Harnessing the power of intelligent machines to enhance primary care.

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Moore et al have recently published an editorial on ‘Harnessing the power of intelligent machines to enhance primary care’.1 Whilst we appreciate the main messages of the editorial, we would like to correct the impression given by the authors in relation to one of our studies QRISK3.2 As stated in our QRISK3 paper,2 we included seven additional parameters in QRISK3 in response to the 2014 update to the NICE guidelines and published literature.3-8 These were chronic kidney disease (stages 3, 4, 5); a measure of systolic blood pressure variability; migraine; corticosteroids; SLE; atypical antipsychotics; severe mental illness.

The paper by Weng et al highlighted only identified two of these,9 and was published the year after our paper was submitted to the BMJ.10 It’s inaccurate therefore to attribute the development of QRISK3 to machine learning techniques. Also for clarification the improvement in accuracy of 3.6% referred to from the paper by Weng et al was not in comparison to QRISK2 but to the published equations in the 2013 American ACC/AHA guidelines. Their highest c statistic value of 0.764 from the machine-learning algorithms was lower than ours for either the current version of QRISK2 (0.879 in women and 0.858 in men) or the new QRISK3 (0.880 in women and 0.858 in men).

References:


Competing Interests:
JHC is professor of clinical epidemiology at the University of Nottingham and co-director of QResearch® – a not-for-profit organisation which is a joint partnership between the University of Nottingham and Egton Medical Information Systems (leading commercial supplier of IT for 55% of general practices in the UK). JHC is also a paid director of ClinRisk Ltd which produces open and closed source software to ensure the reliable and updatable implementation of clinical risk algorithms within clinical computer systems to help improve patient care. CC is associate professor of Medical Statistics at the University of Nottingham and a paid consultant statistician for ClinRisk Ltd. This work and any views expressed within it are solely those of the co-authors and not of any affiliated bodies or organisations.