# Cardiovascular disease risk communication in NHS Health Checks using QRISK®2 and JBS3 risk calculators: the RICO qualitative and quantitative study

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**Disclaimer:** This report contains transcripts of interviews conducted in the course of the research, or similar, and contains language which may offend some readers.

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# Plain English summary

## The RICO qualitative and quantitative study

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# Plain English summary

In England, NHS Health Checks aim to prevent cardiovascular diseases, such as heart attack and stroke. Health checks are conducted in primary care by a health-care assistant or practice nurse, who should measure the patient's risk of cardiovascular disease before advising them on how to reduce their risk. Cardiovascular disease risk is measured using a cardiovascular disease risk calculator. These calculators use various patient characteristics (e.g. age, sex, blood pressure and cholesterol) to predict how likely patients are to have a heart attack or stroke in the future.

The aim of this study was to compare how practitioners explain cardiovascular disease risk to patients during health checks when using two risk calculators: QRISK®2, which measures the risk of heart attack or stroke over the next 10 years (current usual practice), and JBS3 (a newer risk calculator), which gives this risk across the lifetime, is more interactive and has various visual displays of risk. We were interested to see if using JBS3 in health checks would lead to better practitioner and patient understanding of cardiovascular disease risk and result in patients intending to change, or actually changing, their behaviour to reduce their cardiovascular disease risk (compared with QRISK2).

Health checks were video-recorded: 73 using QRISK2 and 100 using JBS3. Patients and members of the public advised on the study design, methods and management. Most consultations lasted < 20 minutes, with most time spent discussing the causes of cardiovascular disease. There was evidence that, compared with health checks using JBS3, those using QRISK2 led to less discussion of risk and practitioners speaking far more than patients. Sixty-four health checks from each risk calculator group were examined in depth. Opportunities to check whether or not patients understood the cardiovascular disease risk information and to encourage ways to lower risk were missed, making it less likely that patients would change their behaviour. The way that risk is presented by JBS3 seems to be more easily understood by patients than that presented by QRISK2.

Nineteen patients in the QRISK2 group and 21 patients in the JBS3 group were interviewed 4 weeks after the consultation, and the practitioners were interviewed after they had completed all of their health checks. Patients found it difficult to understand and remember what they had been told about their cardiovascular disease risk during their health check. Their understanding and motivation to change behaviour appeared to be higher when they were visually shown how behaviour changes could lower their risk. Practitioners sometimes misunderstood risk and used patients' reactions to judge whether or not they understood, rather than asking them.

Our findings should help to improve how cardiovascular disease risk is communicated during health checks in future, through simple changes to the consultations (e.g. using aspects of JBS3) and by highlighting a gap in practitioners' training.

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