

Fact Sheet

United Nations follow-up to the recommendations of the Independent Panel of Experts on the Cholera Outbreak in Haiti

Background

Following the first instances of cholera in Haiti that were reported in mid-October 2010, the UN Secretary-General appointed a panel of independent scientific experts on the cholera outbreak.

The Independent Panel presented its [report](#) at the United Nations Headquarters on 3 May 2011 and to the Government of Haiti through the Special Representative of the Secretary-General for Haiti on 4 May 2011. The Independent Panel made seven recommendations on cholera prevention and response.

Upon receipt of the report, the Secretary-General convened a Task Force with representatives of UNDP, UNICEF, WHO and several offices and departments of the United Nations, which also included relevant United Nations actors and observers, to review the recommendations of the Independent Panel and provide ongoing advice to the Secretary-General on their implementation.

Follow-Up in Response to the Seven Recommendations

Recommendation I

The Independent Panel of Experts noted that the Haiti cholera outbreak highlights the risk of transmitting cholera during mobilization of population for emergency response. To prevent the introduction of cholera into non-endemic countries, it recommended that United Nations personnel and emergency responders traveling from cholera endemic areas should either receive a prophylactic dose of appropriate antibiotics before departure or be screened with a sensitive method to confirm absence of asymptomatic carriage of *Vibrio cholerae*, or both.

Follow-up

1. The United Nations is committed to protecting the health of the people it serves, UN personnel and emergency responders and to preventing the transmission of disease through its medical policies and practices. United Nations guidelines are based on guidance provided by the World Health Organization (WHO).
2. The United Nations has worked to support the objective of lowering the overall risk of spreading the disease through the promotion of proper personal hygiene and cholera prevention training for UN personnel. In the context of UN peacekeeping, the Department of Peacekeeping Operations (DPKO) and Department of Field Support (DFS), in partnership with Medical Services (Department of Management) and the Integrated Training Service (DPKO-DFS), have developed a training plan for Troop and Police Contributing Countries (TCCs/PCCs) designed to reinforce proper hygiene and cholera prevention. This plan complements other hygiene initiatives already taking place as part of in-mission training for all categories of UN uniformed personnel. The plan is included in the Medical Support Manual for missions and makes the availability of cholera training materials more explicit, stressing the requirement for, and importance of, cholera prevention

training within the established pre-deployment training programmes. The training is carried out by each TCC/PCC before deployment to the field. Further in-mission training on cholera prevention is provided systematically by civilian and military medical personnel in each peacekeeping operation, as part of a larger focus on prevention of water-borne diseases.

3. The specific proposal for the wide-scale use of prophylactic antibiotics is based on the assumption that antibiotics provided to UN personnel and emergency responders from cholera endemic areas would eradicate the carrier state and thereby the risk of cholera introduction into non-endemic countries through asymptomatic carriers. There are currently divergent views within the medical community on expected benefits from such a practice, including experts who recommend against this practice.
4. Those experts and institutions that recommend against the practice of mass prophylaxis are concerned that the prophylactic use of antibiotics could encourage selection and spread of antibiotic resistant pathogenic bacteria, leading to (i) the risk that antibiotic resistant strains of *Vibrio cholerae* may further develop; and (ii) the risk that other organisms may develop resistance, compromising the use of that antibiotic in the management of other infectious diseases. The indiscriminate use of antibiotics for a wide variety of diarrheal diseases has contributed to the spread of resistance.
5. Given the limited evidence related to the benefits of mass prophylaxis, and the divergence in expert views on this issue, WHO convened a PAHO/WHO Expert Group on 9 December 2011 to specifically review the above recommendation. This group of experts produced a report: "PAHO/WHO Expert Consultation on Pharmacological Measures for Prevention of Cholera Introduction in Non endemic Areas". The report concluded that "it is not possible to endorse any recommendation about antimicrobial mass treatment of or screening for asymptomatic carriers (due to) lack of evidence on the efficacy, safety, and risks of the administered treatment and on the sensitivity and cost-effectiveness of the current technology for detecting asymptomatic carriers in a timely fashion". The PAHO/WHO report further concludes that "the prevalence of asymptomatic cholera carriers and disseminators in any group of potential peacekeepers is unknown, and there is no evidence that similar azithromycin treatment could eradicate that state" and "implementing a policy without an evidence base is not ethical and should not be done".
6. The recommendation related to screening of personnel was carefully considered by the United Nations Task Force. Screening to confirm the absence of asymptomatic carriage of cholera poses immense challenges due to the lack of sufficiently sensitive screening methods and technology. Currently, the screening of asymptomatic individuals to detect transient asymptomatic or mild infection is not possible because the relatively low levels of cholera bacteria present would not be detectable. Even if a screening test with adequate sensitivity and specificity is indeed available, such interventions would require substantial infrastructure for sampling, including equipment and supplies for invasive rectal swabbing, safe transportation of samples and appropriate quality standards for medical personnel performing the testing. Should a decision be taken in the future to perform mass screening of personnel (if and when a viable screening test becomes available), it should be noted that additional questions relating to ethics and confidentiality would need to be carefully considered and negotiated.

Recommendation II

United Nations missions commonly operate in emergencies with concurrent cholera epidemics. The Independent Panel of Experts recommended that all United Nations personnel and emergency responders traveling to emergencies should receive prophylactic antibiotics, be immunized against cholera with currently available oral vaccines, or both, in order to protect their own health and to protect the health of others.

Follow-up

1. As of October 2010, the UN recommended that all UN personnel, including troops of TCCs/PCCs, are offered the oral cholera vaccine. Recognising that the vaccine does not eradicate a carrier state, it is nonetheless useful to protect the individual who is vaccinated from developing new, active disease, or a new carrier state, and thereby reducing disease transmission. The vaccines used, either as primary immunization or booster, are part of a comprehensive risk assessment undertaken before deployment.
2. Before every TCC/PCC troop deployment, recommendations on the appropriate vaccinations and prophylaxis are provided, based on considerations of a health risk assessment of the country they are deploying to and of current existing WHO guidelines. With regard to Haiti, the UN Medical Services Division has recommended that all personnel, including TCC/PCC, be vaccinated against cholera before deployment. It should be noted that the vaccination of TCC/PCC troops remains a responsibility of the TCCs or PCCs. Additional issues related to prophylactic antibiotics for cholera are covered in the response to recommendation 1, above.

Recommendation III

The Independent Panel of Experts recommended that to prevent the introduction of contamination into the local environment, United Nations installations worldwide should treat faecal waste using on-site systems that inactivate pathogens before disposal. These systems should be operated and maintained by trained, qualified United Nations staff or by local providers with adequate United Nations oversight.

Follow-up

1. The proper management and oversight of waste water treatment at UN installations, including the proper management and oversight of UN wastewater treatment service providers (where utilized) is a priority for all UN Missions. The UN fully endorses the use of independent on-site waste water treatment plants in UN Missions, where this is the most effective method to ensure that untreated effluent is not discharged from UN installations into the environment. In some instances, properly designed and well-maintained traditional wastewater treatment systems may provide an effective alternative, particularly for smaller UN installations such as team sites or field offices. The Task Force recommended that the most effective and appropriate wastewater solutions be used in all UN installations, following a comprehensive assessment of each location.
2. Following the recommendations of the Independent Panel, the UN has undertaken substantial actions to improve wastewater management in field missions. All missions have provided action plans to ensure that all their wastewater facilities meet the minimum required standards set by the Organization's Environmental Policy. Missions are implementing these plans and report on the

range of actions being taken, and highlight any areas that require further headquarters attention and guidance.

3. The actions undertaken in some field mission and being undertaken in others include improvements to and better monitoring of existing facilities, installation of independent wastewater treatment plants and inspection and closer supervision of contractors involved in wastewater disposal. The UN also continues to strengthen operational and oversight capacity.
4. In Haiti, MINUSTAH had successfully established a fully functional Environmental Unit and has performed a detailed analysis of all the mission's wastewater facilities. The mission actively inspects and reviews its sanitation and waste management mechanisms to ensure that acceptable standards are maintained. MINUSTAH has installed 32 wastewater treatment plants throughout the country and closely monitors the proper disposal of untreated wastewater into government-approved disposal sites.

Recommendation IV

The Independent Panel of Experts recommended that to improve case management and decrease the cholera case fatality rate, United Nations agencies should take stewardship in: a) Training health workers, especially at the treatment centre level; b) Scaling up the availability and use of oral rehydration salts at the household and community levels in order to prevent deaths before patients arrive at treatment centres; and c) Implementing appropriate measures (including the use of cholera cots) to reduce the risk of intra-facility transmission of cholera to health staff, relatives and other patients.

Follow-up

1. Despite severe infrastructure and financial constraints, important strides have been made in combating cholera in Haiti. There has been a drastic reduction in the number of suspected cholera cases and deaths from cholera, particularly in 2014. MSPP has reported 8,657 suspected cholera cases (69 deaths) between January and the end of August 2014, representing a 76 per cent reduction in suspected cases and 78 per cent reduction of deaths when compared to the same period in 2013 (35,793 suspected cases, and 315 deaths). Further, the national incidence (0.8 per 1,000 persons) and hospital fatality (0.91 per cent) rates are also at their lowest. These results confirm that efforts to tackle the epidemic are working.
2. The Government of Haiti launched its National Plan for the Elimination of Cholera (2013-2022) on 27 February 2013, along with a two-year operational component of the Plan. The United Nations system in Haiti (including IOM, MINUSTAH, OCHA, PAHO/WHO, UNDP, UNICEF and UNOPS) has been supporting the Government of Haiti's response to the cholera epidemic, including in the critical areas outlined in the above recommendation. A comprehensive report of the ongoing efforts related to the response, as well as update on activities and progress is available on the UN's website and is updated on a regular basis.
3. The UN's strategy to support the implementation of the Government's plan aims at curtailing the epidemic and reducing the number of cases and deaths resulting from cholera. As such, the UN strategy includes activities in all aspects of cholera prevention and response including

epidemiological surveillance, health and hygiene promotion, medical treatment and strengthening water, hygiene and sanitation systems.

4. Within this context, the UN has been supporting national authorities i) to ensure free access for cholera patients to adequate treatment and safe water as a first life-saving intervention; ii) to integrate cholera treatment services into the national health system in order to guarantee the sustainability of treatment of patients; iii) to ensure fast and reliable data on the evolution of the epidemic is available in order to detect and respond rapidly to alerts; and iv) to increase the capacity of the Ministry of Health (MoH) for mobile response to alerts and localised outbreaks, by providing financial, technical and logistical support for the MoH Rapid Response Mobile Teams for which funding is available through to June 2015.
5. In partnership with the Centres for Disease Control and Prevention (CDC), the UN helped establish a national data collection and reporting system to monitor cholera cases. In 2013, thanks to this system, 1,150 alerts of suspected cholera cases were received through the system and teams responded with health and water interventions. Between 1 January to 30 September 2014, 120 alerts were received. The UN has made further significant investments to sensitize and equip the population with the knowledge of how to protect themselves, their families and their communities from cholera. Investing in increasing knowledge and practice of safe hygiene behaviour is the most cost-effective way of reducing the risk of cholera in the country. The UN has also helped increase access to clean water in health centres for the population. Furthermore the UN is supporting the Government to increase the use of rapid tests to assist in outbreak identification and strengthen laboratory capacity to quickly differentiate cholera from other forms of acute diarrhoea in order to better isolate and tackle the disease.
6. Since 2012, the UN has helped rehabilitate the water and sanitation infrastructures in department (state) hospitals and improved water quality in 80 health centres. Because human excreta is a major risk of contamination within treatment centres, the UN continues to support desludging and disinfection of sanitation facilities in these centres and has funded the repair of the government's sanitation truck fleet, dedicated to ensuring the desludging of treatment centres.
7. The UN is also supporting the MoH to carry out vaccination campaigns targeting 600,000 people in areas of cholera persistence. The first phase of the campaign took place in August 2013, targeting 107,906 people in two affected communes. A second phase was implemented in August and September 2014 that reached 184,517 people (99 per cent of the targeted population) with two doses of the oral cholera vaccine Shanchol™ in seven high-risk areas across the Departments of Centre, Artibonite and West.
8. The combination of these efforts has had a direct impact in the reduction in the number of cases and fatalities related to cholera. An increase in targeted water and sanitation activities in areas of cholera persistence will further consolidate these gains.

Recommendation V

The Independent Panel of Experts recommended that to prevent the spread of cholera, the United Nations and the Government of Haiti should prioritize investment in piped, treated drinking water supplies and improved sanitation throughout Haiti. Until such time as water supply and sanitation infrastructure is established: a) Programmes to treat water at the household or community level with

chlorine or other effective systems, hand-washing with soap and safe disposal of faecal waste should be developed and/or expanded; b) Safe drinking water supplies should continue to be delivered and faecal waste should be collected and safely disposed of in areas of high population density, such as the spontaneous settlement camps.

Follow-up

1. The United Nations has called on the international community to support the Government of Haiti's National Plan and to scale up water and sanitation in Haiti. Although Haiti's sanitation coverage has marginally risen from 19 per cent in 1990 to 24 per cent in 2012 due in large part to the earthquake response, Haiti has fallen further behind the rest of the region in that time period (62 per cent to 82 per cent). And while more Haitians in urban areas now have access to improved sanitation facilities, rapid urbanization means these percentages have actually gone down. The most excluded population is in rural areas, where sanitation coverage is only 16 per cent and sometimes health infrastructures are absent and cholera response can be a bigger challenge. Nearly 3.9 million people (38 per cent of the population) lack access to safe drinking water¹.
2. The UN's strategy of engagement with regards to water and sanitation includes an emergency response mechanism for water and sanitation to respond to cholera alerts and sustainable community-based water, sanitation and hygiene (WASH) programmes to increase access to safe water, sanitation and hygiene for the population, particularly women and children.
3. As part of this strategy, the UN has expanded its rapid response activities to protect households and communities in areas affected by cholera outbreaks. In cooperation with non-governmental organization (NGO) partners present in all 10 departments of Haiti, UNICEF, UNOPS and PAHO/WHO work with technical field staff from the national water and sanitation directorate (DINEPA) and local authorities to deliver an emergency WASH response to cholera spikes within 48 hours. Activities include sensitization on the treatment of water consumed by households in affected neighbourhoods, the delivery of materials (soap, Aquatabs, etc.) to improve water quality and hygiene at household level. Activities also include the immediate repair of water points and systems in communities affected by cholera. From January to October 2014, there were 1,051 interventions by the WASH partners with an average response time of 1.9 days (median 1 day) of the initial cholera alert, providing immediate response to over 250,000 persons living in cholera affected areas.
4. The UN has also carried out sustainable community-based WASH projects in areas of cholera persistence. This includes supporting a nation-wide marketing strategy to promote larger household water treatment and storage and hand washing with soap and supporting community sanitation in areas of cholera persistence. The UN, in cooperation with government partners, is also supporting increased access to safe water, including through the strengthening of a water systems chlorination control, along with the chlorination of water tankers in the two metropolitan areas of Port-au-Prince and Cap Haitian.
5. On 14 July 2014, the Government of Haiti with UN support launched the National Sanitation Campaign. The campaign strives for zero open defecation, increased access to water and sanitation

¹ WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation, <http://www.wssinfo.org/>

infrastructure in primary and secondary schools as well as in health centres. It also encourages greater household investments in durable, hygienic latrines. With funding from the governments of Canada and Japan, UNICEF and partners are working in six high-risk cholera communes in Artibonite and Centre to reach 170 rural communities (some 200,000 people) with improved water and sanitation infrastructure. Project activities started in the communes of Mirebalais and Cerca La Source in the Centre department on 14 October 2014.

6. At the World Bank Group's donor conference for Haiti held in Washington, D.C. on 9 October 2014, the joint Clean Water, Improved Sanitation and Better Health for Haiti appeal was launched to solicit funds for a US\$310 million strategy to reach 1.9 million people in 16 high-risk cholera communes with improved water, sanitation and health infrastructure over the next three years (it also included a further \$70 million to improve the water supply in Port-au-Prince). The strategy aims to consolidate resource mobilisation efforts by prioritising high-risk cholera communes across the 10 departments to support cholera elimination efforts and to begin to address both the medium-term objectives of the Government's 10-year plan for the Elimination of Cholera and the objectives of the National Sanitation Campaign.
7. As recommended by the Independent Panel of Experts, the UN also supports the collection and safe disposal of faecal waste in IDP camps of the metropolitan area, where there is a high sanitary risk. Since 2010, the UN has been supporting the desludging of latrines in IDP camps. UNICEF continues to support desludging in IDP camps in the metropolitan area of Port-au-Prince, with an average of 70,000 persons spread over more than 80 camps who benefited from desludging between January and July. Since September, seven cholera treatment centres have also received regular desludging from UNICEF partners. With the support of the UN and its partners, DINEPA established and is maintaining a waste site, and has recently started to desludge health facilities in the areas worst affected by cholera.
8. Funding to continue and sustain the progress made from the above critical activities described above is urgently required. This is in addition to the essential long-term investments in water and sanitation. The Government's 10-year plan requires \$2.2 billion for the long-term elimination of the disease through large-scale development of public health and sanitation infrastructure. To date, less than 15 per cent has been mobilized by international partners against the National Plan.
9. Since the outbreak, the UN has expended approximately \$177 million on the cholera response. The total amount required for the UN's Support Plan covering humanitarian and development activities during 2014-2015 is \$69 million. As of October 2014, some \$32 million has been received, from the UN Central Emergency Response Fund and the Governments of Canada, Japan and the UK. This is vastly insufficient to meet urgent needs. The lack of available funds today risks the departure of cholera actors, which could compromise gains attained so far and lead to resurgence in suspected cases.

Recommendation VI

The Independent Panel of Experts recommended that the international community should investigate the potential for using vaccines reactively after the onset of an outbreak to reduce cholera caseload and spread of the disease.

Follow-up

1. The United Nations Task Force established by the Secretary-General fully endorsed the use of vaccines reactively after the onset of a cholera outbreak as part of an integrated overall response and particularly when other interventions cannot be delivered effectively, which is in line with WHO guidelines. WHO recommends that immunization with currently available cholera vaccines be used in conjunction with the usually recommended control measures in areas where cholera is endemic as well as in areas at risk of outbreaks. Vaccines provide a short-term impact while longer term activities like improving water and sanitation are put in place.
2. On 14 August 2012, the PAHO Technical Advisory Group on Vaccine-Preventable Diseases recommended the introduction of the cholera vaccine in Haiti with the goal of moving toward universal vaccination for the people of Haiti.
3. The Ministry of Health included the vaccination of 600,000 people in areas of cholera persistence as part of the National Plan. As noted in Recommendation IV above, the cholera vaccination campaigns have taken place. The first phase took place in August 2013 and reached 107,906 people in two affected communes. The second phase was implemented in August and September 2014 and reached 184,517 people (99 per cent of the targeted population) with two doses of the oral cholera vaccine Shanchol™ in seven high-risk areas across the Departments of Centre, Artibonite and West.
4. The United Nations is appealing to the international community to urgently mobilize the necessary funds to expand the vaccination campaign. Combined with vital longer-term investments in water and sanitation, the CDC estimates that the vaccination program could prevent nearly 90,000 new cases of cholera over the next two decades and significantly contribute to defeat the disease's spread.
5. The United Nations has urged the international community, including governments and partners who use cholera vaccines reactively, to actively engage with the WHO to monitor and assess such interventions and gather evidence on their impact.
6. The United Nations has worked with the global health community to create a global stockpile of oral cholera vaccine (OCV), as an additional tool to help control cholera epidemics. As global vaccine production is limited, for 2015, the stockpile will gradually have two million doses of vaccine, primarily intended for outbreak interventions.
7. The OCV stockpile is managed by the International Coordinating Group (ICG). The ICG has managed similar stockpiles of meningococcal meningitis and Yellow Fever vaccines for outbreak response over the past 12 years. The ICG is comprised of four decision making partners: the International Federation of Red Cross and Red Crescent Societies (IFRC), Médecins Sans Frontières (MSF), United Nations Children's Fund (UNICEF) and WHO, which also serves as the Secretariat.

8. In November 2013, the GAVI Alliance Board approved a contribution towards a global cholera vaccine stockpile for the period 2014-2018 to increase access to oral cholera vaccine in outbreak situations and endemic settings.
9. Embedded within the OCV stockpile mechanism is a system of monitoring and evaluation. As experience and data accrue, the results of evaluations should enable continuous improvement in the structure and functioning of the stockpile and inform the use of OCV as a public health tool. The ICG members are communicating with partners and stakeholders to increase awareness of the OCV stockpile and placing the vaccine in the context of an integrated cholera response which is based around early detection and case management, provision of safe water, sanitation and raising awareness among the affected communities.

Recommendation VII

The Independent Panel of Experts noted that recent advances in molecular microbial techniques contributed significantly to the investigative capabilities of their report. It recommended that through its agencies, the United Nations should promote the use of molecular microbial techniques to improve surveillance, detection, and tracking of *Vibrio cholerae*, as well as other disease-causing organisms that have the potential to spread internationally.

Follow-up

1. The United Nations strongly supports calls for the international scientific community to enhance its research focus on the use of molecular microbial techniques and in the development of appropriate technologies to assist with the timely detection of *Vibrio cholerae*. This research should also be extended to other disease-causing organisms that have the potential to spread internationally.
2. WHO, with the support of the wider UN system, has taken proactive steps to help coordinate the efforts of the scientific community. This has included a review of laboratory tools best adapted to the surveillance and tracking of cholera strains and the identification of WHO collaborating centres and associated partners.
3. In response to the recommendation of the Independent Panel of Experts, WHO has initiated a mapping of the existing rapid diagnostic tests for the detection of cholera. There are ongoing plans to evaluate the technical specifications of available tests, together with assessments of their field performance in order to elaborate recommendations for their use, alone or in combination with other existing techniques. In 2013, WHO initiated a project to study the feasibility of an innovative diagnostic technology that will support simultaneous detection of a wide range of pathogens, including agents responsible for acute diarrhoea.

The elimination of cholera in Haiti remains a key priority of the United Nations. The complexity of the cholera epidemic in Haiti requires a comprehensive response that includes hygiene promotion, delivery of quality health services, reliable access to safe water and improved sanitation. This requires linking short-term life-saving interventions with long-term investments.

(updated October 2014)
