Slum upgrading strategies to improve the physical environment and infrastructure: What do we know about the effects on health and socioeconomic outcomes?

THE COCHRANE COLLABORATION® PUBLIC HEALTH GROUP

Background

Over one billion slum dwellers reside in informal housing globally, and a significant number of investments in slum upgrading are being implemented to improve lives and other outcomes. However, the task of improving the physical environments and infrastructure of slums is occurring at the same time as the numbers or urban and peri-urban poor are also increasing. Understanding which strategies are likely to be the most effective in improving outcomes for slum dwellers is therefore essential. Housing quality is known to be a key determinant of health but the evidence of which slum upgrading strategies improve health status and socioeconomic wellbeing of those living in slums needs to be synthesised and updated regularly as new programs are implemented and completed.

An international group of researchers, funders, and policy and program makers have worked together to identify what information was useful for decision making, and to review the existing evidence. Systematically reviewing all evidence, rather than just those that demonstrate positive benefits helps shape solutions going forward. This review aimed to examine slum upgrading strategies that involved changes to the physical environment and infrastructure and their impact on health, quality of life, and socioeconomic wellbeing for slum dwellers in low and middle income countries.

What was done?

The international evidence base of strategies and programs involving at least one or more physical or infrastructure changes to the slum environment; with or without the inclusion of policy, financial, legal, behavioural, educational, social or health and social services interventions, was reviewed. Studies with a comparison group (with and without randomisation) and which looked at populations living in urban or peri-urban slums in LMICs were included. The search included all studies that were conducted up until April 2012.

Turley R, Saith, R.R., Bhan N, Rehfuess E, and Carter B (2012). Slum upgrading strategies involving physical environment and infrastructure interventions and their effects on health and socio-economic outcomes Cochrane Database of Systematic Reviews 2013, Issue 1.

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What was found?

While some studies included in the review involved single interventions (like road paving and water supply), others involved multiple interventions related to physical upgrading (like water supply, sanitation, housing, roads etc.) and still others included interventions directed to securing tenure, developing health and educational facilities, and improving livelihoods. The main studies were conducted in India, Indonesia, Argentina, Mexico and Brazil.

The synthesised outcomes of these and other supporting studies suggest that slum upgrading may reduce diarrhoea in slum dwellers and that upgrading may also reduce slum dwellers water-related expenses. Studies showed contradictory findings for whether slum upgrading reduced parasitic infections, financial poverty, education and unemployment outcomes. There was very little information on other health or social outcomes, or which types of interventions were most beneficial. Some of the studies asked slum dwellers for their views and their experiences of slum upgrading interventions, providing reasons why facilities were not used as intended and what factors may have reduced the benefits of the intervention.

What does the review tell us?

Slum dweller perspectives provide insight into barriers and facilitators for successful implementation and maintenance interventions. However, despite millions of dollars invested in slum upgrading internationally, we found that the evidence base was weak. The lack of rigorous studies with low risk of bias made it difficult to draw conclusions about which type of interventions work best or not. There were also gaps in the evidence on the effect of physical slum upgrading on non-communicable diseases, quality of life, employment, education, income, social capital and crime.

What does the review recommend?

The studies conducted up until April 2012 suggest that slum upgrading can reduce diarrhoea and water expenses. Other important outcomes have either not been measured, or evaluations of whether these investments make a difference at all, have not been conducted rigorously enough to allow firm conclusions to be reached. Some evaluation studies are currently being completed or published and this review will be updated as soon as new evidence is available. Scientifically, the review recommends that future upgrading investments align with rigorous evaluations that include views of slum dwellers and developers, monitoring of implementation processes and standardised health outcome measures.