There are even those who only visit the obstetrician clinic every month without checking their pregnancy at the CHC". (Midwife 6, Urban)

In Indonesia, pregnant women can have their pregnancies checked for free at CHCs, or at the private clinics of independent midwives, physicians, or obstetricians. In urban areas, most pregnant women visit obstetrician clinics every month, where the

obstetrician performs a scan and provides a brief explanation of the scan results. Unfortunately, not all obstetricians' clinics have documented data records for pregnant women, as there is no obligation to report the data. Consequently, pregnant women who only visit obstetrician clinics during their pregnancy are not registered at the CHC, whereas data on pregnant women from the CHCs are sources for national data.

> "Some pregnant women only go to private obstetricians and never come to the Puskesmas. Since private clinics aren't required to report their data, we don't have their records. So, they're not registered in our system, and that means they're also missing from the national maternal data. It makes it hard for us to monitor and support them properly." (Midwife 2, Urban)

To sum up, the findings presented in this sub-category suggest that interactions in community collaboration teams involving healthcare professions in various organisation (CHC, professions organisations, and hospital), CHWs, patients, and families are very dynamic. The data shows that there are similarities between team members that can unify and build closeness between members. However, it was also apparent that if differences in professional and educational backgrounds are not managed wisely, they can potentially lead to conflict, associated with power relations. The data suggests that this conflict can prevent the formation of a solid collaborative team. The next sub-category will explain efforts that can be taken to resolve conflicts and encourage collaborative practice, based on the findings of documents analysis and interviews.

5.4.3.2. Transforming conflict into connection

The involvement of many parties in C-SC in the community brings many differences from each collaborating team member, which can trigger conflicts. However, considering the flexible/adaptable character of community collaboration (as explained in section 5.3.1), a change in situation in a collaboration process can change the pattern

or structure of a collaboration team or strengthen existing collaborative relationships. In other words, inter-professional conflict can be transformed by implementing certain circumstances (factors) that lead to strengthening collaborative relationships. This sub-category explains the findings from document analysis and interviews which suggested some interventions to prevent conflict and strengthen the collaborative relationship in the community setting in relation to inter-professional education, the role of leadership, the role of professional organisation, formalisation, and religious approaches.

The health system and the health education system are fundamentally connected; the education system provides input to the health system as users of graduates. The quality of the HCPs produced directly influences whether health services are good or not. On the other hand, the education system is influenced by the health system, for example the curriculum will be greatly influenced by the current health needs of the community. Graduate competencies must also be adapted to current health needs and policies in the health sector. Collaboration between professions is one of the competencies for HCPs to enable them to provide health services effectively and efficiently. To achieve this, support is needed in an education system that implements inter-professional education for HCPs. In this case, the government is showing its support and following through on policy by implementing a program to improve the quality of Indonesian health education based on collaboration between HCPs.

In 2010 the Directorate General of Higher Education (Dikti) rolled out a program aimed at improving the quality of HCP education known as the Health Professional Education Quality Project (HPEQ). This program is carried out in the context of implementing the mandate of Law no. 20/2003 on the National Education System

(Sisdiknas) and Law No. 29/2004. This project is considered successful in encouraging the issuance of policies that lead to improving the quality of Indonesian HCP education and supporting collaboration between health professions. This is the first national project which involves representatives of seven associations of higher education institutions in the field of health sciences, that are Medicine, Dentistry, Nursing, Midwifery, Pharmacy, Public Health and Nutrition.

> "The HPEQ project is expected to contribute to the achievement of improving the quality of health services through improving the quality of health profession institutions. This goal will be achieved by strengthening the policy system and institutional capacity, study program accreditation, and a competency test system to improve HCP education quality". (HPEQ Report, 2011)

Through the HPEQ program, the Indonesian health education system is trying to change the fragmented conventional education system (each health profession carries out its own academic education) into collaborative-based education, by integrating inter-professional education into the health education curriculum. To achieve that goal, apart from involving HCP academics, government of Indonesia and HCP societies acknowledged the important participation and contribution of the young HCPs and healthcare students as key stakeholders. Both groups have actively and importantly contributed in shaping HCP education policy making, particularly the implementation of inter-professional education.

> "HPEQ also supported the creation of HPEQ Student. This network includes students from the seven professions from all universities in Indonesia. HPEQ Student aims to engage students in HCP education policy formulation and to foster IPC across health disciplines; HPEQ helped to establish a network of HCPs associations, HCP institutions association, government entities, students and broader civil society, committed to long term support for quality improvements in the education of HCP in Indonesia". (HPEQ Report, 2011)

The application of Inter-professional education in the higher education curriculum in health sciences was further strengthened by the formation of the Indonesian Accreditation Agency for Higher Education in Health in 2015. One of the assessment points of which was the application of inter-professional education. The Agency's accreditation assessment is one of the parameters for the quality of health education institutions in Indonesia.

> "Interprofessional health education is a real application of the other four operational values of LAM-PTKes, namely continuous quality improvement, quality cascade, conceptualisation - production – usability, and trustworthiness. The Agency has a strategic role in implementing IPE in the higher health education accreditation system by facilitating the preparation of standards, criteria and assessment methods for IPE according to the rules of each profession, facilitating the integration of IPE into the higher health education accreditation instrument". (Indonesian Accreditation Agency for Higher Education in Health, 2016)

It is believed that the implementation of inter-professional education in the health sciences higher education curriculum will be able to overcome problems between HCPs in a collaborative team. Students will get to know various health professions and get used to communicating as fellow HCPs so that they build the sense of mutual trust and need. This is stated in the "Inter-professional Education Program Development" document from the Health Polytechnic of the MoH:

> "Interprofessional communication makes relationships between interprofessional team members better because effective interprofessional communication helps in resolving problems that arise between interprofessional team members from various backgrounds. For this reason, interprofessional communication skills must be developed so that IPC runs well. Good interprofessional communication skills do not just appear but must be developed and trained from the academic stage through inter-professional education so that students have the knowledge and experience of how to communicate well with other professions before students enter the world of work". (Kendari Health Polytechnic of the MoH, 2021)

The findings from the analysis document above are also strengthened by interview data, which emphasised the importance of implementing inter-professional education at the academic level as early as possible for health science students. As one interview participant stated:

> "I think it's important to understand each other [health professions], get to know other professions, know about the authority of each profession. and this can start from the education period so that they are not surprised by and can deal with differences between HCPs when working in teams". (Physician 3, Urban)

However, awareness of the importance of implementing inter-professional education has not been followed by the large number of health education institutions that integrate IPE in their curriculum. The few that have implemented it have used different approaches. This is possible because there are no IPE curriculum implementation standards that can be adopted by every educational institution, as researchers have not found any documents regarding IPE curriculum standards for health education institutions. An interview participant who is also an academic at a university providing a health study program also stated that the implementation of IPE in higher health education has not been optimal and a national standard is needed to facilitate the initiation of IPE in every institution:

> "In addition, it is important to instil in prospective HCPs or healthcare students that we cannot work alone in providing health services. There must be collaboration, so we must introduce IPC early at the educational level. It has been implemented in the Medical Faculty of the University of Sebelas Maret, which is community-based inter-professional education. But until now there are still very few universities that use IPE in learning activities. We are also still trying to find out which IPE approach is suitable to be implemented in our study program. I think, if there were national IPE implementation standards it would make it easier for educational institutions to initiate IPE programs". (Obstetrician) (POGI 1)

These findings indicate the need to integrate collaborative practice from the academic stage through IPE to avoid team conflicts due to differences in professional backgrounds. The existence of clear standards regarding the implementation of IPE will encourage the implementation of IPE in every health institution.

Data from document analysis and interviews found that clear regulations regarding ensuring the welfare of collaborative team members were also needed to strengthen collaborative practice in the context of community services. This welfare guarantee included appropriate incentives and clarity on the position of CHWs in the health system as part of the collaborative health team. In other words, it is a formalisation (to the degree that organisational actions are enshrined in contractual form) of CHWs' status, which can foster their motivation and confidence to work with HCPs and reduce power imbalances and conflicts in their relations.

Considering the growing workload and demands placed on CHWs, the Centre for Indonesia's Strategic Development Initiatives (CISDI) is advocating for significant reforms to the welfare circumstances of CHWs. In addition, the alliance calls for structural adjustments to how CHWs are positioned within the Indonesian health system, acknowledging them as an integral part of the system. In order to improve CHWs' welfare, the Coalition has made several recommendations. These include encouraging the WHO's health policy and system support guidance document to recognise CHWs as health human resources, specifically health support workers according to the "International Classification of Health Workers" and recommending the provision of mandatory incentives to CHWs (CISDI, 2022). This is in line with comments from several interview participants, who proposed rewards for CHWs for

their performance in assisting HCPs in community services, regardless of the desire of some CHWs to work voluntarily, as presented below:

> "The government needs to allocate appropriate incentives for CHWs. They have spent time and energy on this difficult work. I think that with appropriate incentives, they will be more enthusiastic". (Midwife 3, Rural)

In reality, conflict in a team can occur between professions and also between individuals, regardless of profession. In this case, the role of a leader in an organisation becomes crucial. According to interview participants, in that situation, the leader's role was to act as a mediator to reconcile the two conflicting parties. The leader's role to manage conflicts in the work environment would help create a conducive collective work atmosphere to encourage collaborative practice. As described in the following quote:

> "For example, last month a nurse came to see me. She asked for a change in the schedule of home visits and asked to be paired with midwife W. When I asked her the reason, her answer didn't make sense to me. previously she was scheduled to be with midwife R. After I checked, it turned out that she was supposed to be paired with midwife R, but she avoided it. They used to have problems, I have mediated and they have forgiven each other, I also see they are still greeting and chatting. But it seems that the dispute has left an imprint on the hearts of my nursing staff, to the point that she doesn't want to work with the midwife R". (Head of Puskesmas 2, Rural)

> "In addition to socialising the SOP to all relevant staff, I think the role of the head of the Puskesmas as a manager is very important in creating a conducive atmosphere of collaboration. For example, being a mediator if there are staff who have problems. Like a father who reconciles his children who are fighting". (Nutritionist 3, Urban)

In addition to the head of the Puskesmas, professional organisations can also take a role as a bridge connecting between professions. Professional organisations can serve as a platform for discussing maternal health problems and creating discussion forums between HCPs to find joint solutions. This can have an impact on strengthening IPC.

> "I am often invited to IDI and POGI professional organisation meetings to jointly find solutions to the latest maternal health problems. I think professional organisations play an important role in motivating their members to establish good relationships and cooperate with other professions. I think a solution will be found more quickly with many parties involved". (IBI 2)

Leadership roles in the government sector also significantly influence the success of maternal health programs. Data from document analysis proves the vital role of local governments, especially in funding health programs. Since 2015, the NS ("Healthy Archipelago") team-based health workforce deployment program (see section 1.2.1) has sought to address the uneven distribution of the health workforce in remote areas by deploying five mixed health workforce roles (physician, nurse, midwife, nutritionist, and public health expert) for two years in each selected site.

In addition, this program aims to support the implementation of the Healthy Indonesia Program Through the Family Approach to strengthen primary health services in remote, border, and underserved areas through the preventive and promotive approach. An evaluation report document on NS activities indicates the critical role of local government in the success of this team-based program. As stated in the document recommendations:

> "The local government could provide a substantial support for the effectiveness of NS delivery by using some of the following potential resources to support NS activities:
>
> 1. Allocate physical funds for drugs, medical supplies and devices for basic laboratory services, and reagent procurement to support NS activities. This financial support could be a significant contribution
>
> to improve ANC and maternal services post-birth delivery as well as the success of disease medication programs at the deployed sites.
>
> 2. Allocate non-physical funds and its local budget, to support

> the operational requirements of the NS teams, such as by providing financial support to deliver health promotion activities in remote areas.
>
> 3. Share a specific proportion of the Village Fund to support public health programs at the community level (Community Based Health Efforts: UKBM), including an allocation to support health promotion activities at the Posyandu and incentives for CHWs.
>
> 4. Ensure universal health coverage for all community members, as people in the DTPK areas are at risk of unequal access to the JKN". (Improving Health of the Left-Behinds: The Case of Indonesia's Healthy Archipelago, 2019)

Recognising the strong influence of religion on collaborative relationships, participants concluded that religious approaches were quite effective in resolving interpersonal conflicts and strengthening staff motivation to work together in collaborative teams. The aspect of spirituality is an important part of the individual, especially for Indonesian society which upholds values and norms. Beliefs or religion can shape behaviour and become a person's motivation to act. In the context of collaboration between HCPs in collaborative teams, which was previously mentioned in accordance with Islamic teachings, it seems that a religious or values-based approach can be used to strengthen the motivation of HCPs to work in collaborative teams. Apart from that, if a conflict occurs between team members, emphasising and re-awareness of the importance of cooperation through a re-emphasis of religious values will be more easily accepted, so that the conflict can be resolved peacefully. Several participants expressed their agreement, represented by the following quote:

> "I remember, in 2017 we held a gathering event in the form of a recitation because all the staff at this Puskesmas were Muslim. We invited a cleric. He delivered a very touching theme of the lecture, namely '*ukhuwah*'. After this event, I witnessed that two of my staff who were arguing became close again. Perhaps this kind of religious approach can be used to strengthen cooperation and reduce personal ego. I think collaboration or cooperation between HCPs is an implementation of the concept of *ukhuwah* in Islam. In *ukhuwah*, there are concepts of knowing each other, mutual understanding, and mutual

help, which I think should also exist in IPC". (Head of Puskesmas 2, Rural)

5.4.3.3. Summary

The findings in this sub-category inform efforts that can be made to overcome collaboration conflicts, namely through establishing clear regulations, the role of leaders and a religious approach. However, it is underlined that these efforts require committed participation from all parties involved.

5.5. Developing the Collective Oriented Collaboration Model (COCM)

5.5.1. Overview

This section presents the development of a conceptual model based on the findings of this study, which explored IPC in maternity services in Indonesia. The COCM emerged through a GT approach, which emphasises generating theory directly from data (Charmaz, 2014). This method is particularly useful in complex social settings, such as healthcare contexts, where multiple stakeholders interact to deliver services. By utilising this approach, this study aims to provide an empirically grounded framework that captures the nuances of IPC within the Indonesian MC context. In developing the conceptual model, I employed an iterative process that began with systematically coding and categorising the interview and documentary data.

Initially, I used open (or initial) coding to identify recurring themes, such as care complexity, community involvement, and cultural values, which were closely tied to Indonesian practices of *Gotong Royong*. Through memo-writing and reflective discussions, I then moved to focused coding, refining these themes and exploring their interrelationships. This continuous comparison of data and emerging categories

revealed how local cultural and religious values underpinned teamwork, and how cross-sectoral interactions—spanning HCPs, community members, and local authorities—addressed the complexity in maternity services.

Next, I deployed analytic tools like the *CRG* and a *Reflexive Coding Matrix* to probe the conditions and outcomes of each category, along with how different elements (e.g., community engagement, flexible communication, adaptive role-sharing) were connected. By mapping out these interconnections, it became clear that *complexity* was a unifying concept, prompting collaborative strategies that transcended professional boundaries. This realisation formed the "leap" to the conceptual level. I could see that V-BT (rooted in cultural and religious norms) and adaptive systems (characterised by informal communication and flexible roles) were central mechanisms enabling collaboration.

Finally, I synthesised these core insights into the COCM. The model illustrates how cultural and relational dimensions shape the ways stakeholders respond to multifaceted challenges in Indonesian MC. Each component—*complexity*, *C-SC*, *V-BT*, *community empowerment*, and *adaptive system*—originated from the categories that emerged during coding, but were elevated to a conceptual framework by examining how these elements dynamically interact to ensure more responsive and integrated MC.

This conceptual model addresses the inherent complexity of MC and also reflects the unique cultural and religious values that shape teamwork in Indonesian healthcare (Wahab et al., 2023). By developing this model, this chapter provides a framework for understanding how HCPs, community members, and local authorities can work together more effectively to improve maternal health outcomes. It offers insights into

how adaptive systems and community engagement can contribute to more responsive and integrated MC services, ensuring that the needs of both providers and women are met. The following section provides a detailed explanation of this conceptual model and its key components.

5.5.2. Collective-Oriented Collaboration: The Conceptual Model

The COCM, developed through this GT study, offers a framework for understanding how HCPs, community members, and local authorities collaborate in maternity services within the Indonesian context. The model captures the intricate ways in which C-SC (between the healthcare system, local government, and community) is employed to manage the complexity inherent in community-based MC. This complexity is driven by multiple factors, including the diverse medical, social, and interpersonal needs of pregnant women, the challenges of coordinating care across different settings, and the dynamics of teamwork among professionals from various disciplines.

At the core of the model, as summarised in Figure 5.2, is the recognition that *complexity* serves as the central challenge in maternity services, encompassing three interrelated dimensions: case complexity, service complexity, and relationship complexity. The model proposes that to effectively address these complexities, C-SC involving the healthcare system, the community, and local government is essential. This collaboration is influenced by three key elements: V-BT, community empowerment, and an adaptive system. Each of these components contributes to creating a flexible, responsive, and culturally relevant approach to MC.

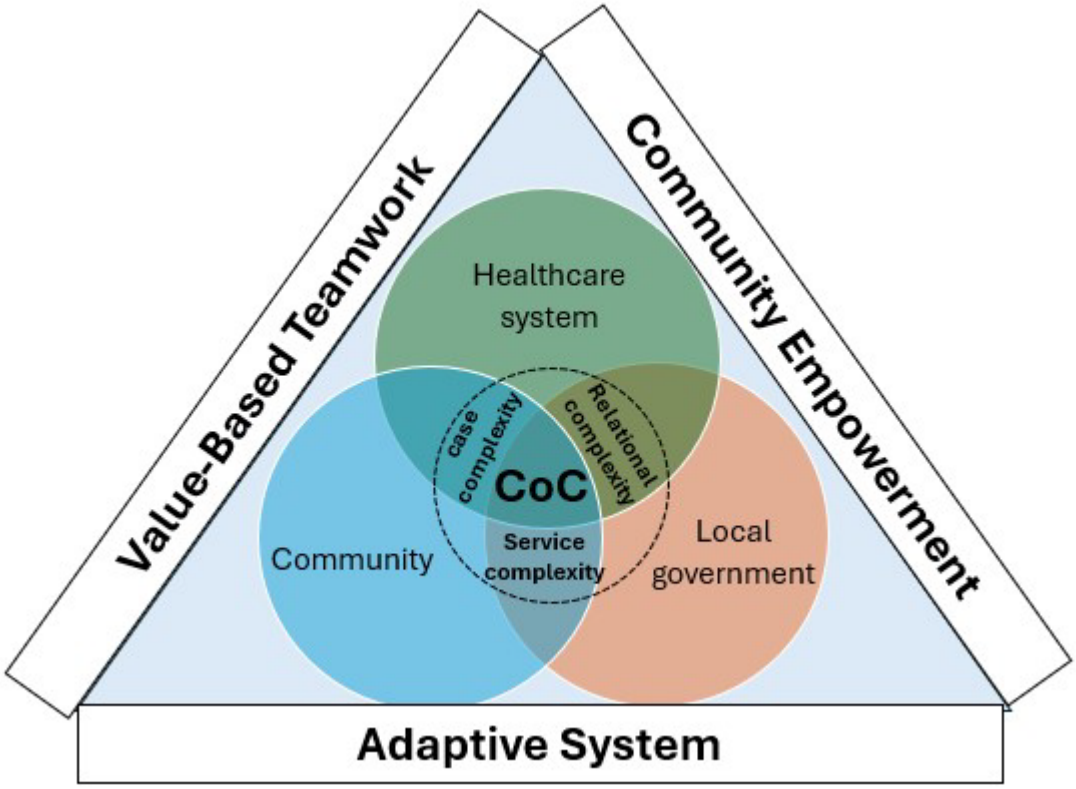

Figure 5.2: Collective Oriented Collaboration Model (COCM)

5.5.3. Complexity as the Central Challenge

In this model, complexity is identified as the central issue that IPC seeks to address. *Case complexity* refers to the varied and often unpredictable medical needs of pregnant women, including managing comorbidities, ensuring continuity of care, and addressing the specific health risks faced by pregnant women. *Service complexity* relates to the diverse settings in which MC is provided, ranging from Puskesmas to community-based services such as Posyandu, and the challenges that arise from limited resources, geographical barriers, and variations in service delivery. Lastly, *relationship complexity* refers to the interpersonal and professional dynamics among HCPs, as well as between HCPs and women. This includes managing conflicts, role clarity, and communication challenges that can arise in an interprofessional care team (Kreindler et al., 2022).

One of the central findings from this study is that community-based maternity services operate within a highly complex system, where multiple factors—medical, social, cultural, and logistical—intersect, as depicted I Figure 5.3. In the initial coding phase, participants consistently highlighted the diverse needs of pregnant women, which range from physical health concerns (e.g., high-risk pregnancy) to broader social and cultural issues (e.g., family support, local customs, and economic constraints). Further examination revealed that this complexity cannot be addressed solely through a single professional lens; instead, it requires a multi-level approach involving various HCPs, community volunteers, and government bodies.

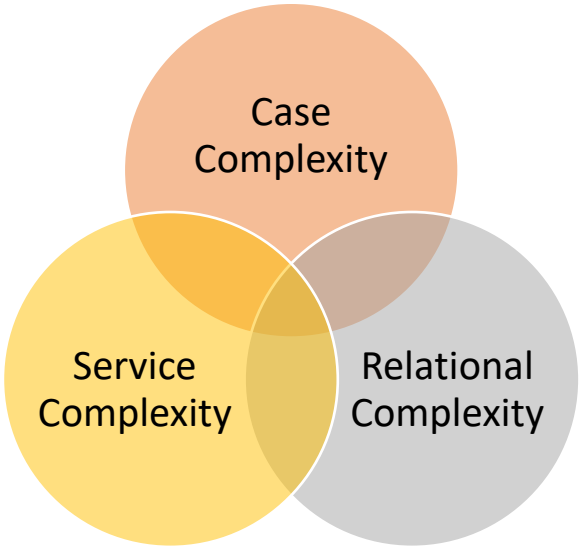

Figure 5.3: Complexity in MC system

Through focused coding, I looked deeper into these interrelated issues and saw that complexity in maternity services often comes from problems that connect with each other. For example, one case in this study involved a pregnant woman with preeclampsia who needed to be referred to a hospital, but her husband's involvement in decision-making delayed the referral. This shows how the decision process can be complex because it depends on family dynamics and cultural norms. In addition, preeclampsia care itself requires complex services—moving from a local clinic to a

higher-level hospital. As a result, many HCPs become involved, creating complex relationships among different professionals who must work together. Seeing "maternity services in the community as a complex system" highlights the need to address both clinical concerns (such as referral and treatment) and local factors (like family roles and cultural beliefs).

This recognition of complexity directly informed COCM, where complexity sits at the core as the primary challenge driving the need for synergy across professional and community boundaries. Instead of seeing complexity as a barrier that blocks progress, the model views it as a spark that brings people together to solve problems collaboratively. By acknowledging the multidimensional nature of MC and the interdependence of various stakeholders, "Complexity as a Central Challenge" became the conceptual bedrock for other model components, including C-SC, V-BT, community empowerment, and adaptive systems. This shift from the empirical findings to a theoretical construct demonstrates how the GT process translated real-world conditions into a cohesive framework for understanding and enhancing MC practices.

5.5.4. Cross-Sectoral Collaboration (C-SC)

5.5.4.1. Overview

To address the various dimensions of complexity, the model emphasises the importance of C-SC, which involves coordinated efforts between HCPs, community members, and local government authorities. This collaboration extends beyond the traditional boundaries of the healthcare system, incorporating the active participation of CHWs, pregnant women, and their families. In Indonesia, where healthcare services are often community-centred, the involvement of these stakeholders is crucial to

ensuring that care is accessible, culturally sensitive, and tailored to the local context (Tanasugarn et al., 2020).

In this study, C-SC emerged as a key strategy for handling the complex system of community-based MC. During the initial and focused coding stages, participants often mentioned the importance of working not just across different health professions, but also across various organisations and community groups. This idea expanded the scope of collaboration from interprofessional teamwork to broader partnerships with hospitals, local government, CHWs, and professional associations (Figure 5.4).

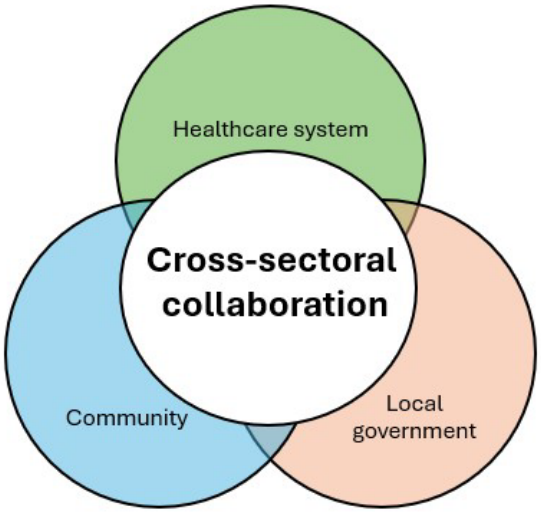

Figure 5.4: Cross-sectoral collaboration

A clear example from the findings is the networking with hospitals for emergency referrals. When a local health centre cannot manage a high-risk pregnancy or urgent case, they reach out to hospitals with better resources. By doing so, midwives, physicians, and other staff create a more reliable safety net for pregnant women who need immediate, specialised care. Another form of cross-sectoral work is the partnership with village heads and CHWs to support *Posyandu* programs. Here, local leaders help mobilise the community, ensure that health events run smoothly, and connect families with the services they need. In addition, there is collaboration with

professional health associations—such as those for physicians, midwives, or nurses—to share knowledge and detect conditions like preeclampsia early.

These practical examples show how C-SC acts as a shared response to the varied challenges in MC. Instead of limiting teamwork to professionals within the same facility, this approach involves a wide network of stakeholders, each with unique roles and resources. By linking many sectors, HCPs can address medical and social problems more effectively, reduce gaps in services, and provide more comprehensive support for mothers. As found in this research, moving from interprofessional to intersectoral collaboration is a natural expansion of teamwork, driven by the diverse and ever-changing needs of MC in the community. This collaborative approach is influenced by three interrelated factors, as shown in Figure 5.5 and described in the following subsections: V-BT, community empowerment, and an adaptive system.

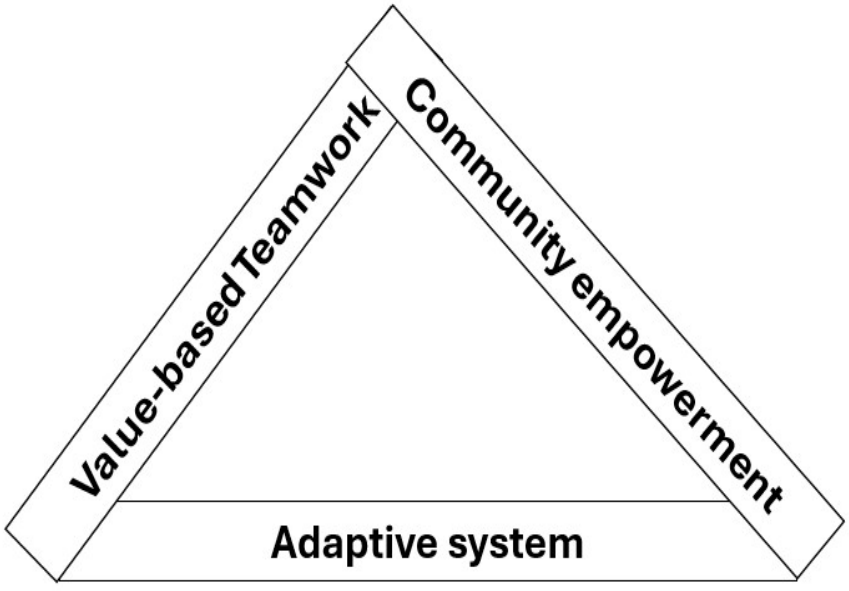

Figure 5.5: Influencing factors for collective-oriented collaboration

5.5.4.2. Value-Based Teamwork (V-BT)

The concept of V-BT highlights the role of cultural and religious values in shaping how HCPs work together. In the Indonesian context, Islamic principles and local

cultural norms of *Gotong Royong* play a significant role in guiding interprofessional relationships and decision-making processes. These shared values foster a sense of mutual respect, trust, and collective responsibility, which are essential for successful collaboration (Wahyuningsih et al., 2021). V-BT encourages HCPs to work cohesively, respecting each other's roles and contributions, while prioritising the well-being of the mother and child.

One important finding from this study is that collaboration among HCPs is shaped by local cultural values. Many participants mentioned a shared sense of mutual help, commonly known as *Gotong Royong*. For example, midwives spoke about how they often rely on one another and on other professionals, such as physicians or public health staff officer, when providing services in the community. This culture of helping also includes local officials, who feel a strong responsibility to support community health efforts.

During the initial and focused coding stages, I noted repeated references to these shared cultural and religious values. At first, it appeared in the data as simple statements about "people helping each other", "we work as a family"; however, closer analysis revealed that these values directly encourage collaboration, not just within a single team but across different organisations and professions. Through reflective memos and comparisons with other findings, it became clear that this V-BT promotes stronger communication, flexible roles, and problem-solving among those involved in MC.

When building the COCM, I recognised that V-BT does more than influence relationships among HCPs. It also affects how different sectors—such as local government offices, professional associations, and community groups—join forces.

Because of these shared values, participants were more willing to trust each other, share resources, and agree on common goals when addressing the complexity of maternal health. By showing that, these values guide everyday actions and decisions, I could see that V-BT influences C-SC, ensuring that all parties, from different backgrounds, stay focused on a shared mission: improving maternal health outcomes in the community.

5.5.4.3. Community Empowerment

Community empowerment is a fundamental element of the *COCM*. In Indonesia, the community is actively involved in MC. This empowerment is crucial for ensuring that maternity services are responsive to the needs and preferences of the community. CHWs, in particular, act as vital links between HCPs and the local population, providing health education, facilitating access to services, and supporting continuity of care. The involvement of families and community members also strengthens social support networks, which are important for improving maternal health outcomes (Adeney et al., 2019).

Another important component of the COCM is community empowerment, which plays a crucial role in supporting C-SC. Findings from the document analysis show that the Indonesian government actively promotes community-based strategies to improve public health. One of the main initiatives highlighted in these documents is the Posyandu program, where local community members gather to receive and share health information, especially related to maternal and child health. These documents emphasise that involving the community in health activities is a key strategy for ensuring services reach more people and better meet their needs.

During the interviews, participants stressed the vital role of CHWs in primary health efforts. Many interviewees described how CHWs help bridge gaps between formal HCPs—like physicians and midwives—and the local population. CHWs not only share health information but also support families in understanding health risks and navigating referral systems when more specialised care is needed. This direct engagement with the community makes collaboration across different sectors smoother and more responsive to local conditions. Because community members themselves play an active role, external agencies—such as local governments, health facilities, and professional associations—find it easier to coordinate efforts that align with the real needs of mothers and families.

Together, the documentary evidence on government-led community empowerment efforts and the interview findings on CHWs' strong influence demonstrate how community empowerment moves beyond being simply an activity to becoming a foundational part of C-SC.

5.5.4.4. Adaptive System

The third component of the model is the presence of an adaptive system, characterised by flexibility in roles, practices, and communication among HCPs. This adaptability is essential for navigating the complexities of MC, where unexpected situations and resource constraints often require HCPs to step outside their traditional roles. For example, midwives may take on tasks typically performed by physicians, or CHWs may engage in informal communication with families to bridge gaps in care. This flexibility allows the system to respond more effectively to the dynamic and often unpredictable nature of maternity services, ensuring that care remains continuous and coordinated (McDonald et al., 2020).

Another central element of the COCM is the adaptive system, which influences the way C-SC unfolds in community-based MC. In the initial and focused coding phases, flexibility in both clinical practice and communication emerged as a common theme. Several participants shared stories of task delegation—for instance, midwives taking on duties normally done by physicians, or CHWs assisting with minor clinical tasks—especially when staffing is limited in local health centres. This flexibility allows care to continue smoothly, even under resource shortages or time constraints.

Likewise, participants described the value of informal communication among busy HCPs. They noted how sending quick messages via mobile apps or chatting briefly in hallways helps to share updates or ask for help without waiting for a formal meeting. Although these interactions might seem minor, they often lead to quicker responses for urgent concerns, better coordination, and more mutual support. As these practices repeatedly surfaced in both interviews and field notes, the data pointed toward a broader pattern: an adaptive system where professionals feel empowered to adjust roles and methods of communication as the situation demands.

As the empirical findings were synthesised into a conceptual framework, task delegation and informal communication, which initially appeared to be separate coping strategies, proved to be part of a larger mechanism that helps HCPs manage the complex and ever-changing needs of community MC. In the resulting model, the adaptive system emerges as a driver of C-SC, enabling teams with varied backgrounds and resources to coordinate more effectively. Through flexible roles and open communication channels, the system as a whole becomes better equipped to respond to challenges, ultimately supporting more cohesive and comprehensive maternity services.

5.6. Chapter Summary

In summary, the COCM provides a comprehensive conceptual framework for addressing the complexities of MC in Indonesia. By focusing on case, service, and relationship complexities, the model highlights the importance of C-SC involving healthcare systems, communities, and local government. The integration of V-BT, community empowerment, and adaptive systems within this collaboration fosters a flexible, culturally responsive approach to maternal healthcare. This conceptual model not only reflects the unique socio-cultural context of Indonesia but also offers practical insights for improving IPC in diverse MC settings. Chapter 6 builds on this to examine the findings of this research in depth, drawing connections to existing literature and theoretical frameworks. This chapter also explores the implications of the study, addressing how the insights gained contribute to understanding IPC in community MC. Finally, Chapter 6 outlines recommendations for EBP and future research, providing a comprehensive conclusion to the study.

CHAPTER 6

Discussion and Conclusion

6.1. Introduction

The WHO (2010) identifies IPC in education and practice as a pivotal strategy to address the global health workforce crisis. Due to the distinct characteristics of each health region, IPC strategies must be tailored to local needs and challenges. In certain areas, this may involve promoting patient safety (Guraya, 2023; Dinius, 2020), optimising limited health resources, transitioning care from acute to primary settings, or fostering integrated working practices (Geese, 2023; Pardede et al., 2019). In other regions, the emphasis might be on human resource benefits, such as enhancing job satisfaction among HCPs or providing greater role clarity within teams (Karadas et al., 2022).

In Indonesia, IPC is listed under professional competency standards and the Health Education Law (Law No. 13, 2013) as one of the main competencies that must be mastered by HCPs (Doctor Professional Standards, 2019). In addition, collaboration is the basis for implementing national development programs in the health sector, as stated in the vision of the President of Indonesia:

> "The realisation of an advanced Indonesia that is sovereign, independent and displays attributes, based on *Gotong Royong*". (MoH, 2020).

In maternity services, collaborative practice is realised in the integrated ANC program as a strategy to encourage integrated primary care (MoH, 2020).

My study was conducted in a specific health setting, community-based MC. It involved perspectives from different HCPs which contributed to novel knowledge in

the area of IPC. This is because most of the existing research on interprofessional work in maternity services focuses on interactions between midwives and GPs or obstetricians and conducted in hospital settings. The increasing emphasis on public health, particularly preventive and promotive care, opens up opportunities for researchers in the field of healthcare teamwork to contribute more broadly to strengthening understanding of teams and teamwork in more complex organisational systems, for example primary care in the community. Moreover, undertaken in Indonesia, this research provides novel contribution to the understanding of interprofessional work in Indonesia, giving the fact that research on IPC in MC in Indonesia is still limited.

This research also provides a novel theoretical understanding of how IPC operates within community maternity teams in Indonesia, arguing that the COCM conceptual framework is crucial for navigating the complexities of these services. Community maternity services in Indonesia are embedded within a multi-layered system, marked by interconnected services, case, and relationships complexities. To effectively manage this complexity, collaborative teams can adopt the COCM. This model, grounded in values-based interprofessional teamwork and C-SC, is essential for delivering efficient and effective care to pregnant women. However, the research also identifies that interprofessional tensions and behaviours can serve as significant barriers to collaboration, underscoring the need for deliberate strategies to foster a more integrated and cohesive team environment.

To substantiate these findings, three main points are distilled. Firstly, working in community maternity services involves managing multifaceted complexity, which often challenges traditional team working models. Secondly, collaboration relies on

HCPs building connections and using V-BT to manage complexity, build relationships, and optimise resource utilisation, thereby improving IPC and QoC. Thirdly, community maternity services require inter-professional and C-SC, which creates major challenges for IPC and impact the provision of services for pregnant women.

6.2. Overview of Findings (Understanding of IPC)

The findings of this study offer an overview of perceptions regarding IPC within a specific context, specifically community maternity services in Indonesia. These findings address the research questions illustrated in Figure 6.1.

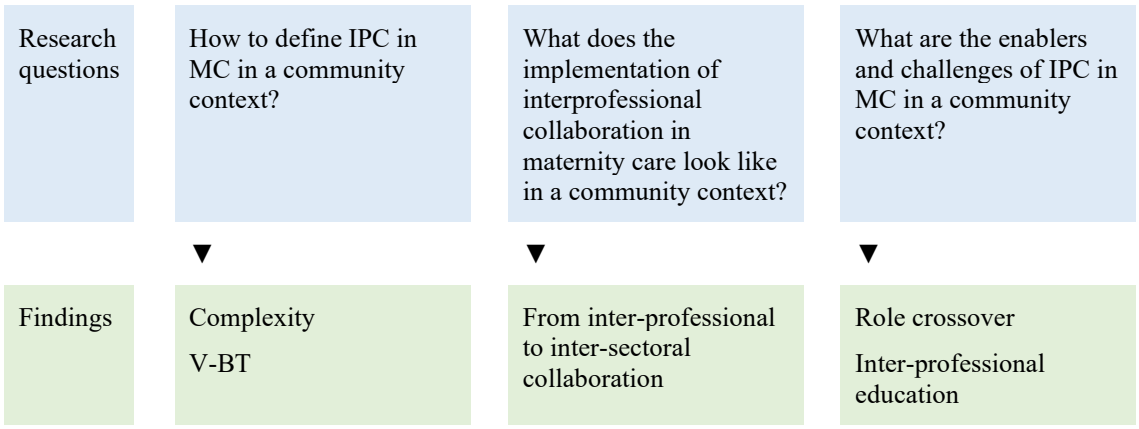

Figure 6.1: Understanding of interprofessional collaborative MC in a community context

In the following sections, these results are examined in greater depth in relation to existing literature. The discussion begins with an exploration of "complexity", situating it within the existing literature. This is followed by an analysis of V-BT, which incorporates cultural and religious values in IPC, and a consideration of C-SC and interprofessional tensions. Subsequently, I outline the implications of these findings for clinical practice, policy maker, education, and future research. This is

followed by an acknowledgment of the study's limitations and strengths. The thesis concludes with some final reflections.

6.2.1. Complexity as a Context and Central Challenge

From the findings of this research, it is clear that complexity is the main characteristic and challenge faced by HCPs in maternity services in the community. The complexity involved interlinked components of complex services, cases, and relationships.

6.2.1.1. Complexity within extant literature

The concept of complexity arose from the participants' perspectives, though the meaning was implicitly articulated, which gave rise to various interpretations from the author. This reflects the multiple ways in which the term "complexity" is used in the literature; it can carry different connotations depending on where and how it is used.

In academic literature, "complexity" typically refers to the intricate and interconnected nature of systems, phenomena, or theories within a specific discipline. It often involves a nuanced understanding of complex systems, their emergent properties, non-linear dynamics, and interactions among multiple components (Turner et al., 2019). In the field of physics, for example, this concept is used to analyse physical systems that have many interacting particles or components, such as fluid dynamics systems, particle systems, or cosmological systems (Stalne et al., 2014).

Meanwhile, in mainstream media, "complexity" is used interchangeably with "complicated", which may be used more broadly and loosely to describe situations, issues, or phenomena that are difficult to understand or explain (Boulton et al., 2015). It often refers to anything that seems intriguing, confusing, or multifaceted to the general public, regardless of its actual complexity. From these definitions, in general,

the term complex refers to a system or phenomenon that involves many elements that are interrelated and interact in a complicated and difficult to predict way.

Although there is no universally acclaimed definition, the use of “complexity” in general helped the author uncover the implicit meaning of complexity for the participants in this study. The notion of complexity regarding systems with many interacting layers is particularly relevant to this research. This relates to this study definition of complexity in the community maternity service system as having three interrelated components: service complexity, case complexity, and relationship complexity.

Generally, in the interprofessional health literature, the term “complexity” is used in two main ways: as a descriptive term to qualify various aspects of practice, and as a topic of major debate. When used descriptively, complexity is often assumed to be understood without an explicit definition and is used to encompass many factors that are not easily explained. For example, the term is commonly used to describe complex patients (Geese & Schmitt, 2023), complex environments (Schot et al., 2020), or medical interventions complexity (Zullig et al., 2016), as well as emerging IPC competencies (Vaseghi et al., 2022). However, some authors adopt a broader perspective on interprofessional interaction, viewing it as a complex phenomenon without delving deeply into its underlying theoretical implications.

For example, McLaney et al. (2022) and Reeves et al. (2017) discuss IPC in healthcare settings, but do not provide a thorough examination of the theoretical frameworks that might explain the dynamics of these interactions. This lack of theoretical clarification can result in ambiguity, making it challenging to establish a clear understanding of IPC and complicating the transfer and application of these concepts to different

contexts. Consequently, the absence of a well-defined theoretical basis may hinder the development of effective interprofessional practices, as the foundational principles guiding these interactions remain underexplored and poorly articulated.

In Chapter 2, I explored several relational theories such as Bourdieu's theory of practice, Berger and Luckmann's social construction of reality, professional identity theory, social identity theory, social exchange theory, and relational coordination theory. These theories were instrumental in shaping my initial conceptualisation of interprofessional collaboration (IPC) as a socially constructed and relationally embedded process. For instance, Bourdieu's notion of *habitus* and *field* helped illuminate how health professionals' dispositions and power dynamics shape their roles and interactions in the health system. Similarly, Berger and Luckmann's (1966) theory highlighted how everyday interactions between professionals become institutionalised and shape collaborative norms.

As the research progressed, my findings confirmed and extended these relational insights. For example, the construction of a collective identity across professions in community settings echoed professional and social identity theories, demonstrating how shared values and goals contribute to team cohesion. Evidence of reciprocal exchanges of support and knowledge between HCPs aligned with social exchange theory and the relational coordination framework, particularly in relation to shared goals, mutual respect, and frequent communication. However, my analysis moved beyond these theories by demonstrating that IPC in community maternity care is not solely shaped by interpersonal relationships, but also by systemic and situational complexities. The concept of complexity—manifested in case service, and relationship dimensions—emerged as central. This required recognising cross-sectoral

collaboration, value-based teamwork, community empowerment, and adaptive systems as responses to these layers of complexity.

Thus, while relational theories offered a strong foundation, the grounded theory of Collective Oriented Collaboration that emerged in this study extended the literature by offering a broader, contextualised lens. It incorporates both relational and structural dynamics, highlighting how collaborative practice is co-constructed not only through interprofessional relationships but also through engagement with communities, cultural values, and flexible system adaptations in response to contextual challenges.

In the interprofessional literature, when complexity is a primary focus, researchers often use "complexity theory" to explain aspects of teamwork or interprofessional practice, such as adapting processes in primary care (Sirimsi et al., 2022). "Complexity theory", which originated in the fields of mathematics and physics in the 1950s and was further developed by organisations such as the Santa Fe Institute (Stevens & Cox, 2008), began to be used in the organisational and health literature in the 1990s (Buchanan, 2000; Sweeney & Griffiths, 2002). Fundamentally, this theory explores the study of complex systems, examining how order, patterns, and structure emerge from them. It provides a framework for analysing how different elements within a system interact in dynamic and often unpredictable ways to create new forms of organisation and behaviour (Manson, 2001; Mitchell, 2009).

This perspective aligns with the management of interprofessional work in complex settings, such as maternity community services, where the delivery of care often involves multiple professional groups and sectors working together. In such settings, a V-BT approach, coupled with C-SC, is crucial to effectively manage the complexities of care delivery. By applying complexity theory, this thesis highlights

how such collaborative efforts can lead to improved coordination, more responsive care practices, and better health outcomes, as the system continuously adapts and reorganises in response to internal and external influences.

The concept of "complexity" is linked to IPC as it captures the multifaceted nature of healthcare environments where professionals from diverse disciplines must work together to address patient needs. The complexity in IPC arises from various sources, such as differing professional cultures, roles, and terminologies; the need for coordinated decision-making; and the management of patients with diverse and often interconnected health conditions. In IPC, complexity may manifest in the form of overlapping responsibilities, varying degrees of authority and expertise, and differing approaches to patient care. For example, understanding and managing "complex patients" in an interprofessional context requires a coordinated effort whereby multiple professionals such as physicians, nurses, and social workers bring their unique perspectives and expertise to create a comprehensive care plan.

Moreover, the complexity inherent in healthcare environments often necessitates a collaborative approach that leverages diverse professional competencies to provide high-quality, PCC. The literature suggests that recognising and effectively managing complexity is critical for fostering effective IPC, as it requires clear communication, mutual respect, and a shared understanding of roles and responsibilities (Skyberg & Innvaer, 2020). When complexity is not adequately addressed, it can lead to miscommunication, role confusion, and conflict, ultimately hindering collaborative efforts and negatively impacting patient outcomes. Therefore, a more precise understanding and articulation of "complexity" in interprofessional settings can help clarify the dynamics of collaboration, guide the development of collaborative

competencies, and facilitate the creation of frameworks that support effective teamwork across disciplines. This clarity is essential for translating the theoretical principles of IPC into practical strategies that can be applied across various healthcare settings to enhance the quality and safety of patient care.

Although the concept of complexity is frequently mentioned in studies of interprofessional work, it often remains insufficiently defined and explored. This lack of conceptual clarity limits a holistic understanding of how complexity influences IPC in real-world settings. Existing research typically narrows its focus to a single aspect such as patient care, specific services, or professional roles rather than examining the multifaceted nature of interprofessional work (Braithwaite et al., 2018; Lingard et al., 2017). For example, studies that concentrate solely on patient outcomes may highlight the benefits of collaborative care for safety and satisfaction, but they often fail to account for how these outcomes are shaped by the complex interactions among professionals, services, and organisational contexts (Geese & Schmitt, 2023).

In my Integrative Literature Review, I observed that complexity in interprofessional collaboration (IPC) was primarily understood through a relationship-based lens, focusing on how interpersonal dynamics influence collaborative practices in maternity care. However, the findings from my current study extend this perspective by demonstrating that complexity in community-based maternity care involves not only relational aspects but also case (e.g., multifaceted patient conditions) and service components (e.g., coordination across different healthcare and non-healthcare services). These three interconnected dimensions—case, service, and relationship—underscore a broader conceptualisation of complexity that has not been well-explored in maternity IPC literature. My thesis expands on this understanding by addressing the

multiple dimensions of complexity that characterise interprofessional work, particularly in maternity community services. It highlights how complexity in such settings is not limited to the nature of the cases being managed, such as varying patient needs and clinical conditions, but also encompasses the diverse services provided and the intricate relationships between professionals from different backgrounds. This aligns with the broader literature on complexity theory, which emphasises that complex systems, such as interprofessional teams, cannot be understood by examining their components in isolation but must be viewed as dynamic wholes where various elements (cases, services, and relationships) interact in unpredictable and nonlinear ways (Carroll et al., 2023).

By addressing these interconnected elements, my thesis contributes to the understanding of IPC that provides a clearer framework for recognising and managing the complexities inherent in IPC, moving beyond the fragmented perspectives often seen in existing literature. This approach emphasises the importance of comprehensive strategies that not only address patient needs but also consider the broader service and relational contexts in which care is delivered (Braithwaite et al., 2018; Lingard et al., 2017).

My findings demonstrate how MC professionals must work flexibly within this complex environment, responding to emerging conditions and the non-linear nature of the system. This finding reflects the principles of Complex Adaptive Systems (CAS) theory that complex systems have properties such as non-linearity, uncertainty, and emergence, which means that the behaviour of the system cannot be fully predicted by analysing its individual components in isolation. Instead, the overall behaviour of the system emerges from the dynamic interactions between its components and their

external environment (Asefa et al., 2020). By aligning with CAS theory, my research underscores the importance of collaborative approaches that allow healthcare teams to adapt effectively to the unpredictable nature of community-based MC. Thus, my work illustrates how CAS theory can inform the understanding of MC systems while advancing insights into the specific collaborative strategies needed to optimise care delivery in such complex settings.

In the context of MC, these elements include a diverse range of HCPs, such as midwives, obstetricians, GPs, nurses, and CHWs, each bringing their own expertise, practices, and perspectives to patient care. Additionally, the care involved multiple sectors (healthcare, local government, and community), each with its own set of policies, resources, and constraints. The interactions between these diverse elements do not follow a simple path; instead, they are characterised by unpredictability and variability, as they respond to changing patient needs, fluctuating resource availability, and evolving policy environments (Braithwaite et al., 2018).

To conclude, MC in the community comprises non-linearity, uncertainty, and emergence, reflecting the properties of a complex adaptive system. The care provided is not simply the sum of its parts, rather, it is an emergent phenomenon shaped by the ongoing, often unpredictable, interactions among professionals, patients, services, and external factors. Recognising MC as a complex system emphasises the need for IPC and adaptive strategies that can effectively navigate these complexities (Asefa et al., 2020), as highlighted in my thesis findings.

6.2.1.2. Managing complexity through IPC

IPC has emerged as a crucial strategy for managing complex systems, particularly in healthcare settings where the needs of patients are diverse and constantly evolving

(Boeckxstaens, 2023). In line with the findings of this thesis, IPC, especially when implemented through V-BT and C-SC, proves to be an effective approach in addressing the complexities inherent in MC. This approach fosters the integration of different professional perspectives, enhances the coordination of care, and improves patient outcomes by drawing on the unique skills and knowledge of various HCPs (Anderson et al., 2023; Zwarenstein et al., 2009).

In the context of maternity community services, complexity arises from multiple factors, including diverse patient populations, varying socio-economic conditions, and the need for continuous adaptation to changes in health status, care preferences, and available resources. My study found that IPC helps manage these complexities by promoting a value-based approach that prioritises PCC and the optimisation of resources across sectors. C-SC, in particular, allows for the alignment of efforts among HCPs, local government, and community, facilitating comprehensive care that addresses both medical and social determinants of health (Anderson et al., 2023).

Stevens and Cox (2008) used complexity theory together with complex adaptive systems theory to conceptualise dynamic and open systems in child protection. They emphasised the importance for HCPs to recognise their role in larger systems and utilise complexity theory principles such as self-organisation and emergence to understand the challenges faced in everyday practice. Although not a new theoretical approach, Stevens and Cox's (2008) concept of linking practitioner behaviour to system complexity offers a valuable bridge between complexity theory and practical applications. This concept aligns closely with the findings of this thesis, which introduces the COCM to explain how health service workers navigate the complexities of MC in community settings. According to this thesis, HCPs manage this complexity

through flexible practices that adapt to the dynamic nature of their environment, one of which is the delegation of authority.

The COCM illustrates that in complex and unpredictable settings, such as MC, professionals often cannot rely solely on rigid protocols or predefined roles. Instead, they must continuously adjust their behaviour and decision-making processes to respond effectively to emerging situations. For example, the delegation of authority—whereby tasks and responsibilities are redistributed among team members based on situational needs rather than fixed hierarchies—enables teams to be more responsive and adaptive (Stevens & Cox, 2008). This approach reflects a practical application of complexity theory, which emphasises the importance of adaptability and flexibility in managing complex systems (Mitchell, 2009).

By delegating authority dynamically, health service workers can leverage the diverse skills and expertise within the team, thereby enhancing their collective ability to respond to patient needs and unforeseen challenges. This practice is crucial in managing the non-linearity and uncertainty characteristic of MC in the community, where patient conditions and service requirements can change rapidly. It allows teams to function effectively despite the complexities of their work environment, supporting the emergent properties of effective care delivery, as posited by complexity theory (Braithwaite et al., 2018).

Thus, the COCM in this thesis not only demonstrates how health service workers navigate complexity through flexible practices like delegation of authority but also provides a concrete example of how the theoretical insights of Stevens and Cox (2008) can be translated into practical strategies for IPC in complex healthcare settings.

6.2.2. Value-Based Teamwork

In this research, V-BT emerged as a concept that defines the implementation of collaborative practice in community maternity services in Indonesia from the perspective of HCPs and is supported by the findings of the document analysis. Collaboration is understood as a form of cooperation that occurs spontaneously and is driven by the principles of cultural and religious values that are internalised within each individual HCP. This section will explain the concept of values and its application in interprofessional teamwork, the role of cultural and religious values in IPC and how this works in various healthcare settings in several countries.

6.2.2.1. V-BT and extant literature

The concept of value is most widely used in scientific fields such as psychology and social sciences. Values, in the context of psychology, ethics, and social sciences, refer to principles, beliefs, or standards that form the basis of individual behaviour and decision making (Allport, 1961; Mason et al., 2010). This definition covers important aspects of values, such as their role as guides to human actions and preferences.

In healthcare, the concept of value is widely used to support PCC (Attum et al., 2023; Liu et al., 2020; Zagloul et all., 2024). In the realm of patient care, Thornton (2006) attributes value to the unique aspects that each patient brings to the clinical encounter. He emphasises that values encompass the unique preferences, concerns, and expectations that each patient brings to a clinical encounter, which must be considered in clinical decisions to effectively serve the patient. Liu et al. (2020) describe this as a cultural competency that a nurse must have to improve service quality. Cultural competence primarily involves the capacity to analyse and differentiate the healthcare

beliefs, values, and cultural practices of diverse individuals, and to deliver care that is both culturally suitable and advantageous to them.

Additionally, Fulford et al. (2012) broaden the definition of values to include anything that is positively or negatively weighted and serves as a guide to healthcare decision-making. These definitions collectively underscore the importance of recognising and integrating values into clinical practice to ensure PCC. In this case, the concept of value is used in the context of attention of HCPs to the diversity of unique aspects possessed by each patient. Meanwhile, this research focuses on the shared values held by HCPs which have an impact on the quality of patient care. For instance, a positive patient safety culture is linked to a reduction in adverse events, making it a useful indicator of patient safety. Safety culture is described as:

> "the outcome of individual and collective values, attitudes, perceptions, competencies, and behaviour patterns that shape an organisation's commitment to, and approach and effectiveness in, managing health and safety". (Health and Safety Commission, 1993)

The concept of V-BT in this research describes interprofessional teamwork that is built on the encouragement of shared values that are based on national and religious cultural principles, which include mutual assistance, volunteerism, mutual respect, and prioritising shared interests over individual interests. This finding is in line with Smith et al. (2020) who highlight that shared values, rooted in professional ethics such as integrity, cooperation and respect, are key in building an effective collaborative framework among health teams. They found that healthcare teams that consistently implemented these values had higher levels of patient satisfaction and better care outcomes.

A study by Johnson et al. (2019) found that differences in the interpretation and prioritisation of values among healthcare team members can be a significant barrier to achieving consensus in collaborative decision-making. This research highlights a critical challenge in interprofessional settings: when team members have divergent values or prioritise values differently, it can create friction and impede the development of cohesive care strategies. Such disparities often result in conflicting perspectives on patient care, making it difficult for teams to reach agreements and deliver integrated and holistic PCC (Johnson et al., 2019).

In contrast, my findings on V-BT in maternity community services suggest a novel perspective. This research emphasises that shared cultural and religious values among team members can actually facilitate more effective collaboration. When HCPs and patients share common cultural and religious values, it can create a foundation of mutual understanding and respect, which enhances team cohesion and supports more harmonious decision-making processes. For example, in MC, shared values related to family, traditions, and religious practices can guide team members in aligning their approaches to care, thereby fostering a collaborative environment where diverse perspectives are integrated into a coherent care plan (Rider et al., 2021). Rider et al. (2021) discuss these dynamics from a theoretical perspective, synthesising insights from existing literature on interprofessional collaboration. They argue that values and attitudes—such as respect, shared power, and accountability—are essential components for effective team functioning. While their discussion is not based on new empirical data, it provides a conceptual foundation that aligns with and supports the findings of this study, which also highlight the significance of value-based teamwork in enhancing collaborative care and improving patient experiences and outcomes.

My findings indicate that when healthcare teams actively engage with and incorporate these shared values, they are better able to navigate complex patient needs and preferences. This shared value framework helps mitigate the barriers identified by Johnson et al. (2019) by providing a common ground on which team members can build consensus and achieve shared goals. By prioritising and respecting shared cultural and religious values, teams can create a more unified approach to care, which not only enhances team effectiveness but also improves patient satisfaction and outcomes (Rider et al., 2021). Thus, while Johnson et al. (2019) underscore the challenges posed by divergent values in IPC, my study provides a novel finding by highlighting how the integration of shared cultural and religious values in IPC can act as a powerful tool in overcoming these challenges. By focusing on common values, teams can transform potential barriers into opportunities for building stronger, more cohesive partnerships, ultimately leading to more effective and PCC (Baek et al., 2023).

In this research, the findings support the importance of V-BT as a foundation for IPC and can provide a strong basis for recommendations for better policies and practices in community maternity services. Nevertheless, further research is needed to explore more complex dynamics in the application of this concept, including how cultural and religious values specifically influence health collaboration practices in different contexts. While existing studies have highlighted the importance of shared values in fostering effective IPC (McLaney et al., 2022; Rider et al., 2021), this study contributes to addressing the significant gap in understanding the nuanced ways in which cultural and religious values impact collaborative practice.

In the Integrative Review (see chapter 2), one of the key insights was the significant influence of organisational values on collaborative practices in healthcare settings. However, most of the studies reviewed primarily emphasized overarching institutional support structures (e.g., policies, leadership) rather than examining the specific impact of local or national culture on everyday teamwork. Building on these review findings, my thesis introduces the concept of value-based teamwork in community-based maternity care, highlighting how deeply held cultural value of *gotong royong* can drive interprofessional collaboration. This focus on local/national cultural norms extends the integrated review's emphasis on the importance of values by demonstrating how culturally informed approaches can shape communication, decision-making, and conflict resolution in maternity care teams. Consequently, this perspective fills a notable gap in the existing literature: while previous studies recognized the importance of organizational values, they did not fully explore how specific cultural contexts reinforce or challenge collaborative practices. By foregrounding this value-based teamwork framework, my thesis contributes a novel dimension to the maternity IPC literature, underscoring the complexity and cultural nuance of collaboration in diverse settings.

6.2.2.2. The role of cultural and religious values in IPC

Values such as mutual assistance, respect, and concern for others are typically major motivators for HCPs, in their career selection and their clinical practice (Wu et al., 2015). In certain prevailing national cultures, such values can have more pronounced impacts on social interaction and cooperation (Hofstede, 2001). In the context of this research, Indonesian cultural values, such as mutual cooperation, are the main driver of IPC in community maternity services. In addition, the religious values held by individual professionals also play an important role in guiding IPC. Values such as

compassion, justice, and a sense of responsibility to others are the basis for collaborative actions carried out by health team members.

Hofstede's (2001) longstanding research on cultural dimensions highlights how cultural values shape individual behaviour and organisational dynamics, providing a useful framework for understanding teamwork in healthcare. One of the key dimensions identified by Hofstede is "collectivism vs. individualism", which reflects the extent to which individuals prioritise group interests over personal interests. The most striking characteristic of Indonesian national culture is its low "individualism" (i.e., high "collectivism") score of 5, seen in comparison with the UK's score of 78 in Figure 6.2.

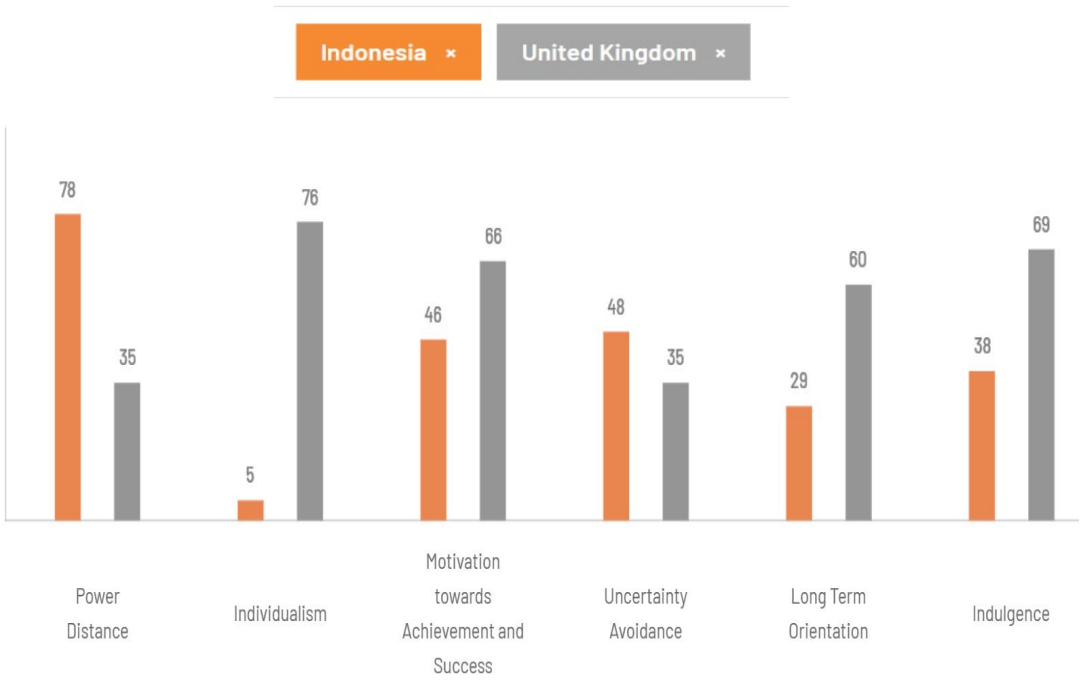

Figure 6.2: Hofstede's country comparison, Indonesia and UK

Source: adapted from Culture Factor Group (2025)

In collectivistic cultures, individuals see themselves as part of a larger group and tend to value cooperation, solidarity, and mutual support (Hofstede, 2001). This cultural

orientation is particularly relevant to healthcare teamwork, where collective values can strengthen collaboration, especially in maternal care. In Indonesia, for example, the cultural concept of *Gotong Royong* embodies this collectivistic spirit, encouraging cooperation and shared responsibility among HCPs. By prioritising group goals and collaboration, professionals in such settings are more likely to engage in interprofessional teamwork, which is crucial for providing comprehensive MC.

Using Hofstede's (2001) principle of collectivism in the context of health services, the cultural value of *Gotong Royong* creates an environment where HCPs tend to feel emotionally and morally bound to support each other and work together for the common good. They may feel a responsibility to make their best contribution to the interests of patients and the community, and this may increase their motivation to work together in collaborative teams. Thus, Hofstede's (2001) research on cultural dimensions, particularly the dimensions of collectivism vs. individualism, provides a useful framework for understanding how the cultural value of *Gotong Royong* influences teamwork dynamics in the healthcare context. This provides a strong foundation for understanding how local cultural values can shape and influence individuals' motivation to work together in a collaborative team.

Consistent with the findings of this study, Earley and Gibson (1998) discussed how shared cultural values can impact teamwork and motivation across different multinational teams. They emphasised that teams with aligned cultural values often show higher levels of cohesion and motivation compared to teams with divergent cultural values. In IPC, the integration of shared values among team members is crucial for successful collaboration. The Interprofessional Education Collaborative Core Competencies (IPEC, 2016) stresses the need for understanding and respecting

diverse perspectives to enhance teamwork. When team members share core cultural values, it facilitates better communication, mutual respect, and understanding, which are essential for effective collaboration.

Shared values can reduce conflicts, align team goals, and enhance the overall cohesion and functionality of the team (Rider et al., 2021). When applied in MC, which involves navigating a complex interplay of cultural beliefs, practices, and values related to childbirth and family, shared local cultural values among HCPs can significantly impact their collaborative efforts. For example, if a MC team shares cultural values related to family and childbirth, it can lead to more cohesive and PCC. This shared understanding helps team members align their approaches to care, respect patient preferences, and coordinate effectively (McLaney et al., 2022).

Galtung (1996) put forward the concept of a "culture of peace" which emphasises the importance of values such as cooperation, justice, and solidarity in society. In the context of maternal health services, the culture of *Gotong Royong* can be considered as part of a culture of peace that encourages harmonious and effective teamwork. A culture of peace creates a social framework in which individuals feel connected to one another and inspired to collaborate to achieve common goals. In the context of healthcare, values such as cooperation, justice, and solidarity promoted in a culture of peace correspond to the cultural value of "mutual cooperation". These values encourage IPC within healthcare teams.

The findings of this research regarding the influence of the cultural value of *Gotong Royong* (mutual cooperation) on collaboration between HCPs are very relevant to the concept of social capital theory, which refers to social resources (i.e., "capital") formed from social relationships, mutual trust, and social norms within a society or

group (Hauberer, 2012). In the context of Indonesian society, which tends to have strong collective values and solidarity, the concept of social capital is important because it encourages the creation of strong and mutually supportive relationships between individuals in society.

In this case, the cultural values of mutual cooperation can be seen as a social resource that produces social capital. The practice of mutual cooperation strengthens social ties among community members and increases trust and interdependence between them (Simons et al., 2022). When applied in the context of IPC, these values can help build strong and mutually beneficial relationships among HCPs. They can work together more effectively, share knowledge and resources, and support each other in providing quality health services to the community. Thus, these findings not only confirm the importance of cultural values in the practice of collaboration between health professions, but also underscore the role of social capital theory in understanding the dynamics of social and collaborative relationships in society.

The findings also show that strengthening cultural values that support cooperation and solidarity can be an effective strategy in building sustainable social capital within a community. Burgess et al. (2020) explored how social capital, including shared norms and values, facilitates collaborative behaviour and enhances the effectiveness of groups. This aligns with my finding that shared cultural values improve collaboration among HCPs by strengthening their social networks and trust, as stated by interview participants that the culture of mutual cooperation inherent in Indonesian society is not only applied in the social environment of society but also in the work environment, fostering closeness between HCPs and encouraging cooperation between health teams.

In this research, it was found that shared values also help in resolving inter-professional conflicts. When team conflict arises, team members can return to those values to find solutions that promote harmony and sustainability. Recent research supports these findings by highlighting the role of shared values in managing interprofessional conflict and strengthening relationships within healthcare teams (Schnurbein et al., 2023).

For example, Johnson et al. (2021) explored conflict resolution strategies in healthcare teams and found that shared values, such as integrity, fairness, and respect, were important guides in finding solutions that promoted harmony within the team. They found that when team members return to these values in the face of conflict, they tend to be better able to reach consensus and resolve tensions that may arise. Similarly, Cullati et al. (2019) found that conflict in teams can be mitigated by emphasising shared goals and values, which helps team members see beyond their personal differences and work towards a common objective.

These findings provide valuable insights into how shared values can be a source of strength in managing conflict in healthcare teams. By understanding the role and impact of these values, healthcare teams can develop more effective strategies for resolving conflict and strengthening collaboration in providing quality care to patients. Reflecting on my research, I see the same pattern, namely using a religious approach (i.e., religious terminology and narratives familiar to contextual participants) and deliberation, which are shared values of society, are found to be effective in solving interpersonal and interprofessional problems.

Bonello et al. (2018) conducted a qualitative case study to explore the concept of introducing an undergraduate IPE program at the Faculty of Health Sciences,

University of Malta, using Hofstede's (2001) cultural dimensions as a means of theorising about the role of culture. Bonello et al. (2018) found that while participants supported the notion of IPE, they identified multiple barriers that challenged implementation, including particular cultural norms and values which participants perceived would conflict with IPE. Bonello et al. (2018) considered that the relatively high power distance index in Malta was indicative of the acceptance that power is distributed unequally. The concept of power distance helps explain why some cultures might struggle more with IPC than others.

In Malta, the relatively high power distance score suggests that the healthcare system operates within a framework of inequalities and strong hierarchies (Bonello et al., 2018). This cultural characteristic is reflected in the dominance of the medical profession and the existence of both explicit and implicit interprofessional rivalries. In such contexts, collaboration across professional boundaries is challenging because of the centralisation of power and the rigid adherence to role specificity, which are hallmarks of societies with high power distance (Hofstede, 2011).

In contrast, despite Indonesia's high power distance score (78), as shown in Figure 6.2, my findings reflect a cultural context where shared values (particularly cultural and religious ones) encourage egalitarian relationships and mutual support among HCPs. In my study, these shared values seem to act as social glue that binds team members together, fostering a collaborative environment that reduce professional hierarchies. For example, cultural values of *Gotong Royong* may help mitigate professional tensions and encourage diverse healthcare teams to work together harmoniously. This reflects the findings in the literature that highlight how cultural

alignment within teams can enhance collaboration by promoting mutual respect and understanding (McLaney et al., 2022).

In the context of this research, findings supporting the role of cultural and religious values in collaborative health practices can provide valuable insights for the development of interventions and strategies that are more sensitive to cultural and religious contexts in community maternity services in Indonesia. However, the challenges of managing cultural differences must also be acknowledged and proactively addressed to ensure an inclusive and collaborative work environment.

6.2.2.3. Informal communication and collaboration between HCPs

In Indonesia, communication tends to be indirect (high-context), where messages are often conveyed implicitly through non-verbal cues, situational context, or body language. This style can present challenges for collaboration between HCPs, particularly when individuals from different cultural backgrounds must work together. In Indonesian culture, respect and maintaining harmony are paramount, leading to the avoidance of direct expression of problems or differences of opinion to prevent conflict (Panggabean, 2004).

Informal communication, including casual conversations outside formal meetings and everyday interactions, is vital in overcoming the challenges posed by indirect communication in Indonesian culture. According to Hall's "intercultural communication theory", high-context cultures like Indonesia rely on social networks and relationship contexts to convey messages, making informal communication crucial for understanding and interpreting information that is not explicitly conveyed (Hall, 1968).

In the context of IPC, informal communication acts as a bridge connecting various HCPs, enabling them to build stronger relationships and better understand each other. This is particularly important in cultures that value harmony and conflict avoidance. Through informal interactions, such as after-hours discussions or social gatherings, HCPs can raise concerns, provide feedback, and discuss ideas without the constraints of a formal hierarchical structure.

For example, Erjavec et al. (2022) demonstrated that informal communication can enhance the quality of collaboration between HCPs by fostering a freer and more open exchange of information, as well as increasing mutual trust and team cohesion. This study highlights that in cultures where formal communication is often restricted by hierarchies and social norms, informal communication becomes an essential channel for overcoming these barriers.

Moreover, the "social penetration" theory of Altman and Taylor (1973) underscores the significance of informal communication in developing deeper and more meaningful interpersonal relationships. According to this theory, communication that begins at a superficial level gradually becomes deeper and more personal as the frequency and closeness of interactions increase. In the context of IPC in Indonesia, informal communication can facilitate this process, allowing HCPs to better understand each other's perspectives and develop more effective collaborative strategies.

6.2.3. Professional Identity and Inter-Professional Tension

As mentioned before, IPC is positioned as an appropriate and effective approach for managing complexity in maternity community services. However, it also introduces a new layer of complexity related to interpersonal and interprofessional relationships.

Relationship complexity arises when individuals from different professional backgrounds are required to work together closely. These differences can create challenges, such as conflicts over decision-making authority, misunderstandings due to varied communication styles, and resistance to change from entrenched professional identities (Hummel et al., 2021; Ryuichi et al., 2020).

The findings from this thesis indicate that in maternity community services, where IPC is essential, relationship complexity can manifest in several ways. For example, differences in professional hierarchies and philosophy of care can lead to conflicts or disagreements about the best approach to care delivery. Additionally, C-SC often involves navigating organisational boundaries and power dynamics, which can complicate efforts to establish cohesive teamwork and shared goals (Jon Damsager et al., 2023).

6.2.3.1. Role crossover

Certain health professions have a number of overlapping roles in their professional skill base, sometimes referred to as general competencies (Katherine et al., 2021). This has been identified in research between midwives and maternity nurses. Role overlap and lack of role clarity are frequently cited as factors in interprofessional misunderstandings, tension, and role guarding (Cloe et al., 2021; Ellen et al., 2021; Murray-Davis et al., 2022). However, clarifying roles is difficult, and is influenced by factors such as the evolving scope of practice, team and practice context, and the skills and philosophy of the profession (Soubra et al., 2018; Ting et al., 2024). This is illustrated in the findings of this study, where the role boundaries between midwives and obstetricians become blurred.

Specifically, obstetricians, who are supposed to provide care for high-risk pregnant women, were reported to also provide routine services for low-risk pregnant women in their private clinics. This condition is considered to threaten the boundary of the professional role of midwives in promoting normality (Sonmezer, 2020). This tension seems to stem from differences in training and professional philosophy where midwives view pregnancy and childbirth as normal and physiological processes while obstetricians are trained to deal with complications and view pregnancy as a risky condition. Interestingly, Touati et al. (2019) challenged the idea that stable professional roles exist in IPC and noted frequent role changes even within structured hospital teams.

Likewise, in community maternity services, interview findings and document analysis in this research show that the complexity of maternity services encourages HCPs to be flexible and adapt to needs. The flexibility referred to is also related to changing roles according to needs. Therefore, it is difficult to define role boundaries. A relevant finding in this research is the way some HCPs use flexibility to allow for role crossover, where a HCP carries out tasks usually assigned to other professions. It is a means of active collaborative work, which occurs under certain conditions (e.g., when there is a lack of resources due to an absent staff member; when travel considerations mean collaborating will save resources and time; or when collaboration will minimise client overload). Role crossover is facilitated by the *Gotong Royong* perspective and the collectivist context, where sharing skills and training others is a routine practice, whether formal or informal.

However, role crossover is not a completely accepted practice. Some interview participants saw it as a solution to managing service complexity and limited resources,

while others viewed it as violating established professional boundaries. Despite these differing opinions, role crossover is increasingly seen as an integral aspect of IPC. To manage this practice ethically and reduce interprofessional tensions, the involvement of professional regulatory bodies is crucial (Gill et al., 2014). For instance, the World Federation for Medical Education (2015) and joint statement of the International Council of Nurses and International Confederation of Midwives (2014). Several studies have emphasised the importance of professional regulatory bodies in maintaining professional boundaries – and thereby limiting role crossover – across the scope of professional practice (Dean & Ballinger, 2012; Ervin, 2009). The World Federation for Medical Education (WFME, 2015) emphasizes that interprofessional education and collaboration should be integrated into medical training and accreditation standards, urging medical schools to prepare students for collaborative practice to improve healthcare delivery. This highlights the critical role of professional regulatory bodies in shaping curricula and expectations that promote teamwork and challenge hierarchical, siloed practices. Similarly, the joint statement by the International Council of Nurses (ICN) and the International Confederation of Midwives (ICM) in 2014 advocates for respectful interprofessional relationships, role clarity, and shared responsibility in maternal and newborn care. These organisations stress that regulatory bodies are key to fostering collaboration by setting professional standards, promoting mutual respect, and addressing role conflicts. Together, these statements underscore the importance of regulatory bodies in reducing interprofessional tensions by embedding collaborative values into education, licensing, and practice standards—an approach that aligns with this study's findings. In the Indonesian context, greater engagement of professional associations such as the Indonesian Midwives Association (IBI), Indonesian National Nurses Association

(PPNI), and Indonesian Medical Association (IDI) in interprofessional initiatives could help reshape professional identities and support collective-oriented teamwork in community maternity care.

Most regulatory bodies support IPE and IPC in principle (Thistlethwaite, 2012), but acknowledge that professionals still have a responsibility to maintain the boundaries of their mutual roles (Barr et al., 2008). There appears to be an inherent tension between professional regulatory bodies that oversee role boundaries, and training organisations that encourage IPC that allows for flexibility in roles, but this is not yet clear (Barr et al., 2008; Oandasan & Reeves, 2005). Regulatory bodies often define strict role boundaries to ensure that practitioners stay within their scope of practice. For example, a nursing regulatory body might specify the tasks that nurses are allowed to perform independently, as opposed to those that require physician oversight. However, in some settings, particularly where IPC is emphasised, team members may operate beyond these traditional boundaries to meet the needs of patient care more effectively.

For example, in my study, a nurse or a midwife may take on tasks that are typically reserved for physicians if it benefits patient care, especially in underserved areas or in situations where immediate medical intervention is needed. A study by Reeves et al. (2010) highlights how rigid role boundaries can hinder collaboration in healthcare settings. In their work, they found that, despite similar encouragement towards IPC, many HCPs still feel constrained by regulatory guidelines that limit their scope of practice, making it challenging to fully engage in flexible, team-based care. Their study calls for a balance where professional regulations accommodate the realities of interprofessional teamwork.

6.2.3.2. CHW in inter-professional teams

The PHC approach endorsed by the WHO (2010) facilitates the initiation and rapid expansion of lay health worker (LHW) programs in LMICs to deal with the issue of chronic shortage and uneven distribution of HCPs in many countries. LHWs encompasses a wide range of roles, including CHWs, village HCPs, treatment supporters, and birth attendants. Although they receive job-specific training, they lack formal professional or paraprofessional tertiary education and may provide care on either a paid or voluntary basis (Lewin, 2005). My findings indicate that CHWs as LHWs play an important role and CHW involvement in the health team with HCPs at the Puskesmas in providing maternity services in the community, especially in the Posyandu program and home visits. However, in the implementation of collaborative practice, CHWs were in a subordinate position and did not yet have a clear status in the health collaboration team.

CHW are often an integral part of public health efforts in a particular area. They have an advantage in understanding the local, cultural and social context in which they work. In this way, they can act as effective liaisons between health facilities and the communities they serve (Joubert & Reid, 2024). Their deep understanding of community needs enables them to provide more relevant and effective services. The findings of the document analysis show that the role of CHWs cannot be separated from maternity services in community settings in Indonesia, especially in the Posyandu program which offers health promotion, counselling, and support for pregnant women, including recording and reporting pregnancy data to national bodies (Posyandu Guidelines, 2020).

Despite growing evidence regarding the role of CHWs in public health services, they remain on the fringes of mainstream health services. The peripheral role of CHWs is made apparent by questions about their legitimacy, and the limitations of their presence in discussions of IPC, in healthcare. When regulations are generally associated with movements towards professionalisation and improving the level of skills and knowledge of healthcare professionals (Brydges et al., 2022; Finch, 2009; Gray & Amadasun, 2024), these issues related to CHWs continue to be a challenge.

A small number of recent studies have examined CHWs in relation to IPC, however, the main focus is the important role of CHWs in their contribution to HCPs in reducing their workload (Marjorie et al., 2018), and their communication skills and commitment (McCarville et al., 2024), the need for training to improve CHW skills (Joubert & Reid, 2024). However, the issue of professional status of LHWs (including CHWs) in a health collaboration team has not been a special concern. The literature on TBAs underscores the lack of formal professional recognition that hinders their ability to contribute effectively within healthcare teams. TBAs are often seen as supplementary rather than integral to MC, despite evidence showing that their involvement can enhance care outcomes, especially in underserved communities (Gruber et al., 2013; Sibley et al., 2012).

This professional status issue has an impact on the effectiveness of a collaborative team. This study is in line with the findings of this research which shows that there are obstacles to CHW status in a collaborative team with HCPs, namely the existence of a hierarchy or power relationship between HCPs and CHWs as non-HCPs. The professional gap positions CHWs as subordinates, besides that there is concern among HCPs that they will lose their authority as HCPs. Further research involving CHWs

would help confirm these tentative findings, considering the findings of this study are only from the perspective of HCPs.

Recent research on the role of CHW in IPC teams highlights the complexity of the dynamics involved in cross-professional collaboration in the health sector (McCarville et al., 2024). The findings confirm that although CHW make valuable contributions in improving the accessibility of health services at the community level, they often face challenges in terms of clinical knowledge and technical skills (Franklin et al., 2015; Joubert & Reid, 2024; Maes et al., 2014; McCarville et al., 2024). CHWs may lack the clinical knowledge and technical skills typically possessed by trained HCPs. This can create an imbalance in the distribution of responsibility and power within the team, as well as a potential gap in understanding and expectations between health cadres and other HCPs (Joubert & Reid, 2024). Additionally, their limited clinical knowledge may limit their ability to participate fully in discussions and collaborative decision making (McCarville et al., 2024).

This was also reflected by interview participants in this study stating that CHWs in Indonesia often have limited clinical knowledge and training, which restricts their ability to make informed clinical decisions. This can result in CHWs being perceived as less competent by other HCPs, potentially limiting their involvement in discussions and decision-making processes (Ngatul et al., 2021). While CHWs are crucial for community outreach and health promotion, their limited training and status often mean that their voices are less influential in interprofessional settings (Atun et al., 2022). This power differential can lead to a gap in understanding and expectations, as more highly trained professionals may undervalue the input of CHWs due to perceived deficiencies in their knowledge and skills (Perry et al., 2014).

6.2.4. From Interprofessional Collaboration to Cross-Sectoral Collaboration

The majority of interprofessional literature focuses on IPC within an interprofessional team or collaboration of HCPs and patients, rather than in the context of C-SC (Sondergaard et al., 2024). This is not surprising, considering that much of the literature highlights the challenges in teamwork practices and the resulting negative impact on clients. Health services in the community also face similar issues in their interprofessional teams, even with more complex services, HCPs in community services are faced with even broader challenges, namely the involvement of various sectors in their regular work (Shahzad et al., 2019). The findings from this study indicated that collaboration between sectors is a significant challenge for HCPs in community health services.

C-SC appears to be poorly coordinated, with obstacles that cannot always be overcome. As discussed in this thesis, challenges arise from the complexity of services and relationships. This is proven by the findings of interview that there was poor communication between CHCs and hospitals and there was no integration of data on pregnant women between CHCs and independent obstetrician clinics. However, cross-sector collaborative working is becoming increasingly common worldwide, driven by trends in high-level policy promoting the importance of C-SC for improved services, better client outcomes, and prevention strategies (Kim et al., 2023).

One important aspect of the WHO's health reform agenda is moving the organisation beyond its traditional technical focus to a more proactive role where the organisation more effectively addresses the broader determinants of health through C-SC (Gopinathan et al., 2015). Several studies on cross-sectoral work show significant results to reduce adverse birth outcomes and support positive child development for

expectant parents with psychosocial risk factors (Ellehave et al., 2023), tackle problems regarding public health issues and the physical environment (Van Vooren et al., 2020), and address local health needs of populations and improve health outcomes (Shahzad et al., 2019). However, although evidence shows that effective C-SC can improve service quality, operationalising high-level policies is not easy, and positive outcomes are not guaranteed.

Interview participants in this study found cross-sectoral work to be challenging, affirming the findings of a review of cross-sectoral work in the rehabilitation profession by Andersson et al. (2011). They highlighted this ambiguity, noting at least seven basic models of collaboration in operation: "information exchange, case coordination, cross-sectoral meetings, multidisciplinary teams, partnerships, shared office locations, and pooling sector budgets". These models vary from informal to formal, with overlap between models, structures, and processes, highlighting the inherent complexity of relationships and services in C-SC. Therefore, it is understandable that organisations and HCPs experience difficulties in implementing these processes.

6.3. Implications of the Research

This thesis has advanced the field of IPC in MC by presenting a theoretical model that enhances the understanding of how HCPs perceive and engage in collaborative practice within the context of community MC. Additionally, it introduces a novel complexity framework that elucidates the various challenges that community-based HCPs must navigate in their daily work and the influence of religious and cultural values in IPC. The recommendations derived from this research, as shown in Table 6.1 and adumbrated below for three core stakeholder groups, hold significant

implications for CHCs, health policymakers, and education and future research, in order to ultimately improve MC for service users.

Table 6.1: Recommendations arising from the research

Recommendation for CHCs
Puskesmas managers must facilitate informal communication and relationship-building. Team leaders must receive inter-professional training. Organisations, leaders, and HCPs must actively manage intersectoral collaboration.
Recommendation for health policymakers
MoH should establish clear regulations on IPC in healthcare in Indonesia Health policy makers should integrate national culture and religious values into the development and implementation of health policies. MoH and local government should recognise and clarify the role and status of the CHW
Recommendation for education and future research
Health education institutions should implement an IPE curriculum. Health education institutions should facilitate IPC training in community settings Further research on IPC should involve CHWs Further research on IPC should involve patients Further research on V-BT is needed. Future Research on IPC and its impact on maternal and neonatal outcomes

6.3.1. Recommendations for CHCs

Puskesmas managers must facilitate informal communication and relationship-building

The findings indicated that IPC improved when HCPs cultivated relationships through informal interactions. Despite regular formal meetings at the Puskesmas, HCPs expressed a preference for informal communication, even when discussing cases and patient conditions. Informal communication fosters relationship-building, thereby enhancing collaboration among HCPs. To support this, team leaders must recognise the importance of both formal and informal relationships and facilitate these processes in a balanced manner.

Team leaders must receive inter-professional training

This study revealed that the head of Puskesmas recognised the benefits of IPC. However, the regulations at Puskesmas did not explicitly mandate collaborative practice. Therefore, it is essential to have leaders who not only understand the rationale behind IPC but also possess the skills to implement strategies that enhance team collaboration. Consequently, organisational training for team leaders is necessary to equip them with the skills to support and facilitate collaborative processes within their teams.

Organisations, leaders, and HCPs must actively manage intersectoral collaboration

Given the complexity of the Puskesmas system in Indonesia, prioritising and actively managing intersectoral collaboration is critical to overcoming resource constraints, addressing the social determinants of health, and improving service delivery. By fostering a culture of collaboration, developing strong leadership, and investing in capacity building, Puskesmas can enhance their ability to provide comprehensive and effective care to the communities they serve.

6.3.2. Recommendations for Health Policymakers

MoH should establish guideline on IPC in healthcare in Indonesia

Currently, there is no formal guideline that explicitly governs IPC practices in Indonesia. To enhance the effectiveness and quality of healthcare delivery, it is crucial that the Indonesian government, in collaboration with professional regulatory bodies and relevant stakeholders, develops and implements clear guidelines on IPC within the healthcare sector. The guideline should outline the principles and standards for IPC, define the roles and responsibilities of different HCPs, and provide mechanisms

for conflict resolution. Additionally, such guidelines should promote collaborative decision-making, shared goals, mutual respect, and the integration of cultural and contextual factors relevant to Indonesia's diverse healthcare environment.

Health policy makers should integrate national culture and religious values into the development and implementation of health policies

A salient finding as well as a novelty of this research was the positive impact of V-BT, which highlighted the national culture of *Gotong Royong* and religious values as foundational for effective collaboration within community maternity teams. This study suggested that health policymakers should integrate national culture and religious values into the development and implementation of health policies. Furthermore, it provided valuable insights for other countries by underscoring the importance of considering cultural factors when transferring innovations across health systems. Policymakers can consider several concrete actions.

First, they could involve local cultural and religious leaders in the planning phase, ensuring that community values like *Gotong Royong* are integrated into guidelines and protocols from the start.

Second, creating training modules or orientation sessions for healthcare teams—explicitly highlighting cultural norms and how they support collaboration—would help align daily practices with broader policy goals. Third, policymakers could encourage co-creation processes where community members, including representatives of professional associations and local authorities, jointly develop or refine service delivery plans.

This approach would ensure that national culture is not only acknowledged but actively leveraged as a strength in collaborative initiatives. Finally, periodic

evaluations that measure how cultural values are being upheld in practice (and how they influence outcomes) would provide feedback for continuous improvement, making it more likely that these culturally informed policies take root and remain effective over time.

MoH and local government should recognise and clarify the role and status of the CHW

As identified in this research, the role of CHWs was integral to community maternity services. They facilitated communication between HCPs and the community, assisted in providing services, and collected data on pregnant women. Interview participants recommended enhancing CHWs' welfare by offering appropriate incentives and training. Furthermore, the status of CHWs within the health system needed to be clarified as part of the collaborative healthcare team at both policy and system levels. This clarification would boost CHWs' confidence within collaborative teams and mitigate power imbalances between CHWs and HCPs.

6.3.3. Recommendations for Education and Future Research

Health education institutions should implement an IPE curriculum

To prepare future healthcare professionals for effective teamwork and collaboration, it is essential that health higher education institutions in Indonesia incorporate IPE into their curricula. The Ministry of Higher Education and the MoH, in collaboration with HCP associations and accreditation bodies, should mandate the inclusion of IPE in the curricula of all health-related programs, such as medicine, nursing, midwifery, pharmacy, and allied health sciences. The IPE curriculum should be designed to provide both theoretical knowledge and practical opportunities for interprofessional learning.

By applying the developed COCM to IPE, health education institutions can design learning activities that mirror the realities of community-based MC. For instance, cases featuring multifaceted challenges—such as social and clinical complexities, coordination across multiple sectors, and respect for cultural values—ensure that students actively practice solving problems as teams. In doing so, they address *complexity* through collaborative approaches that span different professional and non-health fields, embrace *V-BT* by incorporating cultural norms like *Gotong Royong*, and promote *community empowerment* through hands-on involvement with CHWs.

Health higher education institutions should facilitate training on IPC in community settings

To enhance the readiness of future HCPs for IPC, it is recommended that health higher education institutions in Indonesia integrate practical learning experiences in community settings into their undergraduate community-based field placements programs. In these programs, interprofessional teams of students (e.g., with midwifery, nursing, medicine, and public health students) should jointly provide care and health education at local health posts, working alongside CHWs and local authorities. By engaging in V-BT, promoting community empowerment, and practicing adaptive collaboration (through flexible roles and informal communication), students will gain hands-on experience with C-SC that reflects the realities of MC in the community.

This approach can ensure that future HCPs develop both the technical skills and the relational competencies needed to meet complex, context-specific healthcare challenges. Currently, such opportunities may be limited, which underscores the need for educational reforms that facilitate experiential learning in real world environments.

By prioritising this approach, institutions can better prepare students for the complexities of IPC in diverse healthcare settings, ensuring they develop the necessary skills and competencies to effectively work within interprofessional teams.

Further research on IPC should involve CHWs

Future research on interprofessional collaboration (IPC) in healthcare should broaden its scope to include Community Health Workers (CHWs) as integral members of collaborative teams, especially in maternal and neonatal health services. CHWs play a vital role in connecting formal healthcare systems with the community, particularly in rural and underserved areas where access to care is often limited. Their close relationships with families and communities position them uniquely to support early identification of maternal risk factors, promote timely referrals, and enhance adherence to antenatal and postnatal care protocols.

Research should explore how CHWs contribute to the IPC process, the dynamics of their engagement within interprofessional teams, and how their inclusion influences communication, decision-making, and continuity of care. Importantly, future studies should examine the impact of CHW involvement on maternal and neonatal health outcomes, such as increased antenatal care attendance, early detection of pregnancy complications, reduced delays in seeking care, improved birth preparedness, and reductions in maternal and neonatal morbidity and mortality. This expanded understanding will help identify best practices for integrating CHWs into IPC strategies in community-based healthcare settings and inform evidence-based policy and training initiatives that support maternal and neonatal health.

Further research on IPC should involve childbearing women and their families

Future research should prioritise the inclusion of patients (pregnant women and their families) to gain their perspectives and expectations regarding IPC in MC. By actively involving women and their families, studies can help identify what women specifically want from IPC, including aspects such as communication styles, support systems, and the integration of cultural and religious values in care delivery which is essential for developing patient-centred IPC models that enhance satisfaction and health outcomes (Bennett et al., 2020; McGowan et al., 2021). Additionally, engaging pregnant women and families in the research could inform training programs for HCPs, ensuring that collaborative practice align with the actual needs and expectations of patients (Reeves et al., 2016).

Moreover, incorporating women's voices into IPC research has important implications for maternal and neonatal outcomes. For instance, improved collaborative practices that respond to women's needs may lead to earlier detection of complications, more timely referrals, better adherence to antenatal and postnatal care, increased satisfaction with childbirth experiences, and ultimately, reduced maternal and neonatal morbidity and mortality.

Further research on Value-Based Teamwork is needed

Future research on IPC is needed on exploring the concept of V-BT, with particular emphasis on understanding how cultural and religious values shape collaboration among HCPs. Cultural and religious values significantly influence attitudes, communication styles, decision-making processes, and conflict resolution strategies within interprofessional teams. These values can either enhance teamwork and mutual respect or create barriers to effective collaboration.

However, it is also essential that future research investigates how V-BT affects maternal and neonatal outcomes. For example, collaborative teams grounded in shared values may be more effective in coordinating antenatal, intrapartum, and postnatal care, leading to improved service continuity, culturally sensitive care, and stronger relationships with patients. These elements are critical for reducing preventable delays, increasing service utilisation, and enhancing trust in the healthcare system—factors known to impact maternal and newborn health indicators.

To generate robust insights, future studies could adopt a mixed-methods approach—using qualitative interviews or focus groups alongside surveys—to explore the mechanisms through which V-BT influences collaboration and care outcomes. Research conducted in culturally and religiously diverse community health centres (CHCs), especially in rural or semi-urban areas, would offer a valuable perspective. Including HCPs from various professional and cultural backgrounds—such as doctors, midwives, nurses, nutritionists, and CHWs—would help uncover how values are enacted in practice and how they contribute to or hinder positive maternal and neonatal outcomes.

Future Research on IPC and its impact on maternal and neonatal outcomes

To build a stronger evidence base for interprofessional collaboration (IPC) in community-based maternity care, future research should incorporate quantitative approaches that measure the impact of IPC on maternal and neonatal health outcomes. While existing qualitative studies provide rich insights into the processes and perceptions of IPC, there remains a critical need to demonstrate how collaborative practice translates into tangible improvements in clinical indicators such as maternal morbidity and mortality rates, neonatal complications, rates of skilled birth attendance,

timely referrals, and patient satisfaction. Studies using experimental or quasi-experimental designs, or mixed-methods approaches, could explore associations between IPC models and outcome measures across various settings. This direction will not only strengthen the case for implementing IPC at scale but also provide policymakers and health system leaders with empirical data to guide investment in collaborative maternity care interventions.

6.4. Limitations and Strengths of the Research

6.4.1. Limitations

As with any study, several factors negatively influenced this research process. Firstly, the choice of a constructivist methodology means the findings are not automatically generalisable, and the context of their construction must be considered. It is important to acknowledge the specific context in which this research was conducted, particularly within the Indonesian community health sector. This setting presents unique organisational, cultural, and situational factors that influence HCPs' practices. While several findings from this study are consistent with international research (McDonald et al., 2012; Oliver et al., 2010; Statham, 2011), these results should be interpreted with caution before applying them to other regions, as the local context plays a significant role in shaping the outcomes.

The second consideration pertains to my role as a researcher in this study. My role as a midwife and academic with experience in IPE/IPC research introduced both strengths and potential biases to the study, which required reflexivity to manage. Reflexivity, the process of reflecting on how my background might influence the research, was key in addressing my pre-existing assumptions (Olmos-Vega et al., 2023). To mitigate this, I conducted a self-interview and documented my assumptions

as a reference point, ensuring I did not impose interpretations on the data. Additionally, participants occasionally presumed I understood certain concepts due to my clinical background, but by staying vigilant and probing further, I encouraged them to explain their views fully, thus minimising the impact of these assumptions on the research process (Berger, 2015; Finlay, 2002).

The third point concerns the participant sample. GT typically uses theoretical sampling to refine emerging categories and ensure they are fully developed (Charmaz, 2006). While this study adopted a purposive sampling approach to select participants most relevant to the research question, the opportunity to implement theoretical sampling in its fullest sense was limited, by practical constraints (e.g., in time, available participants, and institutional access, related to COVID-19 in many cases) affected the extent to which the researcher could seek out new participants to test and deepen specific categories as they arose. Consequently, although the sampling strategy was directed by the evolving analysis wherever possible, the potential for selection bias remains.

For instance, by focusing on individuals with recognised expertise, other meaningful perspectives may have been inadvertently excluded (Andrade, 2021), thus affecting the transferability of the findings. To address this issue, participants were selected from a diverse range of professional roles within MC, including physicians, midwives, nurses, nutritionists, and public health practitioners to capture a comprehensive understanding of IPC in MC. This study did not include CHWs, pregnant women, or families, though their roles were highlighted by the interviewees. Future research should include these groups to provide a broader view of collaborative MC.

The fourth critical consideration is the impact of the COVID-19 pandemic. As mentioned in Chapter 4, this context profoundly affected the research, imposing a range of significant changes and limitations. Interviews initially intended to be conducted face-to-face had to be moved online, leading to issues such as internet connectivity problems, scheduling difficulties due to the time zone difference, and participants' distractions caused by sudden calls from the Puskesmas. These challenges resulted in a shorter interview duration for some participants. Additionally, the recruitment process was prolonged due to rejections from several health centres, the increased workload of HCPs during the pandemic, and the withdrawal of potential participants who contracted COVID-19.

6.4.2. Strengths

The strengths of this study are reflected in its adherence to Charmaz's (2006) evaluative criteria of credibility, originality, resonance, and usefulness, as mentioned in Chapter 3. First, in terms of credibility, reflexivity was rigorously applied throughout the research process, allowing for transparency and minimising bias by acknowledging and managing pre-existing assumptions through self-reflection (Berger, 2015; Finlay, 2002). Furthermore, strong logical connections between the data, analysis, and concept development were established using tools like the conditional relationship guide and reflexive coding matrix (Scott & Howell, 2008). Credibility was further enhanced through triangulation by complementing interview data with document analysis, providing additional layers of evidence and strengthening the overall findings (Bowen, 2009).

Regarding originality, this study offers novel insights into IPC by focusing on community maternity services in Indonesia which has not been extensively studied in

both national and international IPC research. While much of the existing literature centres on hospital-based care, this research highlights the distinct challenges and dynamics of collaborative care in community settings. It fills a critical gap by examining the role of cultural and religious values in shaping interprofessional relationships, an aspect often overlooked in IPC studies from high-income countries (McDonald et al., 2012).

Additionally, the study emphasises the importance of C-SC between HCPs, community organisations, and government particularly relevant in Indonesia's health system. These findings not only extend theoretical understanding of IPC but also provide practical insights for improving collaboration in resource-constrained environments. The resonance of the study is evident in its inclusion of diverse perspectives from HCPs such as midwives, nurses, physicians, nutritionists, and public health practitioners. This range of viewpoints captures the complexities of IPC.

Additionally, the study was conducted across multiple clinical sites (four Puskesmas in two regions) allowing for the consideration of contextual variations in organisational structure, resource availability, and local cultural practices. By integrating insights from various professional groups and clinical environments, the findings resonate with the realities of healthcare teams in similar contexts, offering practical implications for improving collaborative practice in low-resource or community-based MC (Pittman et al., 2021; Reeves et al., 2017).

Finally, the usefulness of the study is demonstrated by its theoretical contributions, particularly in enhancing understanding of IPC within the context of community-based MC. By examining the dynamics of IPC in low-resource settings like Indonesia, the study offers valuable insights that are directly applicable to improving healthcare

delivery in similar environments. The findings provide actionable recommendations to foster more effective collaboration and teamwork. These practical implications can guide healthcare policymakers, practitioners, and educators in developing strategies to enhance collaborative practice, ultimately improving maternal and child health outcomes in under-resourced communities. Additionally, the study's contribution to IPC theory fills a critical gap in literature, offering a model that can be adapted to other LMICs facing similar healthcare challenges (Pittman et al., 2021; Reeves et al., 2017).

6.5. Conclusion

This research provides new insights into how collaboration in healthcare emerges from the cultural and religious values of communities within a country. The study was driven by the need to understand how HCPs employ collaborative processes in MC within community settings. This investigation is critical, given the current shortage of HCPs, the rising demand for health services, and the complexity of primary care, all of which necessitate innovative working methods. Despite longstanding advocacy for IPC to optimise health resources, there is limited information on its implementation in community contexts in LMICs such as Indonesia.

The aim of this study was to offer a theoretical explanation of IPC within community maternity teams, with implications for clinical practice, education, and further research. This goal was addressed by developing a GT that integrates the concept of the complexity of maternity health services with a COCM, thereby providing a deeper understanding of the community context.

The fundamental conclusion of this research is that effective interprofessional work in complex community environments requires a relationship-building process, facilitated by V-BT, which enhances IPC. These processes involve C-SC and community

empowerment as strategies to manage complexity. The collective-oriented collaboration theory contributes to knowledge by explaining the context, strategies, and perspectives utilised by HCPs to improve IPC. The findings are relevant to clinicians, educators, policymakers, and future research. Ultimately, by offering practical interpretations, this thesis honours the daily efforts of HCPs in establishing relationships within increasingly complex environments.

6.6. Chapter Summary

This chapter provided a comprehensive discussion of the research findings, linking them to existing literature in the fields of IPC and maternity care. By comparing the study results with extant studies, the analysis underscored both shared themes and unique elements, including the depth of community engagement influenced by local norms. These comparisons helped validate and refine the emergent Collective-Oriented Collaboration model, demonstrating how multidimensional complexity, cross-sectoral collaboration, value-based teamwork, community empowerment, and an adaptive system work together to support effective maternity care in Indonesia.

This chapter highlighted recommendations for clinical practice, including strategies to enhance collaboration, policy interventions that integrate cultural values and local contexts, educational reforms to strengthen interprofessional training in community settings, and future research avenues to further refine and validate the proposed approaches. Ultimately, the chapter concluded that the proposed Collective-Oriented Collaboration model serves as both a practical framework for strengthening maternal health services and a theoretical contribution to understanding interprofessional collaboration in culturally diverse contexts.

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APPENDICES

Appendix 1: Search Strategy

Framework

PICo strategy was used as a framework to construct a focused search strategy:
'How does the implementation of interprofessional collaboration among health practitioners in maternity care? '
Population:-maternity care providers
Interest: implementation of interprofessional collaboration
Context:-maternity care

Search Terms

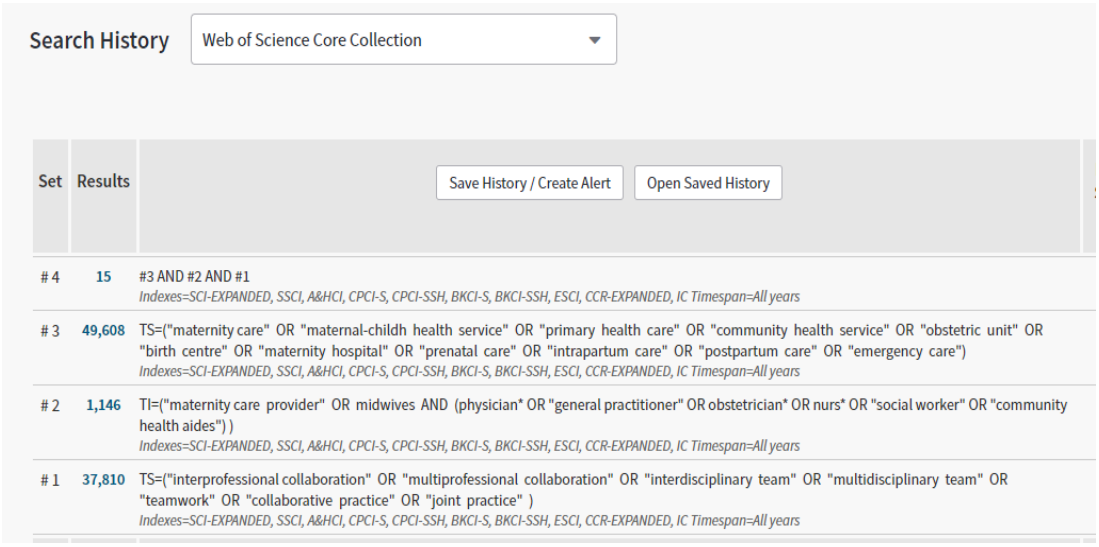
Key Concepts	Synonyms/broader terms/narrower terms/related terms/alternative spellings
Population: Health practitioners	Healthcare provider/health worker/doctor/physician/general practitioner/family physician/obstetrician/nurse/midwives/community health aides/allied health personel/ voluntary workers/social support/lay worker/paramedic/paramedical worker/health visitor
Interest: Interprofessional collaboration	Interprofessional collaboration/multiprofessional collaboration/multidisciplinary collaboration/interdisciplinary collaboration/ interprofessional relationship/collaboration/collaborative practice/teamwork/ inter-professional collaboration
Context: Maternity care	Health facility/hospital/"primary health care"/"community health service"/"birth centre"/secondary care/acute care/obstetric unit/ maternity care/midwifery department/midwifery unit/maternal-child health service/antenatal care/antepartum care/intrapartum care/postpartum care/postnatal care

Search History

PubMed

Search: ((((((((((interprofessional relations[MeSH Terms]) OR (communication, multidisciplinary[MeSH Terms])) OR ("interprofessional collaboration"[MeSH Terms])) OR ("interdisciplinary team"[MeSH Terms])) OR ("multidisciplinary team"[MeSH Terms])) OR ("collaborative practice"[MeSH Terms])) OR (teamwork[MeSH Terms])) OR ("patient care team"[MeSH Terms]) AND ((((((((((doctor[MeSH Terms]) OR (assistant, physicians[MeSH Terms])) OR ("family physicians"[MeSH Terms])) OR ("general practitioner"[MeSH Terms])) OR (obstetricians[MeSH Terms])) OR (midwives[MeSH Terms])) OR ("nurse midwives"[MeSH Terms])) OR (aides, nurses[MeSH Terms])) OR (nurses[MeSH Terms])) OR ("social workers"[MeSH Terms])) OR ("community health workers"[MeSH Terms]) AND ((((((((((("maternity care"[MeSH Terms]) OR ("maternity hospital"[MeSH Terms])) OR ("obstetric unit"[MeSH Terms])) OR (primary health care[MeSH Terms])) OR ("community health centers"[MeSH Terms])) OR ("secondary care"[MeSH Terms])) OR ("midwifery unit"[MeSH Terms])) OR (birth centers[MeSH Terms])) OR ("antenatal care"[MeSH Terms])) OR ("antepartum care"[MeSH Terms])) OR ("intrapartum care"[MeSH Terms])) OR (postpartum care[MeSH Terms])) OR (childbirth[MeSH Terms]) AND ((journalarticle[Filter] OR review[Filter] OR systematicreviews[Filter]) AND (fft[Filter]) AND (english[Filter]))) AND ((((((((((implementation) OR (aplication)) OR (development)) OR (challenges)) OR (barriers)) OR (difficulties)) OR (supporting factors)) OR (enabling)) OR (influencing factors)) OR (experiences) AND

((fft[Filter]) AND (english[Filter]))) Filters: Full text, Journal Article, Review, Systematic Reviews, English
Web of science



Search History — Web of Science Core Collection

Set	Results	Save History / Create Alert	Open Saved History
# 4	15	#3 AND #2 AND #1 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	
# 3	49,608	TS=("maternity care" OR "maternal-childh health service" OR "primary health care" OR "community health service" OR "obstetric unit" OR "birth centre" OR "maternity hospital" OR "prenatal care" OR "intrapartum care" OR "postpartum care" OR "emergency care") *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	
# 2	1,146	TI=("maternity care provider" OR midwives AND (physician* OR "general practitioner" OR obstetrician* OR nurs* OR "social worker" OR "community health aides")) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	
# 1	37,810	TS=("interprofessional collaboration" OR "multiprofessional collaboration" OR "interdisciplinary team" OR "multidisciplinary team" OR "teamwork" OR "collaborative practice" OR "joint practice") *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	

CINAHL

(Overleaf)

#	Query	Limiters/Expanders	Last Run Via	Results
S38	S6 AND S35 AND S36 AND S37	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	226
S37	S14 OR S15 OR S16	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	662,183
S36	S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	107,301
S35	S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	126,514
S34	"team* n2 (interdisciplinary OR transdisciplinary OR multidisciplinary OR work)"	Expanders - Apply equivalent subjects Search modes - SmartText Searching	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL Plus with Full Text	589
S33	"team* n2 (interdisciplinary OR transdisciplinary OR multidisciplinary OR work)"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL Plus with Full Text	0
S32	(MH "Interprofessional Relations") OR "interprofessional collaboration"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL Plus with Full Text	28,822

S31	MH "role conflict"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	2,004
S30	MH "teamwork"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	17,918
S29	MH "multidisciplinary care team"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	48,027
S28	MH "joint practice"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,258
S27	MH "collaboration"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	46,839
S26	MH "intrapartum care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,946
S25	MH "prenatal care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	18,110
S24	MH "obstetric emergencies"	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases Search Screen - Advanced	898

S31	MH "role conflict"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	2,004
S30	MH "teamwork"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	17,918
S29	MH "multidisciplinary care team"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	48,027
S28	MH "joint practice"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,258
S27	MH "collaboration"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	46,839
S26	MH "intrapartum care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,946
S25	MH "prenatal care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	18,110
S24	MH "obstetric emergencies"	Expanders - Apply equivalent subjects	Interface - EBSCOhost Research Databases Search Screen - Advanced	898

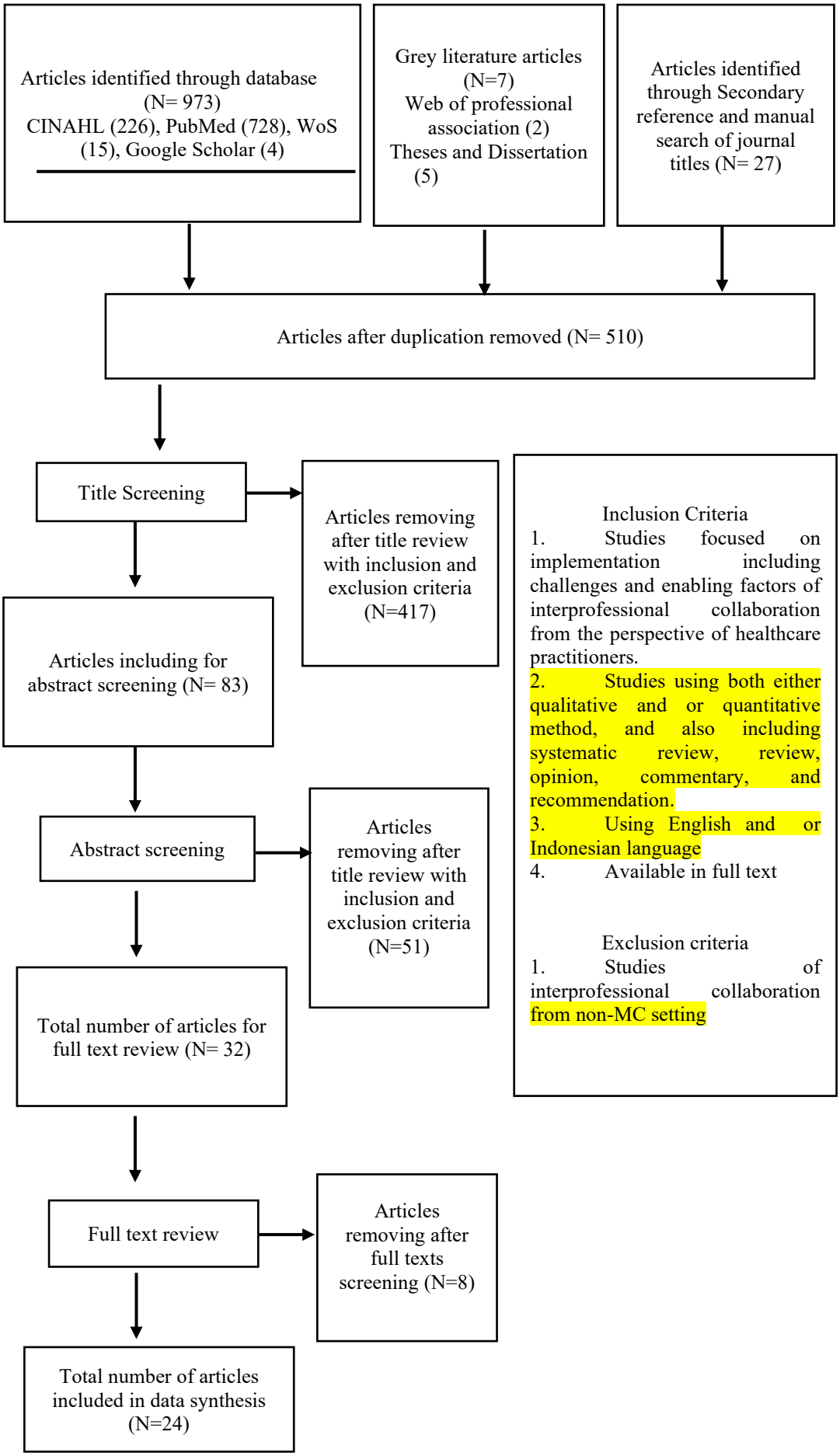
		Search modes - Boolean/Phrase	Search Database - CINAHL Plus with Full Text	
S23	MH "obstetric care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	7,718
S22	MH "obstetric service"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,507
S21	MH primary health care	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	66,863
S20	MH "nurse-midwifery service"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	203
S19	MH "maternal-child care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,369
S18	MH "maternal-child health"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	3,620
S17	MH "maternal health services"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	9,987

S16	MH social workers or social services or social work	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	21,934
S15	MH obstetrician or obstetrics	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	6,114
S14	S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	636,216
S13	"health visitor"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL Plus with Full Text	1,549
S12	TI nurs* OR AB nurs*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	591,211
S11	MH "community health nursing"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	32,294
S10	MH "obstetric nursing"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	5,285
S9	MH "perinatal nursing"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	1,059

			Database - CINAHL Plus with Full Text	
S8	MH "maternal-child nursing"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,607
S7	MH "nurses"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	68,708
S6	S1 OR S2 OR S3 OR S4 OR S5	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	44,504
S5	TI midwi* OR AB midwi*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	37,278
S4	MH "nurse-midwifery service"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	203
S3	MH "midwifery service"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	1,821
S2	MH "nurse midwives"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	2,532
S1	MH "midwives"	Expanders - Apply	Interface - EBSCOhost	13,227

Appendix 2: Study Retrieval Process

(Overleaf)


Articles identified through database (N= 973)
CINAHL (226), PubMed (728), WoS (15), Google Scholar (4)
Grey literature articles (N=7)
Web of professional association (2)
Theses and Dissertation (5)
Articles identified through Secondary reference and manual search of journal titles (N= 27)
Articles after duplication removed (N= 510)
Title Screening
Articles removing after title review with inclusion and exclusion criteria (N=417)
Articles including for abstract screening (N= 83)
Abstract screening
Articles removing after title review with inclusion and exclusion criteria (N=51)
Total number of articles for full text review (N= 32)
Full text review
Articles removing after full texts screening (N=8)
Total number of articles included in data synthesis (N=24)
Inclusion Criteria
1. Studies focused on implementation including challenges and enabling factors of interprofessional collaboration from the perspective of healthcare practitioners.
2. Studies using both either qualitative and or quantitative method, and also including systematic review, review, opinion, commentary, and recommendation.
3. Using English and or Indonesian language
4. Available in full text
Exclusion criteria
1. Studies of interprofessional collaboration from non-MC setting

Appendix 3: Characteristics of Included Studies

Methodology	Method	Phenomena of Interest	Participant	Findings
1. Beasley et al. (2012), Royal Hospital for Women, Australia				
Quantitative-Retrospective and prospective analysis	-Meeting notes and medical records -Audio recording -Survey	Efficacy of a collaborative partnership between obstetric doctors and midwives providing midwifery group practice (MGP) care	Midwives and obstetricians	This study shows that, where there are indicated risks during pregnancy, collaborative practice between midwives and obstetricians is very achievable. A model such as MGP, coupling continuity of care and collaboration with medical staff, allows for professional satisfaction of both midwives and obstetricians, leading to better outcomes.
2. Warmelink et al. (2017), Netherland				
Descriptive cross-sectional study	Questionnaire	Satisfaction of primary care midwives in collaboration with other maternity care providers	99 midwives	Interactions with non-physicians are ranked consistently higher on satisfaction compared with interactions with physicians (GPs, obstetricians and paediatricians). Midwives with more work experience were more satisfied with their collaboration with GPs. Midwives from the southern region of the Netherlands were more satisfied with collaboration with GPs and obstetricians. Compared to the urban areas, in the rural or mixed areas the midwives were more satisfied regarding their collaboration with MCA(O)s and clinical midwives. Midwives from non-Dutch origin were less satisfied with the collaboration with paediatricians. No relations were found between the overall mean satisfaction of collaboration and work-related and personal characteristics and attitude towards work.

Methodology	Method	Phenomena of Interest	Participant	Findings
3. Van der lee et al. (2016), Netherland				
Quantitative	Questionnaire	The perspectives of the midwives on their collaboration with obstetricians	57 midwives	The midwives experienced a power imbalance and a lack of trust and mutual acquaintanceship in their collaboration with obstetricians. They also reported a need for interprofessional governance and formalisation.
4. Klode et al. (2020), Denmark				
Qualitative	Observation and focus group interviews	Healthcare professionals' interpretations and understanding of interprofessional and intersectoral collaboration in antenatal care for vulnerable pregnant women	12 interprofessional staff (midwife, nurse, obstetrician, social workers, health visitor and GPs)	Interprofessional collaboration was influenced by the relationships between professionals and sectors involved in antenatal care for pregnant women and was thereby influenced by the settings and structures in place for interprofessional and intersectoral collaboration.
5. Melkamu et al. (2020), Jimma Teaching Hospital, Southwest Ethiopia				
Cross-sectional study	X	Factors associated with the interprofessional collaboration of nurses and midwives with physicians	358 nurses and 52 midwives	66,7% of the participants had a satisfactory inter-professional collaboration with physicians, relationship with physicians, attitude towards interprofessional collaboration with physicians, occupational status and experience of disruptive behaviors were found statistically significant

Methodology	Method	Phenomena of Interest	Participant	Findings
6. Psaila et al. (2014), Australia				
Mixed method	-Focus group -Survey	Collaborative practice from the perspective of midwives and child and family health nurses	-Focus group: 45 midwives and 60 nurses -Survey: 1098 nurses and 655 midwives	Midwives and child health and family health nurses reported 'some collaboration'. Midwives and child health and family health nurses indicated that collaboration was supported by having agreement on common goals and recognising and valuing the contributions of others. Organisational barriers such as poor communication and information transfer processes obstructed relationships. Good collaboration was reported more frequently when working with other professionals (such as allied health professionals) to support families with complex needs
7. Romijn et al. (2018), Netherland				
Cross-sectional study	X	Discrepancies in the perceptions of interprofessional collaboration	Obstetricians (n=74), hospital-based midwives (known as clinical midwives) (n=42), nurses (n=154) and primary-care midwives (n=109)	Obstetricians rated their collaboration with clinical midwives, nurses and primary care midwives more positively than these three groups rated the collaboration with obstetricians. Discrepancies in mutual perceptions were most apparent in the isolation subscale, which is about sharing opinions, discussing new practices and respecting each other

Methodology	Method	Phenomena of Interest	Participant	Findings
8. Watson et al. (2016), Australia				
Quantitative	Survey	Interprofessional maternity care providers' perceptions of communication	281 midwives 21 GPs, 35 obstetricians	Results indicated an intergroup environment in maternity care in which the professionals found exchange of ideas difficult, and where differences with respect to decision making and professional skills were apparent. Although scores on some measures of collaboration were high, the two professions differed on their ratings of the importance of team behaviors, information sharing, and interprofessional socialization as indicators of collaborative practice.
9. Behruzi et al. (2017), Canada				
Case study	Semi-structured interviews and observation	Barriers and facilitators of the interprofessional and interorganizational collaboration	4 administrators, 9 nurses, 5 midwives, 5 obstetricians & gynaecologists, and 2 family physicians	Factors affecting collaboration between midwives and other health care professionals divided in three themes: interactional factors (Conflict over Professional Philosophy, Conflict over Autonomy, Professional Territory, Work Style, and conflict over Compensation Issue), organisational factors (Hospital versus Birth Center Philosophy, Lack of Midwives at the Administrative Level, Dedicated Financial Resources, Essential Infrastructure and Time, Culture of Team Work, Culture of Interventionism vs. Non-Interventionism, Organizational Rules and Regulations), and systemic factors (Power and status, Managing care)

Methodology	Method	Phenomena of Interest	Participant	Findings
10. Wieczorek et al. (2016), Austria				
Qualitative	Semi-structured interviews	Challenges and enabling inter-professional teamwork and collaboration	11 midwives, 11 nurses, 13 physicians, and one quality manager1	Differing approaches to childbirth and breastfeeding, deep seated professional jurisdictions, as well as spatial constraints, challenge inter-professional teamwork and collaboration on maternity units. To enable collaboration and facilitate the implementation of programs such as BFHI, the different perspectives of health professionals should be brought together and the potential for integrating different forms of knowledge and practices should be considered.
11. Watson et al. (2012), Australia				
Quantitative	Survey	Agreement of definition of collaboration and professionals' preferences for models of care	281 midwives, 35 obstetricians, and 21 general practitioners	Ninety-one percent of the participants agreed with the NHMRC definition of collaboration: Midwives (M = 5.97, s.d. = 1.2) and doctors (obstetricians and general practitioners: M = 5.7, s.d. = 1.35) did not differ significantly in their level of agreement with definition (t (332) = –1.8, P = .068). However, 72% of doctors endorsed a doctor-led model of care, whereas only 6.8% of midwives indicated agreement with it. Fewer (56%) doctors agreed with the midwife-led model of care, whereas 99.3% of midwives endorsed it.
12. Reiger and Lane (2009), Australia				
Qualitative Case study	Interview, focus group, and observation	Challenges to inter-Professional collaboration	134 midwives, 36 doctors, 17 managers	effective collaboration among doctors and midwives was limited by tensions over role boundaries, power relationships and incivility that appeared to be related to increasing workload and fragmentation of the workforce

Methodology	Method	Phenomena of Interest	Participant	Findings
13. Hastie and Fahy (2010), Australia				
Qualitative-Interpretive	In-depth interviews	Factors affect inter-professional interactions in birthing units	9 doctors and 10 midwives	Midwives and doctors agree that positive interactions are collaborative, include the woman and her partner and are associated with the best possible outcomes and experiences possible. In contrast, they agree that negative interactions involve power struggles between the professionals and these are associated with adverse outcomes. All participants are able to demonstrate emotional and social competence when interacting and applied those skills sometimes. Factors related to the organisational culture within the 'birth territory' of a particular maternity unit seem to be predictive of the type of interactions that are likely to occur there.
14. Miller (1997), California				
Qualitative	Interviews	Attitudes and experiences of midwives and physicians in collaborative practice	27 midwives and 10 physicians	Factors contribute to success collaborative practice were grouped into five categories: external condition (the context for collaborative practice), individual attributes of participants, organisational dynamic of the practice, trusting attitudes, and philosophy of the practice.
15. Peterson et al. (2007), Canada				
Qualitative descriptive	Semi-structured telephone interviews	Attitudes towards multidisciplinary collaborative maternity care	25 participants ((family physicians, obstetricians, registered midwives, registered nurses, nurse practitioners, and rural physicians)	Significant barriers to collaboration include structural factors (fee structure, liability issues) and interdisciplinary rivalry between groups of providers (turf protection, lack of mutual respect). Strategies to promote collaboration that were supported by the participants include strong national leadership and interdisciplinary education.

Methodology	Method	Phenomena of Interest	Participant	Findings
16. Scholmerich et al. (2014), Netherland				
Qualitative field study	Interviews and non-participatory observation	Challenges in coordination between midwives and obstetricians	13 community midwives, 8 hospital-based midwives and 19 obstetricians	Challenges in coordination: fragmented organizational structures, different perspectives on antenatal health and inadequate interprofessional communication. These challenges limited professionals' coordinating capacity and thereby decreased their ability to provide optimal care. Pregnant women needed to compensate for suboptimal coordination between community midwives and secondary caregivers by taking on an active role in facilitating communication between these professionals
17. Wiles and Robison (1994), Southampton, England				
Qualitative	Interview	Views and experiences of nurses, midwives and health visitors towards teamwork in primary care	Nurses, midwives, and health visitors	Team identity, leadership, access to GP(s), philosophies of care, understanding of team memhers' roles and responsihilities, and disagreement concermng roles and responsihilities were found influencing healthcare professionals' views and experiences of team working,
18. Fatalina et al. (2015), Indonesia				
Qualitative and interview	Focus group discussion	Perceptions and acceptance of health workers' maternity's interprofessional collaborative practice	10 respondents (midwives, nurses, obstetricians, pharmacists, and nutritionist)	Most respondents had a wrong perception of interprofessional collaboration's definition. All of respondents accepted if interprofesional collaboration implemented properly. Data analysis resulted in six categories: perception of health workers about interprofessional collaboration, implementation of interprofessional collaboration in hospital, application of collaboration's elements in interprofessional collaboration, health workers's expectations for better collaboration, health workers's motivation in doing interprofessional collaboration and variation of health workers's acceptance of interprofessional collaboration.

Appendix 4: Critical Appraisal of Included Studies

JBI Critical Appraisal Checklist for Case Reports

Author: Beasley et al. **Year**: 2012 **Record Number**: 1

	Yes	No	Unclear	Not applicable
1. Were patient's demographic characteristics clearly described?	☑	□	□	□
2. Was the patient's history clearly described and presented as a timeline?	☑	□	□	□
3. Was the current clinical condition of the patient on presentation clearly described?	☑	□	□	□
4. Were diagnostic tests or assessment methods and the results clearly described?	☑	□	□	□
5. Was the intervention(s) or treatment procedure(s) clearly described?	☑	□	□	□
6. Was the post-intervention clinical condition clearly described?	□	□	☑	□
7. Were adverse events (harms) or unanticipated events identified and described?	□	☑	□	□
8. Does the case report provide takeaway lessons?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: This paper does not state the methodology clearly, however it described the research process in comprehensive manner.

JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

Author: Warmelink et al. **Year**: 2017 **Record Number**: 2

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☑	□	□	□
2. Were the study subjects and the setting described in detail?	☑	□	□	□
3. Was the exposure measured in a valid and reliable way?	☑	□	□	□
4. Were objective, standard criteria used for measurement of the condition?	□	□	□	□
5. Were confounding factors identified?	□	☑	□	□
6. Were strategies to deal with confounding factors stated?	□	□	□	☑
7. Were the outcomes measured in a valid and reliable way?	☑	□	□	□
8. Was appropriate statistical analysis used?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: Morgan et al. (2015) found as single most important and concrete element of successful interprofessional collaboration the 'constant opportunity for frequent, shared informal communication'. However, this study did not measure the opportunities for, or time spent in, informal consultations, occasionally or frequently. recommend future research to explore the views and experiences/satisfaction from all of the key maternity providers, to identify barriers and facilitators to collaboration.

JBI Critical Appraisal Checklist for Qualitative Research

Author: ☑an der lee et al. **Year**: 2016 **Record Number**: 3

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	☑	□
2. Is there congruity between the research methodology and the research question or objectives?	□	□	☑	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	☑	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: This study is aimed to explore the perception of midwives on their collaboration with obstetrician. Secondary analysis of questionnaire was used as a method in this study.

JBI Critical Appraisal Checklist for Qualitative Research

Author: Klode et al. **Year**: 2020 **Record Number**: 4

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☑	□	□	□
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	☑	□	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: Wider insight into the competencies of the other professions can help professionals to develop the antenatal care for ☑PW in greater collaboration and by doing so, hopefully ensure safety, quality and continuity of care.

JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

Author: Melkamu et al. **Year: 2020** **Record Number: 5**

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☑	□	□	□
2. Were the study subjects and the setting described in detail?	☑	□	□	□
3. Was the exposure measured in a valid and reliable way?	☑	□	□	□
4. Were objective, standard criteria used for measurement of the condition?	☑	□	□	□
5. Were confounding factors identified?	□	□	v	□
6. Were strategies to deal with confounding factors stated?	□	□	□	☑
7. Were the outcomes measured in a valid and reliable way?	☑	□	□	□
8. Was appropriate statistical analysis used?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments (including reason for exclusion):

- Cross sectional study using questionnaire
- relationship of participants with physicians, respondent's attitude towards collaborating with physicians, the experience of disruptive behaviors and occupational status in the hospital were found to significantly affect participant's collaborative work with physicians
- Future researchers are recommended to conduct a qualitative study to have a detailed understanding of the problem by including the experience from the side of physicians too

JBI Critical Appraisal Checklist for Qualitative Research

Author: Psaila et al. **Year**: 2014 **Record Number**: 6

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☑	□	□	□
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	☑	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: This research used focus groups and survey to explore the collaboration between midwives and nurses.

JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

Author: Romijn et al. **Year: 2018** **Record Number: 7**

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☑	□	□	□
2. Were the study subjects and the setting described in detail?	☑	□	□	□
3. Was the exposure measured in a valid and reliable way?	☑	□	□	□
4. Were objective, standard criteria used for measurement of the condition?	☑	□	□	□
5. Were confounding factors identified?	□	□	☑	□
6. Were strategies to deal with confounding factors stated?	□	□	□	☑
7. Were the outcomes measured in a valid and reliable way?	☑	□	□	□
8. Was appropriate statistical analysis used?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments (including reason for exclusion):

- A limitation of this study is the assessment of care professionals as homogenous groups, which is inherent to the research question and questionnaire set-up.
- This study provided insight into the perception of interprofessional collaboration by all members of teams of obstetrical care professionals.

JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

Author: Watson et al. **Year: 2016** **Record Number: 8**

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☑	□	□	□
2. Were the study subjects and the setting described in detail?	☑	□	□	□
3. Was the exposure measured in a valid and reliable way?	☑	□	□	□
4. Were objective, standard criteria used for measurement of the condition?	☑	□	□	□
5. Were confounding factors identified?	□	□	☑	□
6. Were strategies to deal with confounding factors stated?	□	□	□	☑
7. Were the outcomes measured in a valid and reliable way?	☑	□	□	□
8. Was appropriate statistical analysis used?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments (including reason for exclusion):

- This study explore maternity care professionals' perceptions of communication in their current workplace using survey as the study method.
- perceptions are an important measure, they may or may not reflect actual communication behavior in the workplace; only future observational research can shed light on this. Nevertheless, the findings from this research provide directions for future research and for practice.

JBI Critical Appraisal Checklist for Qualitative Research

Author: Behruzi et al. **Year**: 2017 **Record Number**: 9

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☑	□	□	□
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	☑	□	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments (including reason for exclusion):

- This study used: interviews, participant-observation, and documents
- The proposed conceptual framework could be used as a theoretical basis for future studies and could be examined in other hospitals and affiliated birth centers

JBI Critical Appraisal Checklist for Qualitative Research

Author: Wieczorek et al. **Year**: 2016 **Record Number**: 10

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	☑	□
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	□	☑	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: this article has shown that it is of considerable importance to investigate how collaboration and related struggles between professions become evident within social practices in a specific field of healthcare.

JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

Author: Watson et al. **Year: 2012** **Record Number: 11**

	Yes	No	Unclear	Not applicable
9. Were the criteria for inclusion in the sample clearly defined?	☑	□	□	□
10. Were the study subjects and the setting described in detail?	☑	□	□	□
11. Was the exposure measured in a valid and reliable way?	☑	□	□	□
12. Were objective, standard criteria used for measurement of the condition?	☑	□	□	□
13. Were confounding factors identified?	□	□	☑	□
14. Were strategies to deal with confounding factors stated?	□	□	□	☑
15. Were the outcomes measured in a valid and reliable way?	☑	□	□	□
16. Was appropriate statistical analysis used?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments (including reason for exclusion):

JBI Critical Appraisal Checklist for Qualitative Research

Author: Reiger and Lane. **Year**: 2009 **Record Number**: 12

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	☑	□
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	□	☑	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: This paper explores the attitudes of midwives, doctors and managers in relation to collaborative maternity practice. Using interviews to collect the data, this study found that effective collaboration among doctors and midwives was limited by tensions over role boundaries, power relationships and incivility that appeared to be related to increasing workload and fragmentation of the workforce.

JBI Critical Appraisal Checklist for Qualitative Research

Author: Hastie and Fahy. **Year**: 2010 **Record Number**: 13

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	☑	□	□	□
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	☑	□	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: Perspectives from both doctors and midwives are included in this study. Data was gained from a wide diversity of participants in terms of age, years of experience, qualifications and geographical locations. Limitations of this study are not certain that data saturation was complete because of the time restrictions associated with the research project. Findings were validated with peers and supervisors but were not validated with a sub group of participants, which would have made the study stronger.

JBI Critical Appraisal Checklist for Qualitative Research

Author: Miller **Year**: 1997 **Record Number**: 14

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	□	☑
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	□	☑	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: Although participants were theoretically selected, there remains self-selected bias.

JBI Critical Appraisal Checklist for Qualitative Research

Author: Peterson et al. **Year**: 2007 **Record Number**: 15

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	□	☑
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	□	☑	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: limitation of conducting interviews by telephone is that the interviewer is unable to observe and respond to non-verbal communication

JBI Critical Appraisal Checklist for Qualitative Research

Author: Scholmerich, et al. **Year**: 2014 **Record Number**: 16

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	□	☑
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	☑	□	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: The scope of this study was the region of Rotterdam, so it provide a detailed picture of local coordination challenges it would be interesting to conduct studies on the role of clients in the coordination process in other health care sectors.

JBI Critical Appraisal Checklist for Qualitative Research

Author: Wiles and Robinson. **Year**: 1994 **Record Number**: 17

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	□	☑
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	☑	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments: This study do not mention the philosophical perspective and the methodology of the research

JBI Critical Appraisal Checklist for Qualitative Research

Author: Fatalina et al. **Year**: 2015 **Record Number**: 18

	Yes	No	Unclear	Not applicable
1. Is there congruity between the stated philosophical perspective and the research methodology?	□	□	□	☑
2. Is there congruity between the research methodology and the research question or objectives?	☑	□	□	□
3. Is there congruity between the research methodology and the methods used to collect data?	☑	□	□	□
4. Is there congruity between the research methodology and the representation and analysis of data?	☑	□	□	□
5. Is there congruity between the research methodology and the interpretation of results?	☑	□	□	□
6. Is there a statement locating the researcher culturally or theoretically?	□	☑	□	□
7. Is the influence of the researcher on the research, and vice- versa, addressed?	□	☑	□	□
8. Are participants, and their voices, adequately represented?	☑	□	□	□
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☑	□	□	□
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☑	□	□	□

Overall appraisal: Include ☑ Exclude □ Seek further info □

Comments:

Appendix 4: Ethical Approvals and Research Permits

University of Nottingham

University of Nottingham
UK | CHINA | MALAYSIA

Faculty of Medicine & Health Sciences
Research Ethics Committee
Faculty Hub
Room E41, E Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH
Email: FMHS-ResearchEthics@nottingham.ac.uk

25 March 2021

Endah Sulistyowati
PhD in Midwifery Student
School of Health Sciences
Academic Midwifery
12th Floor, Tower Building
University Park, Nottingham
NG7 2RD

Dear Ms Sulistyowati

Ethics Reference No: FMHS 181-0221 **– please always quote**	
Study Title: Inter-professional Collaboration among Indonesian Healthcare Professionals in Providing Antenatal Care in a Community Context	
Location of Study: Community Health centres in Semarang, Indonesia	
Chief Investigator/Supervisor: Professor Helen Spiby, Professor of Midwifery, School of Health Sciences.	
Lead Investigators/student: Endah Sulistyowati, PhD Midwifery, School of Health Sciences	
Other Key Investigators/Collaborators: Dr Catrin Evans, Associate Professor & Director of Knowledge Exchange, School of Health Sciences.	
Proposed Start Date: 01/04/2021	**Proposed End Date:** 30/09/2021

The Committee considered this application at its meeting on 22 February 2021 and the following documents were received:

- FMHS REC Application form and supporting documents version 1.0: 04/02/2021

These have been reviewed and are satisfactory and the research project has been given a favourable ethics opinion.

Please submit copies of letters of permission from the Health Office of Semarang and the Head of the Semarang Community Health Centre (Puskesmas Semarang) when these are available so they can be noted to file. This must be completed before recruitment of participants commences.

Please note that this favourable ethics opinion has been given on the understanding that:

1. All appropriate ethical requirements and regulatory permissions are respected and followed in accordance with all local laws of the country in which the study is being conducted and those required by the host organisation/s involved.
2. The research project will adhere to ICH E6 (R2) Good Clinical Practice (GCP) which is the international ethical, scientific, and practical standard to which all clinical research is conducted.
3. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).
4. The Chair is informed of any serious or unexpected adverse event.
5. An End of Project Progress Report is completed and submitted to FMHS REC within six months after the study has finished (Please request a form).

Yours sincerely

pp

Dr John Williams, Associate Professor
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

Universitas Gadjah Mada

MEDICAL AND HEALTH RESEARCH ETHICS COMMITTEE (MHREC)
FACULTY OF MEDICINE, PUBLIC HEALTH AND NURSING
UNIVERSITAS GADJAH MADA – DR. SARDJITO GENERAL HOSPITAL

ETHICS COMMITTEE APPROVAL

Ref. No. : KE/FK/0802/EC/2021

Title of the Research Protocol	:	Inter-Professional Collaboration Among Indonesian Healthcare Professionals in Providing Antenatal Care in A Community Context
Document(s) Approved and version	:	1. Study Protocol version 01 2021 2. Information for Subjects version 02 2021 3. Informed consent form version 02 2021
Principle Investigator	:	Endah Sulistyowati
Participating Investigator(s)	:	1. Professor Helen Spiby 2. Professor in Midwifery 3. Dr Catrin Evans
Date of Approval	:	12 JUL 2021 (Valid for one year beginning from the date of approval)
Institution(s)/place(s) of research	:	Three community health centres (primary health care) in Indonesia

The Medical and Health Research Ethics Committee (MHREC) states that the document above meets the ethical principle outlined in the International and National Guidelines on ethical standards and procedures for researches with human beings.

The Medical and Health Research Ethics Committee (MHREC) has the right to monitor the research activities at any time.

The investigator(s) is/are obliged to submit:
- ☑ Progress report as a continuing review (state its due time)
- ☑ Report of any serious adverse events (SAE)
- ☑ Final report upon the completion of the study

Dr. dr. Eti Nurwening Sholikhah, M.Kes., M.Med.Ed.
Panel's vice chairperson

dr. Rizka Humardewayanti A., Sp.PD-KPTI.
Panel's secretary

P.S: This letter uses signature scan of the panel's chairperson and Secretary of the Ethics Committee. The hardcopy official letter with authority's signature will be issued when it is possible and are kept as an archive of the Ethics Committee	Validation number : 60ed043d64fd6 (http://komisietk.fk.ugm.ac.id/validasi)

Recognized by Forum for Ethical Review Committees in Asia and the Western Pacific (FERCAP)
9-Jul-21

Health Office (Semarang)

[AUTHORIZED TRANSLATION]

GOVERNMENT OF SEMARANG CITY
DEPARTMENT OF HEALTH
Jl. Pandanaran 79, Phone. (024) 8415269 – 8318771, Postal Code: 50241, SEMARANG

Number : B/7131/070/IV/2021
Type :
Attachment :
Subject : **Research Permit**

Semarang, 27 April 2021

To:
1. Head of Kedungmundu Public Health Center
2. Head of Mijen Public Health Center

in Semarang

Based on the letter of the School of Health Sciences University of Nottingham, dated April 8th, 2021, regarding the subject above, we hereby grant a permit to the student as follows:

Name : **Endah Sulistyowati**
With Research's Title : ***"Inter-professional Collaboration among Indonesian Healthcare Professionals in Providing Antenatal Care in a Community Context"***

to conduct a research in the working area of your Public Health Center from April 2021 until September 2021 while still implementing the regulation and health protocols applicable in the Public Health Center and Government of Semarang City.

Thank you for your consideration and cooperation.

o.b. HEAD OF DEPARTMENT OF HEALTH
Secretary
(sealed and signed)
dr. Lilik Faridah

CC:
1. Head of Department of Health (as a report)
2. Chief Investigator/Supervisor University of Nottingham;
3. The concerned;
4. Archive.

AFFIDAVIT
This is to certify that I have translated the foregoing from Indonesian to English that it is true and complete and that I am competent in both languages.
Translated in Jakarta, June 22, 2021

SOESILO
AUTHORIZED & SWORN TRANSLATOR
Decree of Governor of DKI Jakarta No. 527/1995
Address: Jalan Otista III/117, Jakarta Timur 13340, Tel: 8503944

Health Office (Surakarta)

[AUTHORIZED TRANSLATION]

GOVERNMENT OF SURAKARTA CITY
DEPARTMENT OF HEALTH
Jln. Jendral Sudirman No. 2; Tel. (0271) 632202 Fax. (0271) 632202
E-mail: dinaskesehatan@surakarta.go.id
SURAKARTA 57111

PERMIT
Number: 070 / 084 / 2021

FOR CONDUCTING RESEARCH

Re : Letter from the Chief Investigator/Supervisor of the School of Sciences, University of Nottingham England dated April 8, 2021

This permit is hereby granted to:

Name : **Endah Sulistyowati**
ID Number : 332407660389001
Study Program : Midwifery/School of Sciences
To : Conduct research at the Department of Health of Surakarta City, provided that she remains to carry out health protocols and submits the results report (in soft file form) to the Department of Health of Surakarta City, c.q. Data and Health Resources (SDK) Division.
with the title : **Inter-Professional Collaboration Among Indonesian Healthcare Professionals in Providing Antenatal Care in a Community Context.**

Stipulated in : Surakarta
On : April 12, 2021
On behalf of the HEAD OF DEPARTMENT OF HEALTH
SURAKARTA CITY
Head of Data and Health Resources (SDK) Division

(signed and sealed)

dr. SRI RAHAYU SUSILOWATI
Administrator
CSID No. 19780522 200501 2 012

Carbon Copy:
1. Head of Technical Implementation Unit (UPT) of Community Health Center (Puskesmas) of Sangkrah
2. Head of Technical Implementation Unit (UPT) of Community Health Center (Puskesmas) of Nusukan
3. The concerned person
4. Archives

AFFIDAVIT
This is to certify that I have translated the foregoing from Indonesian to English that it is true and complete and that I am competent in both languages.

SOESILO
SK Gub. DKI Jakarta
SOESILO
AUTHORIZED & SWORN TRANSLATOR
Decree of Governor of DKI Jakarta No. 527/1995

Appendix 6: Participant Recruitment Poster

PARTICIPANTS NEEDED
FOR RESEARCH ON INTERPROFESSIONAL COLLABORATION (IPC)

What is the research about?

This research explores the experience and perception of healthcare professionals toward interprofessional collaboration in providing antenatal care.

Who Qualifies?

- Doctors,nurses, midwives, nutritionist, health visitors who work in community health centre.
- obstetricians
- Managers of community health centre
- Committee of health profession association (IDI, POGI and IBI)

What is involved?

- Online interview using Skype/whatsapp/Teams/Google meet
- The interview will take approximately 60 minutes.
- Interview questions will focus on definition of interprofessional collaboration, its challenges and enablers, and your experience in collaborate with other health professions.

14 GB
Mobile data internet
For each participant

If you are interested in participating, please contact Endah Sulistyowati:

Call/whatsapp: 085726413587

or

Email: midwife_sholihah@yahoo.com

Appendix 7: Participant Information Sheet

Study Title: Inter-professional Collaboration among Indonesian Healthcare Professionals in Providing Antenatal Care in a Community Context

PARTICIPANT INFORMATION SHEET

Research Ethics Reference:

Version 1.0

Date: 15/03/2021

We would like to invite you to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. One of our team will go through the information sheet with you and answer any questions you have. Please take time to read this carefully and discuss it with others if you wish. Ask us anything that is not clear.

1. What is the purpose of the research?
The aim of this study is to explore the collaborative practice in the provision of antenatal care in community health centres (Puskesmas) in Indonesia from the perspective of healthcare professionals.

2. Why have I been invited to take part?
You have been invited to take part in this research because you are a healthcare professional who working in a community health center and providing antenatal care. The exclusion criteria are:

- Primary care providers who do not provide antenatal care
- Administration staff
- Declined to participate in the study.

We will be recruiting up to 30 participants in this study.

3. Do I have to take part?
No. It is up to you to decide if you want to take part in this research. We will describe the study and go through this information sheet with you to answer any questions you may have. If you agree to participate, we will ask you to sign a consent form and will give you a copy to keep. However, you would still be free to withdraw from the study at any time, without giving a reason and without any negative consequences, by letting the research know.

4. What will happen to me if I take part?
If you agree to take part, we will send you an online consent form and you can send it back to us prior to the interview. Your involvement would be to participate in one online interview. The online interview will be conducted via Whatsapp/Skype/Teams video call (participants free to choose) and at times chosen by the participants. It will be facilitated by the researcher (Endah Sulistyowati) in Indonesian language. You will be asked about you understanding and clinical experiences related to inter-professional collaborative practice.
The interview will be recorded with the permission of the participants and transcribed verbatim. All transcripts will be checked against the original audio recording to ensure content accuracy and translated into English by the investigator and double checked by a professional translator.
The time it takes for an interview varies, depending on how much you have to say, but most interviews last at least an hour. If you would prefer, we can interview you on two different occasions. Remember, if you want to stop the interview at any time, you can do so without giving any reason at all.

5. Are there any risks in taking part?
There are few risks involved in interview research. However, this research topic is quite sensitive because it relates to professional relationships between health professions.
In order to reduce any potential risks, all information you may give will be treated in the strictest confidence. The interviewer will take notes on the discussion but any information you give during the interview will be fully anonymised and combined with the views and experiences of other participants who agree to take part. No individual will be identifiable at any stage in the publication or presentation of the findings. Data collected will be stored securely in a manner consistent with the data protection act.

6. Are there any benefits in taking part?
There will be no direct benefit to you from taking part in this research but your contribution may give knowledge contribution in the field of interprofessional collaborative practice which is hopefully can improve the maternity care in Indonesia. We also hope you will find the experience of taking part in the interviews interesting and useful.

7. Will my time/travel costs be reimbursed?
You will not be paid to participate in the study. You will get a mobile data voucher worth £8.00 as compensation for the internet costs you will incur during the online interviews.

8. What happens to the data provided?
The interview recording will be transcribed (researcher will type out everything you said in the interview) and translated into English by the researcher (Endah Sulistyowati) double checked by a professional translator. The translator will sign an agreement to keep everything you say in the interview secret. The digital recording and the typed up record (transcript) will be stored confidentially using UoN licenses Microsoft OneDrive. If you wish, we will send a copy of the interview transcript. This will help you decide whether you want your interview to be made available to use for our research. A copy of the interview recording can also be provided if requested. You would be asked to read or listen to the interview and consider if there was anything

you would like to change or remove, to keep anything secret or hide your identity, or to delete or change some of your interview. We can remove any sections that you do not want us to use. We would like your permission to use fully anonymised direct quotes in research publications.
The researcher and supervisor will have access to research data. All research data and records will be stored for a minimum of seven years after publication or public release of the work of the research.

9. What will happen if I don't want to carry on with the study?
Even after you have signed the consent form, you are free to withdraw from the study at any time without giving any reason. Any personal data will be destroyed.
If you withdraw we will no longer collect any information about you or from you but we will keep the anonymous research data that has already been collected and stored as we are not allowed to tamper with study records. This information may have already been used in some analyses and may still be used in the final study analyses.

10. Who will know that I am taking part in this research?
Data will be used for research purposes only and in accordance with the General Data Protection Regulations. Any audio/video digital recordings and electronic data will be anonymised with a code. Electronic storage devices will be encrypted while transferring and saving of all sensitive data generated in the course of the research. All such data are kept on password-protected databases sitting on a restricted access computer system and any paper information (such as your consent form, contact details and any research questionnaires) would be stored safely in lockable cabinets in a swipe-card secured building and would only be accessed by the research team.
Under UK Data Protection laws the University is the Data Controller (legally responsible for the data security) and the Chief Investigator of this study (named above) is the Data Custodian (manages access to the data).

You can find out more about how we use your personal information and to read our privacy notice at:

https://www.nottingham.ac.uk/utilities/privacy.aspx/

Designated individuals of the University of Nottingham may be given access to data for monitoring and/or audit of the study to ensure we are complying with guidelines.

Anything you say during an interview will be kept confidential.

11. What will happen to the results of the research?
The research will be written up as a thesis. On successful submission of the thesis, it will be deposited both in print and online in the University archives, to facilitate its use in future research. The results of the study will be presented to study locations and at local and international conferences related to midwifery, nursing and inter-professional collaboration. Investigators also plan to publish the results of this study in a high-impact peer-reviewed journal.

12. Who has reviewed this study?
All research involving people is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests.

13. Who is organising and funding the research?
This research is organised by Prof. Helen Spiby (Supervisor) and being funded by The Indonesia Endowment Fund for Education (Lembaga Pengelola Dana Pendidikan/LPDP).

14. What if there is a problem?
If you have a concern about any aspect of this project, please speak to the researcher [Endah Sulistyowati]. The researcher should acknowledge your concern and give you an indication of how he/she intends to deal with it. If you remain unhappy and wish to complain formally, you can do this by contacting the FMHS Research Ethics Committee Administrator, Faculty Hub, Medicine and Health Sciences, E41, E Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH or via E-mail: FMHS-ResearchEthics@nottingham.ac.uk.
Please quote ref no: FMHS xx-xxx

15. Contact details
If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:
Endah Sulistyowati
PHD Candidate
University of Nottingham
School of Health Sciences
Room 316, B floor South Block QMC
NG7 2UH
Phone: +44 (0) 754 89 65496
Email: endah.sulistyowati@nottingham.ac.uk

Appendix 8: Participant Consent Form

CONSENT FORM

Title of Study: Interprofessional Collaboration among Indonesian Maternity Care Providers in the Community Health Centres

Name of Researcher: Endah Sulistyowati

Name of Participant:

1. I confirm that I have read and understand the information sheet version number 1.0 dated 15/03/2021 for the above study and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected. I understand that should I withdraw then the information collected so far cannot be erased and that this information may still be used in the project analysis.
3. I understand that relevant sections of my medical notes and data collected in the study may be looked at by authorised individuals from the University of Nottingham, the research group and regulatory authorities where it is relevant to my taking part in this study. I give permission for these individuals to have access to these records and to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.

4. I understand that the interview will be recorded and that anonymous direct quotes from the interview may be used in the study reports.
5. I understand that the information collected about me will be used to support other research in the future, and may be shared anonymously with other researchers.
6. I agree to take part in the above study.

_____ _____ _____

Name of Participant Date Signature