

Letter to the Editors

QRISK or Framingham?

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We would like to comment on the paper by Rupert Payne on 'Cardiovascular risk' [1]. We would like to reassure the author that we have never been reluctant to 'openly publish the coefficients'. The coefficients for the risk factors were included in each of the academic papers which described the derivation and validation of the scores and open source software has been published which implements the algorithms at <http://www.qrisk.org> [2–4]. The statistical superiority of QRISK in UK populations over original or modified Framingham scores is no longer in question. As well as internal and external validation by the authors, an entirely independent team of statisticians, Collins & Altman, have validated the QRISK scores and confirmed superior calibration and discrimination in comparison with the Framingham equation recommended by the Joint British Societies guideline 2, or an updated Framingham score or a modified version of Framingham recommended by NICE.

Collins & Altman concluded that 'QRISK compared with Anderson Framingham. . . will target more high risk patients that would benefit from treatment' [5] and that 'The superior performance of the QRISK risk scores is not surprising as both QRISK risk scores were developed (and internally and externally validated) on large cohorts of general practice patients in the United Kingdom, the population for which the risk predictions were targeted and designed. This includes accounting for social deprivation, family history of coronary heart disease, and ethnicity, all known to increase the risk of developing cardiovascular disease. The Framingham score, by contrast, was developed on a comparatively small ($n = 5573$), homogeneous white, though treatment-naïve, sample from a single town in the US between 1968 and 1975' [5, 6]. To ensure equitable risk prediction for all social and ethnic groups in the UK, QRISK2 is more accurate, more equitable and is preferable to Framingham scores.

Competing Interests

JR has no financial or other competing interest to declare. He was Chair of the NICE guideline CG67 in 2008 which

recommended the use of a version of the Framingham cardiovascular risk score. JHC is professor of clinical epidemiology at the University of Nottingham and codirector of QResearch—a not-for-profit organisation that is a joint partnership between the University of Nottingham and EMIS (leading commercial supplier of information technology for 60% of general practices in the UK). JHC is also a paid director of ClinRisk, 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 consultant statistician for ClinRisk.

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RECEIVED

13 March 2012

ACCEPTED

15 March 2012

ACCEPTED ARTICLE PUBLISHED ONLINE

5 April 2012

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