TOO MUCH MEDICINE

Where’s the evidence for NHS health checks?
The NHS in England must now offer health checks to swathes of the adult population. But is this programme really clinically or cost effective? asks Margaret McCartney

Margaret McCartney general practitioner
Glasgow, UK

Back in January 2008, the then prime minister, Gordon Brown, announced “everyone in England will have access to the right preventative health check-up . . . there will soon be check-ups on offer to monitor for heart disease, strokes, diabetes, and kidney disease.” Brown went further, pledging a national screening committee, an independent clinical body, that “will look at the evidence and advise on what additional screening procedures would be genuinely useful in detecting other conditions.”

Today these “check-ups” have arrived in the form of NHS health checks, available to all 40-74 year olds in England every five years. But does this policy, which every local authority is mandated by law to provide, have a sound basis in evidence?

The health checks consist of an appointment with a healthcare professional at which people are asked about their family history and lifestyle and have their body mass index, blood pressure, and cholesterol concentration measured. Further investigations may then follow.

In July 2013, Public Health England said that by systematically targeting hypertension, smoking, high cholesterol, obesity, diet, physical activity, and alcohol intake the health check programme provides a “fantastic opportunity” to help “prevent 1600 heart attacks yearly, saving at least 650 lives; prevent over 4000 people from developing diabetes; detect at least 20 000 cases of diabetes or kidney disease earlier.”

But, although there is clear evidence that advice to stop smoking has a beneficial effect, what about the rest of the programme?

Untested

Public Health England says that implementing the programme “in the absence of direct randomised controlled trial evidence to guide it” is justified because primary prevention trials have been underfunded and other types of evidence are valid. It goes on: “The responsible authorities do not have the luxury of being able to wait for long-term trials before deciding what to do. In this situation we believe the precautionary principle is the correct framework for making decisions. In the absence of scientific certainty it is necessary to make a decision on the basis of minimising harm, by comparing likely risks and harms of action with likely risk and harms of not acting. However, the onus is on those recommending intervention to demonstrate safety.”

But how will we know if the health checks programme is clinically or cost effective? The claim that 650 lives will be saved annually is based on economic modelling published by the Department of Health vascular team. The team’s original report in 1988 gave a figure of 2000 but this was revised to 650 a few months later as a “result of responses the Department received.” Although the health checks programme is being evaluated, there are no plans for a randomised controlled trial. In 2012, a cluster randomised trial of screening for diabetes in the UK found no evidence of improvements in all cause mortality over 10 years and a Cochrane systematic review found no evidence that general health checks could reduce morbidity or mortality, although they did increase the number of diagnoses. In early 2013, a study in BMJ Open found that a third of people at high risk of having or developing type 2 diabetes were not identified through the health check. A few months later, a paper published in Preventive Medicine found modest reductions in risk of cardiovascular disease in high risk patients attending health checks and an increase in statin prescribing from 14% to 60.6%. This contradicts a statement from the National Institute for Health and Care Excellence (NICE) in 2010 that health checks “will benefit the NHS, local authorities and industry, as well as individuals, by substantially reducing the number of people who need statin or anti-hypertensive medication.”

Much of the controversy surrounding the NHS health check is whether it is screening, and should be validated and run as such. Anne Mackie, director of the UK National Screening Committee (UKNSC), says: “There are certainly some aspects of the programme that look and feel like screening. However it is not run as a systematic ‘call-recall’ programme nor does it have QA [quality assurance].” She says that the screening committee has not looked at the health checks programme “as it is an exclusively English programme,” though from “the outset a
member of the UKNSC team has been engaged in advising the programme, in particular when new areas are suggested, in collection of data on process and outcomes, and ensuring that the NICE clinical guidance is incorporated into the process.”

Indeed, while the committee has produced several editions of the “blue book,” it details the evidence on assessing vascular risk, it does not recommend systematic population screening for vascular risk.

A spokesperson for NICE said that although elements of the health checks are supported by NICE guidance, “NICE has not carried out a comprehensive review of the evidence base in support of health checks.” How would NICE know whether health checks were cost effective or harmful? “We would need a referral from the Department of Health to look at this. Then, as with all areas of our work, we would consider the evidence and make recommendations,” the spokesperson said.

But with plans for evaluations rather than randomised trials, how can we be sure health checks are effective? Kevin Fenton, national director of health and wellbeing at Public Health England, says that he envisages “a robust, evidence informed and effective component of a suite of national health improvement programmes.” He says the planned evaluations will provide qualitative and quantitative evidence that will find whether the modelling is “translating into real life outcomes . . . . If we should get to a point where there was evidence demonstrating that our English programme was not meeting its set objectives, causing significant harm, or failing to demonstrate its cost effectiveness, we would of course take action to rectify and improve. If these issues were insurmountable PHE would advise the Department of Health and ministers on our recommendations for the future directions of the programme.”

Political influence

It seems like a high stakes gamble, and many public health physicians have concerns about the direction that the politicians have set for public health. Gabriel Scally, a former regional director of public health, now director of the WHO Collaborating Centre for Healthy Urban Environments, is a long time observer of the evolution of general health checks in England: “The science of screening is not well understood by politicians and this was exploited by the medical interventionists. What civil servants have been doing is playing with the language—calling the programme health checks rather than screening—to bypass the system we have in the UK to protect people from mass unscientific interventions.”

Health ministers in England since 2008 have supported health checks—including former health secretary Andrew Lansley. Yet while in opposition he wasn’t so enthusiastic, declaring that “the cardiovascular risk assessment was not entered into on the basis of research . . . You know, you have a great idea in the bath and tell someone to go and design it.”

The views of some third sector organisations also affect policy. The chief executive of Diabetes UK, Barbara Young, told the

BMJ that “we are concerned that over the last few months, some of the focus has shifted from how the [health checks] programme is being implemented to the question of whether we should be implementing it at all.” She asks, “What is the alternative the programmes’ critics are suggesting? ... The idea that we should just stand idle while this public health disaster unfolds is unthinkable.”

Yet a “public health disaster” met with inattention to the evidence and lack of high quality randomised trials may create more problems than it solves. This is not just through waste and overdiagnosis but through creating false reassurance that other interventions, such as reducing social inequalities or tobacco and alcohol laws, are no longer as necessary. John Ashton, president of the Faculty of Public Health, says he has “grave reservations” about health checks. “We are not convinced about the evidence base. There is a danger of medicalising social inequalities—in many ways health checks could be seen as playing into the pharmaceutical agenda. We should be focusing on disadvantaged communities—not finding more worried well.”

Competing interests: I have read and understood the BMJ Group policy on declaration of interests and have no relevant interests to declare.

Provenance and peer review: Commissioned; not externally peer reviewed.


Cite this as: BMJ 2013;347:f5834

© BMJ Publishing Group Ltd 2013