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Can financial incentives improve health equity?

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est hazard ratio associated with models that were not fully adjusted in this study was 4.65, it seems unlikely that thigh circumference will be clinically useful.

If a risk prediction model that incorporates thigh circumference in addition to other known risk factors is to be incorporated into usual practice, we need to ensure several things—firstly, that the new model discriminates better (has a higher c-statistic) than existing models; secondly, that it is well calibrated—that the predicted and observed risk estimates for each stratum of risk are similar; and thirdly, that using the new model will lead to an appropriate change in intended management in more patients now correctly reclassified as having higher or lower risk than would be the case using existing risk prediction models.

More research is needed to see whether measuring the thigh circumference with a tape measure adds anything more to our clinical management than eliciting risk factors from the history, examining the cardiovascular system, and measuring serum lipids. Randomised trials are needed to test whether interventions that increase thigh muscle mass through increased physical activity—in addition to or separate from current primary prevention strategies—decrease cardiovascular risk more than current practice. If this approach is shown to be effective, the public health implications would be intriguing.

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Can financial incentives improve health equity?

Evidence shows that they might, if targeted appropriately

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Recently, much interest has been shown in how financial incentives can increase health enhancing behaviours.[1-3] Two centres are studying the subject—the Centre for the Study of Incentives in Health (a joint initiative between King's College, Queen Mary, and the London School of Economics; www.kcl.ac.uk/schools/biohealth/research/csincentiveshealth/) and the Center for Health Incentives at the University of Pennsylvania (www.med.upenn.edu/ldichi/). By encouraging healthier behaviours, it is hoped that incentives will help to contain healthcare costs and improve health. If the incentives motivate people in higher socioeconomic groups more than those in lower socioeconomic groups, however, they could exacerbate health inequalities. In the linked analysis article, Schmidt and colleagues highlight this as a potential problem in Germany, where a sickness fund rewards people for engaging in preventive activities and for minimising use of health care, which might encourage the less well off to forgo needed health care.[1]

These are legitimate concerns, but we should not conclude that all incentives harm health equity. Studies across a range of interventions have shown that people within lower socioeconomic groups do sometimes respond significantly to incentives. Most of these studies were conducted in the United States, but their findings should be applicable to other countries.

For example, vouchers redeemable for fruit juice significantly increased concentrations of β carotene in pregnant women on low incomes.[4] This finding concurs with the Organisation for Economic Co-operation and Development's recent recommendation that cash payments or food vouchers should be offered to materially deprived pregnant women to boost the take-up of antenatal services.[5] Early visits to childhood health centres and uptake of vaccinations have been increased by financial incentives in Mexico, Nicaragua, Colombia, and Jamaica.[2] A $10 (£6; €6.8) incentive significantly increased the uptake of mammograms in women on low incomes aged 40-64 years.[6] Financial incentives have also improved participation of intravenous drug users in a hepatitis B vaccination programme and a tuberculosis treatment programme.[7 8] Several other examples of the positive effects of financial incentives have been published.[9 10]

These studies show that in some areas of health care modest financial incentives can substantially affect the behaviours of the relatively poor. Healthcare incentives do not always have a positive effect, however, and evidence of a positive sustained effect on more complex lifestyle behaviours, such as smoking or weight loss, is lacking.[3]

Some of the studies may have volunteer bias—volunteers may be particularly motivated to change their behaviour—and few studies provide adequate information on costs, let alone value for money. Moreover, the studies do not test the differential effect of incentives on the relatively poor versus the better off. Because less wealthy people do respond to incentives, health inequalities could be reduced if incentives were targeted at them.

Targeting certain groups is controversial because it can breed resentment in the untargeted population. This can undermine solidarity, a key feature of European healthcare systems. Also, should the target be set at the family level (for example, families whose income is below a certain amount) or the geographical level (poor communities)? Because pockets of wealth often exist in poor communities, targeting at the family level seems the most sensible choice. Targeted interventions may be the best option in the current global financial climate because they are less expensive than those aimed at the population.

A child receiving an oral vaccine in Mexico

KEITH DANNEMILLER/ALAMY

Evidence indicates that appropriately targeted incentives could reduce inequalities in health outcomes. Ongoing assessment of their affordability, effectiveness, cost effectiveness, and unintended consequences is needed. Irrespective of the effectiveness of incentives, some people will argue that they do not tackle the root cause of poverty, and that money and health behaviours are incommensurate goods.[11] Like all tools, financial incentives may have unfortunate consequences unless handled with care, but it seems premature and irresponsible to exclude them completely from the policymaking kitbag.

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Screening for intracranial aneurysms in ADPKD

A more accurate risk assignment model is needed

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Autosomal dominant polycystic kidney disease (ADPKD) is one of the most common monogenic human diseases, with an incidence of 1 in 1000. Asymptomatic aneurysms can be detected in 6% of patients with ADPKD without a family history, but in up to 16% of patients with a family history.[1] This compares with an estimated prevalence of 1-2% in the general population. Intracranial aneurysm rupture is a rare but devastating complication of AKPKD that occurs on average 10 years younger than sporadic intracranial aneurysms. The youngest reported case was a 13 week old infant, and in one study 10% of patients were younger than 21 years.[2] Intracranial aneurysm rupture is associated with a death rate of up to 65%. Treatment of a ruptured intracranial aneurysm by either neurosurgical clipping or endovascular treatment also carries an unacceptably high mortality rate of 8-10% and morbidity (disability or dependency) rate of 16-21%.[3]

The risk of rupture of asymptomatic intracranial aneurysms occurring in the general population is primarily determined by size, location, and a history of rupture.[4] For instance, the rate of rupture for intracranial aneurysms less than 10 mm in diameter