

## ABSTRACTS



### Screening and lifestyle counselling and ischaemic heart disease

A recently published paper in the *British Medical Journal* reported on a Danish study on the effect of systematic screening for risk factors for ischaemic heart disease, followed by lifestyle counselling. The study looked at the 10-year development of ischaemic heart disease at a population level using a randomised controlled community-based trial in the suburbs of Copenhagen, Denmark.

The participants were 59 616 people aged 30 - 60 years, who were randomised according to age and sex, and included an intervention group ( $n=11\ 629$ ) and a control group ( $n=47\ 987$ ). The intervention group was invited for screening, risk assessment and lifestyle counselling four times in five years. All those found to have an unhealthy lifestyle were offered individually tailored lifestyle counselling at all visits – at baseline and after one and three years. Those found to be at high risk of ischaemic heart disease were offered a further six sessions of group-based lifestyle counselling on smoking cessation, diet and exercise. After five years all were invited to a final counselling session. Those in need of treatment were referred to their general practitioner, while those in the control group were not invited for screening.

The primary outcome measure was the incidence of ischaemic heart disease in the intervention group compared with that in the control group. Secondary outcome measures were stroke, stroke and ischaemic heart disease combined, and mortality.

A total of 6 091 (52.4%) people in the intervention group participated at baseline. Among 5 978 people eligible at five-year follow-up (59 died and 54 emigrated), 4 028 (67.4%) attended. A total of 3 163 people died in the 10-year follow-up period. Among 58 308 without a history of ischaemic heart disease at baseline, 2 782 developed ischaemic heart disease. Among 58 940 without a history of stroke at baseline, 1 726 developed stroke. No significant difference was seen between the intervention and control groups at the primary end-point (hazard ratio for ischaemic heart disease 1.03; 95% confidence interval 0.94 - 1.13) or at the secondary end-points (stroke 0.98; 0.87 - 1.11; combined end-point 1.01; 0.93 - 1.09; total mortality 1.00; 0.91 - 1.09).

The conclusion was that the intervention had no effect on ischaemic heart disease, stroke or mortality at a population level after 10 years.

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### Burden of childhood TB in 22 high-burden countries: A mathematical modelling study

Diagnosing tuberculosis (TB) in children under 15 years is a challenge. As the authors of this study, recently published in the *Lancet Global Health*, point out, under-reporting can result when children do present to health services. There are no direct estimates available and World Health Organization (WHO) estimates use paediatric notifications, adjusting for incomplete surveillance by the same factor as adult notifications. This study estimated the incidence of infection and household exposure in the 22 countries with a high burden of disease, using a mechanistic mathematical model that combined estimates of adult TB prevalence in 2010 with aspects of the natural history of paediatric TB. The model accounted for age, Bacillus Calmette-Guérin (BCG) vaccination and HIV infection.

The median number of children estimated to be sharing a household with a person with infectious TB in 2010 was 15 319 701 (interquartile range (IQR) 13 766 297 - 17 061 821). In 2010, the median number of *Mycobacterium tuberculosis* infections in children was 7 591 759 (5 800 053 - 9 969 780), and 650 977 children (424 871 - 983 118) developed disease. Cumulative exposure meant that the median number of children with latent infection in 2010 was 53 234 854 (41 111 669 - 68 959 804). The model suggests that 35% (23 - 54) of paediatric cases of TB in the 15 countries reporting notifications by age in 2010 were detected. India is predicted to account for 27% (22 - 33) of the total burden of paediatric TB in the 22 countries. The predicted proportion of TB burden in children for each country correlated with incidence, varying between 4% and 21%.

The model shows that the incidence of paediatric TB is higher than the number of notifications, particularly among young children, showing a great need for preventive treatment.

Dodd P, Gardiner E, Coghlan R, Seddon JA. *Lancet Global Health*. Early Online Publication, 9 July 2014. [[http://dx.doi.org/10.1016/S2214-109X\(14\)70245-1](http://dx.doi.org/10.1016/S2214-109X(14)70245-1)]

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