

Future perfect? Improving preparedness through the experiences of the influenza A (H1N1) 2009 pandemic

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In April 2009, human infections caused by a previously unknown swine influenza A (H1N1) virus were first reported to the World Health Organization (WHO). Within days, spread of this virus in North America was evident and, within weeks, continued dissemination to other regions resulted in the first influenza pandemic of the 21st century. Last year, WHO requested a review of the functioning of the International Health Regulations (IHR) to include the global response to the 2009 influenza pandemic. The report of the IHR Review Committee is now published¹ and WHO welcomes its thorough assessment and constructive recommendations concerning the global (including WHO's) pandemic preparations and response.

The specific circumstances and characteristics of the 2009 pandemic (time, place, virus) had not been predicted. However, concerted preparedness activities had been underway for several years motivated by: scientific and historical awareness of the recurrent nature of influenza pandemics; the emergence and persistence of an avian H5N1 influenza virus capable of causing relatively rare, but severe and often fatal, human infections; and the 2003 experience with severe acute respiratory syndrome (SARS) coronavirus. Such events convincingly demonstrated to the modern world that, in addition to severe illness, the spread of new infections can cause significant societal disruption and anxiety. These events contributed to a sense shared by many countries that they were unprepared for a global international health emergency, and it was these same considerations that spurred adoption of the new International Health Regulations in 2005.

More recently, the IHR Review Committee has concluded that the world still remains ill-prepared to respond to a severe influenza pandemic or to any similar global public health event.¹ This conclusion is consistent with the experience of many countries which discovered

gaps in several areas in their response to the 2009 pandemic. These included gaps in their ability to react briskly and to communicate effectively in the face of a rapidly developing emergency, gaps in compiling accurate information swiftly to monitor fast-moving events, and, among many developing and even middle-income countries, inability to access certain critical supplies, such as pandemic vaccines, in time.

It is fortunate that the 2009 pandemic was relatively mild, but the next pandemic may be very different and so the experience and lessons learnt from the H1N1 influenza pandemic should be used as opportunities to strengthen preparedness for the future. How can we be better prepared? Among the more difficult challenges that countries and the global community face is the development of more flexible plans so responses can be adapted as events occur. At the same time, the reasons for such adaptations must be explained very effectively to reduce confusion and prevent potentially damaging perceptions of "changing horses in mid-stream". While all conventional modes of communication should be used, the use of new modes such as social media are rapidly becoming more important to ensure that accurate information is accessible to diverse audiences. Another area in need of better preparation is the assessment and reporting of the impact ("severity") of an event in real time – a daunting task, given the many real world challenges of information collection, analysis and dissemination during emergencies. The IHR Review Committee highlighted many of the challenges in quantifying and reporting severity, including the fact that it may change over time, and differ by demography (e.g. age, certain populations), health status, geography (e.g. tropical versus temperate), local resources and infrastructure.

Nonetheless, even with extensive and better preparation, one of the unspoken lessons of the pandemic is that reality

is humbling. In the face of fast-moving, complex, global health security events such as influenza pandemics, it is certain that unanticipated twists and turns will be encountered requiring continued reliance upon the precautionary principle.

The report of the IHR Review Committee, together with national and other pandemic performance reviews, provides a strong foundation for strengthening global readiness for future pandemics and other health emergencies. WHO has begun to implement many of the recommendations offered in the Committee's report. Recently, another positive "game-changing" event has occurred. In May 2011, after five years of discussion and negotiations, the World Health Assembly adopted a Pandemic Influenza Preparedness Framework² that couples the identification, characterization and sharing of emerging influenza viruses with improved access to vaccines, medicines and other essential supplies. Together with the many observations and recommendations of the IHR Review Committee, this places us in a better position than ever before to strengthen global preparedness for future influenza pandemics. WHO is committed to making sure that it does not miss this opportunity. ■

References

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