

Running water, working toilets and safe hygiene practices: Essential services to save lives



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Overview

The world is falling behind its targets to improve people's access to sanitation, with major health costs. There is strong evidence that both sanitation and hygiene interventions are highly effective in reducing risks of diarrhoea, however public health promotion appears more cost-effective. More evidence on cost-effectiveness is needed to convince governments to invest more in sanitation.

Key words: sanitation and health

Mind the development gaps

The world is not on track to meet the international sanitation targets set by the Millennium Development Goals (MDGs). While lack of safe water and sanitation is the world's single largest cause of illness, 2.5 billion people are still without access to improved sanitation and 1.2 billion have no facilities (United Nations, 2008). By improving access to sanitation facilities, improving hygiene and reducing pollution of water sources, sanitation interventions contribute towards better health outcomes, higher incomes, improved educational attainment and gender equity. Big efforts need to be made to improve access to adequate sanitation, particularly in sub-Saharan Africa and South Asia where two-thirds of people do not have access to improved toilet.

Basic sanitation technologies produce net benefits at low investment costs and engineers all over the world know how to build toilets and sewage systems. The main challenge is to convince governments and political leaders that sanitation and safe hygiene practices are priority issues, which have a direct impact on improving the lives of their citizens and cutting public health costs.

Lessons learned

Sanitation is a much neglected sector in terms of progress towards global targets and at the potential benefits from sanitation investment. Sanitation is the ultimate preventive intervention for water-borne diseases such as diarrhoea, which is responsible for an estimated 2.5 million under-five deaths in developing countries per year (Kosek et al., 2003). For policy-makers, the enduring question is what are the long-term benefits of sanitation investments in value for money terms?

The core benefits are health and time savings leading to productivity gains and income generation. In addition to reducing child deaths, better health reduces the number of lost work or school hours of those who are sick and their caregivers.

Interventions providing sanitation facilities (hardware) and promoting safe hygienic practices (software) have positive health and time savings impacts:

A new synthetic review shows that sanitation and hygiene interventions are effective in reducing diarrhoea risk, leading to a 37 per cent reduction on average in diarrhoea morbidity across studies conducted in Africa, Asia and Latin America (3ie synthetic review, 2008). Other studies have shown improved sanitation leads to lower mortality rates among children (Galdo and Briceño, 2005; Fuentes et al., 2006; Gamper-Rabindran et al., 2008). The provision of sanitation facilities also has spillover effects and leads to improved health outcomes amongst neighbours (Root, 2001 and Buttenheim, 2008).

Benefits from time savings may also be substantial, particularly for women and girls, but are rarely factored into impact evaluations (IEG, 2008). In rural India, time saved from improved access to sanitation is estimated to 17 minutes per person per day (Pattanayak et al., 2007). The total economic benefits arising from convenience time savings, productivity gains and health cost savings from achieving the sanitation MDG are estimated at USD 35 billion, seven times the value of costs of infrastructure and education (Hutton et al., 2007).

Hand-washing can reduce incidence of diarrhoea and is more cost-effective:

Hygiene interventions reduce child diarrhoea by 31 per cent on average and provision of soap appears more effective than education campaigns alone (3ie Synthetic Review, 2008).

In Bangladesh, a Participatory Total Community Sanitation intervention pursued by NGOs, which focuses on community-led sensitisation rather than hardware provision, resulted in an end of open defecation in 400 villages (Kar, 2003). In the case of India, it appears too early to tell whether community-led total sanitation providing both hardware and software has had a positive impact on diarrhoea morbidity (Pattanayak et al., 2007).

Fundamental behaviour changes are required to ensure that the use of sanitation facilities and safe hygiene practices becomes an integral part of every day life. Those behavioural mechanisms and beliefs are critical factors for the sustainability of the intervention.

Estimates of the cost-effectiveness of sanitation interventions suggest that hygiene promotion is the most efficient. In terms of disability-adjusted life years (DALYs) averted from reduced risk of diarrhea, safe hygiene practices costs USD 3/DALY averted, while sanitation

construction is estimated at up to USD 270/DALY (Cairncross and Valdmanis, 2006).

Closing the evaluation gap

There is a great need to engage in more studies to support the case for more investment on sanitation. In general, data on the full benefits of sanitation provision are rarely collected and therefore cost effectiveness is rarely assessed adequately. The problem caused by the lack of cost analysis is also linked to the lack of a discussion of sustainability, scaling up and replicability of the intervention.

More focus needs to be made on rigorous assessment of the success or failure of behavioural change and its impact on the sustainability of better outcomes.

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Credits

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