



Child mortality in South Africa: Is the Sustainable Development Goal (3.2) target achievable with current efforts?

To the Editor: The two articles by Bamford *et al.*^[1,2] in the recent *SAMJ* Maternal and Child Health Supplement present trends in inpatient case fatality rates for diarrhoeal disease, pneumonia and severe acute malnutrition (SAM), and a review of under-5 mortality and cause of death using several sources of nationally representative data. While these reviews provide evidence of some improvement, seemingly limited to the impact of prevention of mother-to-child transmission roll-out, we have some comments related to the interpretation of the data.

Inpatient case fatality rate reflects both how ill a child is on admission and the quality of care received in the facility. The authors correctly point out that the reduction in HIV prevalence among children is a possible factor in the reductions shown in the case fatality rates from the three conditions; however, the other arguments advanced for the reductions, i.e. increased coverage of key child survival interventions (immunisation against rotavirus and pneumococcal disease, fortification of staples and vitamin A supplementation, improvements in exclusive breastfeeding, improved access to social support), all impact on prevention of disease and thus incidence rates, but are not related to illness severity or hospital management. Moreover, coverage of the abovementioned interventions, especially immunisation, is far from optimal – coverage of three doses of pneumococcal vaccine is 62% and two doses of rotavirus vaccine 70%.^[3]

The authors note that the quality of case management at hospitals is not routinely measured; however, the Child Healthcare Problem Identification Programme (Child PIP), which audits hospital child deaths, in their latest report identified 3.6 modifiable factors per audited death, with the clinical personnel contributing most modifiable factors (57.7%).^[4] Further, Fig. 6 appears to be incorrect, as the case fatality rates do not correspond to the national figures given in Table 3, on which it is based.^[1]

The authors suggest that increases in admissions between 2011/2012 and 2015/2016 are likely to reflect more complete reporting or improved access to inpatient care rather than increases in the number of children with these diseases. We would argue that increases in the numbers of cases, especially for SAM, are plausible, given that stunting rates have increased^[5] over the past decade, with an alarming 36% prevalence among children in the lowest wealth quintile.^[3]

We welcome the statement that consideration should be given to introducing community case management of diarrhoea and pneumonia – and we would recommend including management of SAM and newborn sepsis – by community health workers (CHWs) at household level, especially given the finding in the other article by Bamford *et al.*^[2] that half (49%) of child deaths occurred outside of health facilities in 2015. Although South Africa is currently operationalising ward-based outreach teams, the ratio of workers to population remains too low and their scope too limited (i.e. household screening and referral).^[6] A recently completed investment

case for CHWs undertaken for the National Department of Health found that increasing the number of CHWs to 96 000 (from the current 60 000) and paying a stipend of ZAR2 500 per month, including costs for training, equipment and supervision, would amount to 15% of the current public sector primary healthcare expenditure, over 10 years would lead to cost savings owing to deaths averted, and would contribute to economic growth due to employment of women as CHWs.^[7]

Reaching the Sustainable Development Goal of <25 under-5 deaths per 1 000 live births by 2030, necessitates greater commitment to community-based care. If the goals of greater community involvement and strengthened community-based health services are to be met as recommended in the editorial to the abovementioned supplement,^[8] urgent measures should be taken to invest in these teams and enact policy to enable them to undertake high-impact interventions, especially at household level.

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1. Bamford LJ, Barron P, Kauchali S, Dlamini N. Inpatient case fatality rates improvements in children under 5: Diarrhoeal disease, pneumonia and severe acute malnutrition. *S Afr Med J* 2018;108(3 Suppl 1):S33-S37. <https://doi.org/10.7196/SAMJ.2018.v108i3.12772>
2. Bamford LJ, McKerrow NH, Barron P, Aung Y. Child mortality in South Africa: Fewer deaths, but better data are needed. *S Afr Med J* 2018;108(3 Suppl 1):S25-S32. <https://doi.org/10.7196/SAMJ.2018.v108i3.12779>
3. National Department of Health/Statistics South Africa/South African Medical Research Council and ICF. South Africa Demographic and Health Survey 2016: Key Indicators. Pretoria: NDoH, 2017.
4. Stephen CR. Saving Children 2012 - 2013: An Eighth Survey of Child Healthcare in South Africa. Pretoria: Tshepesa Press, 2016.
5. Editorial. South Africa sliding backwards. *Lancet* 2018;391(10129):1456. [https://doi.org/10.1016/S0140-6736\(18\)30839-0](https://doi.org/10.1016/S0140-6736(18)30839-0)
6. Doherty T, Kroon M, Rhoda N, Sanders D. Ending preventable child deaths in South Africa: What role can ward-based outreach teams play? *S Afr Med J* 2016;106(7):672-674. <https://doi.org/10.7196/samj.2016.v106i7.10790>
7. Daviaud E, Besada D, Budlender D, Sanders D, Kerber K. Saving Lives, Saving Costs: Investment Case for Community Health Workers in South Africa. Cape Town: South African Medical Research Council, 2018.
8. Pillay Y, Barron P. On the path to reach the SDG targets: Decreasing maternal and child mortality in South Africa. *S Afr Med J* 2018;108(3 Suppl 1):S1-S2. <https://doi.org/10.7196/SAMJ.2018.v108i3.12901>

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