Comments on the case-control study on access to health care and child mortality

We have some comments and queries related to the paper “Access to health care and mortality of children under 5 years of age in the Gambia: a case control study” published in the Bulletin of the World Health Organization.1 We appreciate the earnest attempts of the authors in measuring the effects of non-traditional variables in addition to traditional variables. However, the instrument to measure the social support variables shows vast overlapping, with such options as “someone who understood your problem”, “showed kindness and caring” and “some to relax”. These are shown as individual variables and are heavy in both informer and observer bias. It would have been more appropriate to combine them into a complex variable. Further, “had someone to prepare meals if you were unable to” overlaps with “some showed kindness and caring”.

Whereas standard textbooks in epidemiology suggest a maximum ratio of 1:4 between cases and controls,2 the authors have not justified choosing 1:5 for their controls. Choosing controls from the same village would have strengthened the result in terms of general availability and accessibility to transport, thus minimizing the bias. Further matching for socioeconomic status (though a tough proposition) could have strengthened the results. Since 10 controls were randomly chosen for each case before deciding the first random 5 for controls, matching for socioeconomic status could have been a distinct possibility. Similarly the village of residence could also have been matched. Describing the method of deciding the centre of a village would have been useful as well.

The study period stretches over 28 months (31 December 2003 to 30 April 2006). The extra cases and controls included for the last 4 months of data collection would modify additional recruitment in that season, the variation of which might have influenced the results.

Under causes of deaths, “fever of unknown origin” accounts for 23.3%.

We feel that such a high percentage does not realistically reflect the situation. The “non-specific cause” of 24.8% makes the picture even more vague as the close identification of these causes could have given further clues on the variables measured. In total, almost half the cases are in these two categories, which is a huge deficit of information.

Table 1 in the paper says 52.9% of deaths were at home and 89.3% visited health centre or hospital. The proportion of deaths within outside the variable of “visiting the health centre or hospital” needs further discussion.

Finally, though the authors are right that further studies are required, some specific recommendations (in conclusion) from the present study should have been made, for example, organizing community créches to look after children when the primary caregiver is away. It is curious that a major conclusion is drawn from a reference3 rather than from the present study.

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References

Reconsidering global targets for tuberculosis control

A recent paper by Dowdy & Chaisson1 used mathematical modelling to investigate whether annual declines in tuberculosis (TB) incidence can be sustained by maintaining adequate case detection rates (CDRs). In their model, once CDRs stabilized at any constant level below 80%, the projected TB incidence also stabilized. They concluded that TB control programmes should vigorously pursue improvements in case detection, regardless of the CDRs achieved.

Performance targets for global TB control were first formulated in 1991 at the 44th World Health Assembly. National TB control programmes were encouraged to achieve CDRs of at least 70% and cure rates in excess of 85%.2 The underlying rationale was based on epidemiological estimates that TB prevalence, and later TB incidence, should decline by about 5–10% per year if these targets could be met and sustained. Epidemiological estimates were derived from empiric observations in European countries following the introduction of chemotherapy in the 1950s.3 However, even in situations where both targets were reached and achievements sustained, incidence rates failed to decline as predicted. On critical review it is evident that, even if these targets are met, only 60% (0.7 × 0.85 = 0.595) of TB cases will be “cured” by the programme. In addition, these targets only apply to new sputum smear-positive cases, while a huge percentage of patients in endemic areas are either retreatment cases or sputum smear-negative (particularly in HIV-affected areas).

Only two public health intervention avenues exist to gain control of the global TB epidemic. First, every effort should be made to reduce host vulnerability at the population level. Host vulnerability is influenced by multiple factors and creative efforts are urgently required to address issues like poverty, malnutrition and HIV infection. Second, effective measures should be implemented to limit Mycobacterium tuberculosis transmission within communities. This relates directly to the appropriateness of current WHO-defined performance targets, which is the focus of this letter. We introduce two novel concepts that have not been considered in previous models but seem crucial to help advance the discussion.

Case density
The vast differences that exist between endemic and non-endemic areas and...