



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Letter to the Editor

**Credibility, integrity, transparency & courage:
The Haitian Cholera outbreak and the United
Nations (UN)**


*Oh dear Prime Minister it's all such a mess,
Go right ahead and pull the rotten tooth.
Oh Mr President you've been put to the test,
Come clean, for once, and hit us with the truth [1].*

On October 13th 2016 the General Assembly of the United Nations appointed the former Prime Minister of Portugal, António Guterres, as the next Secretary-General of the United Nations [2]. Guterres will commence his term on January 1st 2017, after the current Secretary-General, Ban Ki-moon, steps down at the end of his term. It is interesting to note that in praising the more transparent process of his appointment Guterres stated that "the true winner today is the credibility of the UN" [2].

From a health perspective, there are numerous issues for the new Secretary-General of the UN to concentrate on. However, in terms of their international credibility in the health arena, perhaps the most important concern for the UN should be the long-term impact of UN's response to the ongoing cholera outbreak in Haiti. The death toll from cholera there has continued to rise [3] and the recent impact of Hurricane Matthew in early October 2016 will undoubtedly exacerbate the problem [4]. The cholera outbreak is now believed to have resulted in approximately 10,000 dead and over 800,000 infected [5,6].

The UN mission in Haiti, known by the acronym MINUSTAH (United Nations Stabilization Mission in Haiti), was originally formed on the 30th of April 2004 to help stabilize the distressed state [7,8]. The MINUSTAH mission appears to have been blighted from the start. Local resistance to the occupying force [9] and mission fatigue [10] are longstanding issues. This mission also has the unfortunate distinction of being the site of the greatest single loss of life in the history of UN peacekeeping [8]. 102 UN personnel dead on 12th January 2010 when a catastrophic 7.0 M earthquake occurred, centered just 25 km west of the capital, Port-au-Prince [8]. 220,000 Haitian islanders also died in this earthquake as well as 1.5 million being left homeless [8].

It is important to note that prior to the current outbreak, Haiti had no history of Cholera outbreaks, despite many outbreaks in the Caribbean region [11]. However, just over 8 months after the earthquake a Cholera outbreak started [12], just four days after a contingent of UN troops arrived from a region experiencing a similar outbreak [11]. Classic shoe-leather epidemiology, which was later confirmed by genomic analysis, has now unequivocally determined the cause of the outbreak to be UN peacekeeping troops from Nepal [11,13]:

the MINUSTAH camp contaminated the Meille tributary with fecal matter by their unsanitary practice of sewage drainage, and the

Meille tributary connects downstream to the Latem River that goes through the town of Mirebalais, the site of the first reported cholera case [11,14]

The outbreak highlights a whole series of issues and problems, many of which the UN has since, quite wisely, effectively solved in terms of future deployments through improved health policies including:

mandatory Cholera vaccinations for all UN peacekeepers deploying to and from cholera-endemic areas; proper management of wastewater in military camps, including better monitoring of existing facilities, installation of independent wastewater-treatment plants, and inspection and closer supervision of contractors involved in wastewater disposal; and appointment of an environmental health officer responsible to support missions for implementation of policies on sanitation and environmental issues [12].

Where the UN has patently not learned its lesson is in relation to the need for honesty and integrity in global public health. The UN has seriously damaged its international credibility through its longstanding denial of involvement in the Cholera outbreak. The five years since the beginning of the outbreak have been characterized by UN denials, leaked reports and a mounting body of evidence pinpointing the Nepalese troops as the cause [5,15]. Although some commentators have suggested that trying to assign blame in relation to the outbreak is not helpful [16], others have re-framed it as assigning responsibility and accountability [12].

The self-evident failure of UN in terms of courage, integrity, honesty and transparency relating to the cholera outbreak is alarming because international public health is already in a perilously weakened state [17], and ill-equipped to respond to emerging infectious diseases [18,19]. In her highly influential text, *Betrayal of Trust: The Collapse of Global Public Health*, Garrett outlined the manifold failures of international public health [17]. A central theme in her text is the importance of transparency and integrity in relation to emerging health concerns [17].

Betrayal of Trust first appeared in 2000 and focused in part on the HIV/AIDS epidemic in the former USSR. Garrett demonstrates how, for political and ideological reasons, the Government there refused to respond to, or even acknowledge, the emerging catastrophe [17,20]. Needless to say, HIV/AIDS cases soared in this vacuum. The rhetoric and deceit used by the communist regime in relation to their denial of this issue came to almost resemble some form of Orwellian 'Newspeak' [21]. More recently the international stage has seen similar denials from China in the context of the initial response to the 2003 outbreak of Severe Acute Respiratory Syndrome (SARS) [22,23]. It is interesting to note that the World Health Organization was vocal in its condemnation of China concerning secrecy in its early handling of the emerging epidemic [24].

The Haitian Cholera outbreak has clearly damaged the UN. It should be noted however that it has also tarnished the credibility

of established and prominent epidemiological agencies such as the World Health Organization (WHO), the US Centers for Disease Control (CDC), and the Pan American Health Organization, as according to Piarroux & Frerichs, they chose not to investigate the issue [12].

In our interconnected and fragile global village, infectious diseases necessitate a post-Westphalian perspective in which the arbitrary and artificial nature of nation-state borders cannot be permitted to impede essential global public health efforts [25]. In such a context and facing global disease transmission networks [19] it is imperative that the UN retains the confidence of not only the representatives of member state Governments, but of the populace as well. Denials in the face of insurmountable evidence, followed eventually by partial admissions, and leaked reports have seriously damaged the integrity of the UN in the health sphere [5,12]. One can hope that the UN will decide on full disclosure, a formal apology, and restoration before Guterres assumes his role as the next Secretary-General of the UN. If not, it should be one of his first actions. Either way, if the UN is to restore confidence in the health arena it must work on inspiring trust in its activities. Given the strength of nationalism, which can serve to essentially undermine the UN, it needs to be above reproach and perhaps more importantly to be seen as being above reproach. As Secretary-General Guterres needs to introduce a culture change, moving the UN organization towards transparency and accountability if it is to restore faith, respect and support.

References

- [1] Lines from the song Fallen on Hard Times by Jethro Tull from the 1982 album The Broadsword and the Beast.
- [2] UN. António Guterres appointed next UN Secretary-General by acclamation. UN: UN News Center; 2016 <http://www.un.org/apps/news/story.asp?NewsID=55285#.WAGeA1ZHbYU>.
- [3] European Union. ECHO Fact Sheet—Cholera in Haiti; 2014 http://ec.europa.eu/echo/files/aid/countries/factsheets/haiti_cholera_en.pdf.
- [4] Ahmed A. Cholera Deepens Misery After Hurricane. The New York Times; 2016. http://www.nytimes.com/2016/10/15/world/americas/cholera-haiti-hurricane-matthew.html?_r=0.
- [5] Katz JM. U.N. admits role in cholera epidemic in Haiti. The New York Times; 2016. http://www.nytimes.com/2016/08/18/world/americas/united-nations-haiti-cholera.html?_r=0.
- [6] Luquero FJ, Rondy M, Boncy J, Munger A, Mekaoui H, Rymshaw E, et al. Mortality rates during cholera epidemic, Haiti, 2010–2011. Infect Dis 2016. March [date cited] <http://dx.doi.org/10.3201/eid2203.141970>.
- [7] United Nations. MINUSTAH United Nations stabilization mission in Haiti: MINUSTAH background; 2016 <http://www.un.org/en/peacekeeping/missions/minustah/background.shtml>.
- [8] United Nations. MINUSTAH United Nations stabilization mission in Haiti; 2016 <http://www.un.org/en/peacekeeping/missions/minustah/mmandate.shtml>.
- [9] Lemay-Herbé N. Resistance in the time of cholera: the limits of stabilization through securitization in Haiti. Int Peacekeep 2014;21(2).
- [10] The Economist. The UN and Haiti mission fatigue; 2011 <http://www.economist.com/node/21532299>.
- [11] Oratz FD, Keith PS, Boucher Y. The 2010 cholera outbreak in Haiti: how science solved a controversy. PLoS Pathog 2014;10(4):e1003967.
- [12] Piarroux R, Frerichs RR. Cholera and blame in Haiti. Lancet Infect Dis 2015;15:1381.
- [13] Moore S, Thomson N, Mutreja A, Piarroux R. Widespread epidemic cholera caused by a restricted subset of vibrio cholerae clones. Clin Microbiol Infect 2014;20:373–9.
- [14] Ivers LC, Walton DA. The first case of cholera in Haiti: lessons for global health. Am J Trop Med Hyg 2012;86:36–8, <http://dx.doi.org/10.4269/ajtmh.2012.11-0435>.
- [15] Piarroux P. The U.N.'s responsibility in Haiti's cholera crisis. The New York Times; 2016 <http://www.nytimes.com/2016/09/08/opinion/the-un-responsibility-in-haitis-cholera-crisis.html>.
- [16] The Lancet Infectious Diseases. As cholera returns to Haiti, blame is unhelpful. Lancet Infect Dis 2010;10:813.
- [17] Garrett L. Betrayal of trust. 1st ed. Hachette Books; 2000.
- [18] Garrett L. The coming plague. 1st ed. Farrar, Straus and Giroux; 1994.
- [19] Tatem AJ, Rogers DJ, Hay SI. Global transport networks and infectious disease spread. Adv. Parasitol 2006;62:293–343, [http://dx.doi.org/10.1016/S0065-308X\(05\)62009-X](http://dx.doi.org/10.1016/S0065-308X(05)62009-X).
- [20] Feshbach M. The early days of the HIV/AIDS epidemic in the former Soviet Union. In: Twigg JL, editor. HIV/AIDS in Russia and Eurasia, vol. 1. Palgrave Macmillan; 2008. p. 7–32.
- [21] G. Orwell, 1984. 1st ed. Secker & Warburg, 1949.
- [22] Thiers P. Risk Society comes to China: SARS transparency and public accountability. Asian Perspect 2003;27(2):241–51.
- [23] Huang Y, et al. The Sars epidemic and its aftermath in China: a political perspective. In: Institute of Medicine (US) Forum on Microbial Threats, Knobler S, Mahmoud A, Lemon S, editors. Learning from SARS: preparing for the next disease outbreak: workshop summary. Washington (DC): National Academies Press (US); 2004.
- [24] Crampton TA. W.H.O. criticizes China over handling of mystery disease. The New York Times; 2003 <http://www.nytimes.com/2003/04/07/international/asia/who-criticizes-china-over-handling-of-mystery-disease.html>.
- [25] Fidler DP, et al. Sars: political pathology of the first post-westphalian pathogen. In: Institute of Medicine (US) Forum on Microbial Threats, Knobler S, Mahmoud A, Lemon S, editors. Learning from SARS: Preparing for the Next Disease Outbreak: Workshop Summary. Washington (DC): National Academies Press (US); 2004.

F. Houghton*
A. Norris

Department of Public Health & Health Promotion,
Eastern Washington University, United States

* Corresponding author. Fax.: +1 509 828 1275.
E-mail address: fhoughton@ewu.edu (F. Houghton)

21 October 2016