

Health and Sanitation

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Introduction

Adequate sanitation, alongside good hygiene and safe water, are fundamental to healthiness and to social and economic development. That is why, in 2008, the Prime Minister of India quoted Gandhi who said in 1923, "sanitation is more important than independence. Improvements in one or more of those three components of excellent health can substantially reduce the rates of morbidity and therefore the severity of varied diseases and improve the standard of lifetime of huge numbers of individuals, particularly children, in developing countries. Although linked, and sometimes mutually supporting, these three components have different public health characteristics. It also seeks to show that sanitation work to improve health, once considered the exclusive domain of engineers, now requires the involvement of social scientists, behaviour change experts, health professionals, and, vitally, individual people.

Throughout this paper, we define sanitation because the safe disposal of human excreta]. The phrase "safe disposal" implies not only that folks must excrete hygienically but also that their excreta must be contained or treated to avoid adversely affecting their health or that of other people.

Health Impacts of Sanitation

Lack of sanitation results in disease, as was first noted scientifically in 1842 in Chadwick's seminal "Report on an inquiry into the condition of the labouring population of Great Britain. A less scientifically rigorous but nonetheless professionally significant indicator of the impact on health of poor sanitation was provided in 2007, when readers of the BMJ (British Medical Journal) voted sanitation the most important medical milestonesince1840.

The diseases related to poor sanitation are particularly correlated with poverty and infancy and alone account for about 10% of the worldwide burden of disease. At any given time on the brink of half the urban populations of Africa, Asia, and Latin America have a disease related to poor sanitation, hygiene, and water.

Of human excreta, faeces are the foremost dangerous to health. One gram of fresh faeces from an infected person can contain around 106 viral pathogens, 106–108 bacterial pathogens, 104 protozoan cysts or oocysts, and 10–104 helminth eggs. The major faeco-oral disease transmission pathways are demonstrated within the "F Diagram", which

illustrates the importance of particular interventions, notably the safe disposal of faeces, in preventing disease transmission.

Diarrhoeal Diseases

Diarrhoeal diseases are the most important of the faeco-oral diseases globally, causing around 1.6–2.5 million deaths annually, many of them among children under 5 years old living in developing countries. In 2008, for example, diarrhoea was the leading cause of death among children under 5 years in sub-Saharan Africa, resulting in 19% of all deaths in this age group. Systematic reviews suggest that improved sanitation can reduce rates of diarrhoeal diseases by 32%–37%. While many of the studies included in those reviews couldn't rigorously disaggregate the precise effects of sanitation from the general effects of wider water, sanitation, and hygiene interventions, a longitudinal cohort study in Salvador, Brazil, found that an increase in sewerage coverage from 26% to 80% of the target population resulted in a 22% reduction of diarrhoea prevalence in children under 3 years of age; in those areas where the baseline diarrhoea prevalence had been highest and safe sanitation coverage lowest, the prevalence rate fell by 43%. Similarly, a recent meta-analysis that explored the impact of the supply of sewerage on diarrhoea prevalence reported a pooled estimate of a 30% reduction in diarrhoea prevalence and up to 60% reduction in areas with especially poor baseline sanitation conditions.

Another longitudinal study in urban Brazil found that the main risk factors for diarrhoea within the first three years of life were low socioeconomic status, poor sanitation conditions, presence of intestinal parasites, and absence of prenatal examination. The study concluded that diarrhoeal disease rates could be substantially decreased by interventions designed to improve the sanitary and general living conditions of households.

Further, it's not just the supply and adult use of sanitation that's important. A meta-analysis of observational studies of infants' faeces disposal practices found that unsafe disposal increased the risk of diarrhoea by 23%, highlighting the importance of the safe management of both adults' and infants' faeces.

Acute Respiratory Infections

With 4.2 million deaths annually (1.6 million among children under 5 years), acute respiratory infections are the leading

explanation for mortality in developing countries . Although sanitation is not directly linked to all acute respiratory infections, a recent study reported that 26% of acute lower respiratory infections among malnourished children in rural Ghana may have been thanks to recent episodes of diarrhoea . Thus, sanitation could be a powerful intervention against acute respiratory infections.

While the main goal of agencies' sanitation programming is to improve health, householders rarely adopt and use toilets for health-related reasons.

Instead, the main motivations for sanitation adoption and use include the desire for privacy and to avoid embarrassment, wanting to be modern, the desire for convenience and to avoid the discomforts or dangers of the bush (e.g., snakes, pests, rain), and wanting social acceptance or status. Furthermore, for women, the provision of household sanitation reduces the risk of rape and / or attack experienced when getting to public latrines or the bush to defecate, and for women, the supply of facility sanitation facilities means they're less likely to miss school by staying reception during menstruation.