At the heart of it

Rheumatic heart disease and household crowding in the Northern Territory

Dr Joshua Francis
Rheumatic heart disease burden globally
Census Data. 2016. ABS.
The role of social determinants of health in the risk and prevention of group A streptococcal infection, acute rheumatic fever and rheumatic heart disease: A systematic review

Pasqualina M. Coffey, Anna P. Ralph, Vicki L. Krause

1 Centre for Disease Control, Department of Health, Darwin, Northern Territory, Australia, 2 Menzies School of Health Research, Darwin, Northern Territory, Australia, 3 Division of Medicine, Royal Darwin Hospital, Darwin, Northern Territory, Australia

Implications for ARF and RHD control

Rather than re-describe the problem, the aim of this research was to guide solutions. In ARF and RHD where treatment is logistically intensive and painful, and vaccines or mass drug administration are not currently available options, the case for action on the social determinants that drive ARF and RHD risk is unquestionably convincing. Several candidate vaccines are in development, but even if found to be safe and effective, not all at-risk populations would be able to readily access a new vaccine.

Based on these findings, we recommend that ARF and RHD control programs should address household crowding—particularly in high-income countries where funding and resourcing is more feasible. Structural crowding (inadequate living space including number of bedrooms) must be addressed in collaboration with designers and providers of public housing in partnerships that recognise housing needs to support good health.

Functional crowding (people sharing living spaces for safety, warmth or social cohesion, especially in traditional societies) is more difficult to address, requiring in-depth cultural understanding. For example, in Australian Aboriginal societies, rights and obligations around accommodating extra people in a house must be respected in interventions to reduce household crowding. Where close living is important culturally, ways to live safely in larger households, focusing on ensuring adequate health literacy and washing facilities, need to be implemented.

Site-specific tailoring of interventions are needed: publically-funded interventions in a cold climate high RHD-burden setting for instance include the provision of household insulation and heating to reduce functional bedroom crowding. Conversely, in hot climates, constructing community swimming pools is an effective intervention to decrease GAS skin infections, though pools must be adequately managed so as to not introduce other health risks. Further practical interventions to mitigate the health risks arising from crowding include: community development projects to improve health literacy pertaining to infection transmission; creating community demand for sanitation and hygiene; and effective
Implications for ARF and RHD control

Rather than re-describe the problem, the aim of this research was to guide solutions. In ARF and RHD where treatment is logistically intensive and painful, [135] and vaccines or mass drug administration are not currently available options, the case for action on the social determinants that drive ARF and RHD risk is unquestionably convincing. Several candidate vaccines are in development, [136] but even if found to be safe and effective, not all at-risk populations would be able to readily access a new vaccine.

Based on these findings, we recommend that ARF and RHD control programs should address household crowding—particularly in high-income countries where funding and resourcing is more feasible. Structural crowding (inadequate living space including number of bedrooms) must be addressed in collaboration with designers and providers of public housing in partnerships that recognise housing needs to support good health.

Functional crowding (people sharing living spaces for safety, warmth or social cohesion, especially in traditional societies) is more difficult to address, requiring in-depth cultural understanding. For example, in Australian Aboriginal societies, rights and obligations around accommodating extra people in a house must be respected in interventions to reduce household crowding [137]. Where close living is important culturally, ways to live safely in larger households, focusing on ensuring adequate health literacy and washing facilities, need to be implemented.

Site-specific tailoring of interventions are needed: publically-funded interventions in a cold climate high RHD-burden setting for instance include the provision of household insulation and heating to reduce functional bedroom crowding [138]. Conversely, in hot climates, constructing community swimming pools is an effective intervention to decrease GAS skin infections, [139] though pools must be adequately managed so as to not introduce other health risks. Further practical interventions to mitigate the health risks arising from crowding include: community development projects to improve health literacy pertaining to infection transmission; creating community demand for sanitation and hygiene; [140] and effective