

Near universal childhood vaccination rates in Rwanda: how was this achieved and can it be duplicated?



James Bao, Heather McAlister, Julia Robson, Alissa Wang, Kirstyn Koswin, Felix Sayinzoga, Hassan Sibomana, JeanPaul Uwizihwe, Jean de Dieu Hakizimana, Jose Nyamusore, Adeline Kabeja, Joseph Wong, Stanley Zlotkin

Abstract

Background According to data from the WHO Vaccine-Preventable Disease Monitoring System, Rwanda has achieved near universal childhood vaccination rates, with an overall national coverage rate for childhood immunisation of 98% in 2015. These rates are striking given the country's status as a post-conflict, post-genocide, and low-income country. In this study, we aimed to determine factors that contributed to the success of Rwanda's childhood immunisation programme.

Methods We used primary and secondary sources to identify such factors. Primary research was conducted in August, 2017, in Eastern Province, Northern Province, and the city of Kigali, Rwanda. We used snow-ball sampling to recruit interviewees. Semi-structured interviews were conducted with government, multilateral organisations, and non-governmental staff members involved in the planning and delivery of Rwanda's immunisation programme. Secondary sources included review of primary databases, grey literature, and peer-reviewed literature that was identified through searches in Google Scholar and PubMed for articles written in English and published since Jan 1, 2000, using combinations of the search terms "Rwanda", "vaccination", "immunisation", and "programme".

Findings 24 interviews were conducted and secondary data were analysed. Several factors have contributed to Rwanda's vaccination success. First, at the local level, an engaged cadre of community health workers sensitises communities on the importance of vaccinations and performs health surveillance duties. Second, an integrated health management information system guides vaccination procurement and distribution to support vaccine delivery at the local level. Third, at the governmental level, the vaccination programme is driven by strong political will to prioritise health. Fourth, implementation is sufficiently decentralised to the district and village level to tailor appropriate approaches for the local population. Fifth, the uniquely Rwandan practice of *imihigo*, which involves leaders at all levels of government (centrally and locally) signing performance contracts to achieve certain targets, enhances accountability and ownership. Finally, the Rwandan health system benefits from strong relationships with development partners and cross-over effects from global health initiatives, particularly in developing capacity for supply chain and cold chain management.

Interpretation Although cultural factors such as *imihigo* differentiate Rwanda from demographically comparable countries, the success of the Rwandan vaccine programme is multifactorial. These factors include strong, high-level political will, multilevel accountability, effective use of funding, partnership with development partners, integrated health information, and community-level data collection. Countries aiming to improve coverage may wish to study and emulate these factors.

Funding Mastercard Center for Inclusive Growth.

Copyright © The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY 4.0 license.

Declaration of interests

We declare no competing interests.

Published Online
March 15, 2018

University of Toronto, Toronto, ON, Canada (J Bao, H McAlister, J Robson, A Wang, K Koswin, J Wong); Rwanda Biomedical Center, Kigali, Rwanda (F Sayinzoga, H Sibomana, J Uwizihwe, J D D Hakizimana, J Nyamusore, A Kabeja); The Hospital for Sick Children, Toronto, ON, Canada (S Zlotkin)

Correspondence to:
James Bao, University of Toronto, Toronto, ON, Canada
j.bao@mail.utoronto.ca