HUMAN RESOURCES FOR HEALTH: PRACTICE AND POLICY IMPLICATIONS FOR EMERGENCY RESPONSE ARISING FROM THE CHOLERA OUTBREAK IN PAPUA NEW GUINEA

Technical summary
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Introduction
Health services in Papua New Guinea (PNG) experience challenges in the availability and distribution of all cadres of health professionals. In recent years, a large cholera outbreak has placed significant pressure on clinical and public health services.

This technical summary outlines the challenges and policy implications arising from the cholera outbreak. A longer full-text report describes in more detail some of the challenges to cholera preparedness and response in this human resource-limited setting, the strategies used to ensure effective cholera management, some lessons learnt as well as issues for public health policy and practice. The full report is available at www.hrhhub.unsw.edu.au

Challenge 1 – Multisectoral coordination
Multisectoral coordination has been used effectively in PNG to address protracted epidemics like the HIV epidemic; however, the influenza pandemic in 2009, followed closely by the cholera outbreak, was the first time that many partners had to work together to respond to a nationally declared acute health emergency.

A crucial measure that enabled national leadership was the establishment of a National Cholera Task Force (NTF) that coordinated the required multisectoral response.

Practice and policy implications – Ensure outbreak task forces coordinate outbreaks
The provision of continued support by the Government of Papua New Guinea to health authorities in coordinating the response to health emergencies of all causes through emergency task forces is important.

The roles and responsibilities of task forces could be outlined under the emergency response structure in the national health emergencies plan.

Challenge 2 – Concurrent emergencies
PNG was experiencing an outbreak of cholera in the coastal areas as well as an outbreak of shigellosis and influenza in the highlands region of the same province. These events increase the complexity in the planning of human resources for health.

Practice and policy implications – Strengthen human resources and risk assessment capacity
Health authorities may consider strengthening risk assessment capacity and staffing at national and subnational levels.

Establishing a committee to coordinate all health emergencies may be useful to ensure concurrent health emergencies are addressed simultaneously rather than prioritising one emergency and not addressing another.

Challenge 3 – Provincial coordination
Provincial Health Offices, led by the Provincial Health Advisor, have a mandate to coordinate health emergencies at the subnational level; however, they are constantly responding to complex health issues with limited resources and are frequently understaffed to respond to protracted emergencies such as a cholera outbreak.

Practice and policy implications – Coordinators can be identified and trained in preparedness
An evaluation of the coordination models established in responding to the cholera outbreak would facilitate preparedness for the next emergency. From a national perspective, a database of experienced coordinators could be maintained to enable their deployment in future health emergencies.

A quarantined emergency fund must be maintained for health emergency response at all levels of the health system.

Challenge 4 – Outbreak and behaviour change communication
The limited reach of mass media in Papua New Guinea presents significant challenges to communicating standardised information in a timely way that is required during health emergencies.

Practice and policy implications – Involve local leaders and networks in preparedness
Local leaders and networks, including ward councillors, are important in disaster and emergency preparedness planning activities. Behaviour change messages and communication tools for cholera and other outbreak-prone diseases should be standardised at the national level with technical sign-off by the National Department of Health (NDoH).

The lack of a media unit with trained personnel in NDoH to disseminate public health information was noted as a deficiency and could be emphasised for the future.

Challenge 5 – National laboratory capacity
None of the government laboratories, including the Central Public Health Laboratory (CPHL) and the national cholera reference laboratory, had the materials to perform stool culture to identify cholera. The Pathology Department at the Port Moresby General Hospital offered to perform stool culture to support cholera surveillance if they were given laboratory reagents.

Practice and policy implications – Ensure national laboratory capacity before subnational capacity
National laboratory capacity should be established prior to rebuilding capacity at the subnational level. The draft emerging diseases
national plan should be finalised to ensure that cholera is the next disease included in the external quality assurance program.

**Challenge 6 – Surveillance staffing**

Prior to the arrival of pandemic influenza A (H1N1) 2009, only one staff member within NDoH was working on outbreak surveillance and response.

*Practice and policy implications – Additional staff are required in subnational surveillance*

Health authorities established six to eight new positions in the surveillance, risk assessment and outbreak response unit within NDoH at the end of 2011. Ensuring appropriate training for new staff members will be essential

Institutionalisation of incentives for outbreak surveillance, including training, feedback and epidemiological and clinical assistance, should be strongly considered at the local or district level.

**Challenge 7 – Provincial data management capacity**

Due to a lack of provincial data managers in surveillance and outbreak response, subnational data were rarely shared with national surveillance officers, and the national outbreak profile was frequently based on old and incomplete data.

*Practice and policy implications – Mobile phone reporting works with few staff*

Mobile phone reporting enabled timely surveillance data to be received from remote areas during a cholera outbreak in the context of limited staff in subnational surveillance system. The system has the potential to be rolled out nationally.

**Challenge 8 – Rapid response processes**

Prior to the influenza pandemic, national-level technical support to provincial health authorities for outbreak investigations was provided on an ad-hoc basis by the one surveillance officer from NDoH, with little technical collaboration from other disciplines within the health authorities.

*Practice and policy implications – All provinces need a trained rapid response team*

Provincial health professionals who return from international field epidemiology training programs should formalise rapid response teams to strengthen outbreak investigation and response capacity at the provincial level.

Monitoring the creation and training of rapid response teams remains an important feature of implementing the national health emergencies plan.

**Challenge 9 – Initial clinical surge capacity at cholera treatment centres**

Due to the high initial case-load experienced by provincial hospitals and the limited hospital infrastructure for maintaining essential services, external treatment centres were established within hospital grounds. Unfortunately, most of the provincial hospitals lacked the necessary clinical employees to run the external treatment centres for 24 hours a day, seven days a week.

*Practice and policy implications – Outbreak preparedness includes surge capacity strengthening*

Cholera should be treated the same as other outbreak-prone diseases and (where possible) should be integrated into routine hospital services.

Contact lists of trained clinical staff must be kept updated. Preparedness for the next waves of cholera outbreak or future health emergencies could include identification of the minimum number of staff to operate outbreak management units, identification and documentation of case-load thresholds to trigger additional recruitments, ongoing training and exercises to ensure staff competency and safety, and preparation of contingency arrangements such as memorandums of understanding with key stakeholders for staffing needs. Retention of trained and/or experienced staff on the rosters for surge capacity would be a useful consideration.

*Practice and policy implications – Integrate cholera into existing services*

Cholera has been a protracted emergency in some provinces, with transmission occurring for more than one year. Ways to integrate cholera into the routine business of hospitals and to manage associated staffing, costs and other issues are currently being considered across the country.

**Challenge 10 – Community access to rehydration**

Recent decades have seen a decline in the number of functional aid posts that are staffed with health workers. In this context, the timely establishment of rehydration points at the community level is crucial for limiting mortality associated with cholera outbreaks.

When cholera struck remote areas with aid posts, community health workers were typically responsible for managing cases, with volunteers from the community frequently assisting with case management and infection control. In some urban areas, volunteers were paid to run the rehydration points; in others, they performed this function without remuneration.

*Practice and policy implications – Volunteers require a flexible approach*

Health authorities may consider reviewing the different approaches taken to recruit and remunerate community volunteers, with a view to identifying the strategy that works best for a given situation. This may facilitate community involvement in outbreak response and ensure support for clinical staff in a cost-effective, sustainable way.

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