

Pandemic infectious diseases: the future is now

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Over the past twenty years there have been innumerable outbreaks of serious infectious diseases across the planet. There have been outbreaks of Ebola, swine flu, Zika, SARS, MERS, bird flu and norovirus – to name but a few. The more serious outbreaks have cost thousands of lives and have devastated public health infrastructure in affected countries. The future of frequent and regular global infectious disease outbreaks is upon us.

But until recently our responses to these outbreaks has remained trapped in the past. Our attempts to educate healthcare professionals about these diseases have not been able to keep pace with rapidly evolving pandemics. When we evaluate new drugs or vaccines, we have used trial designs that assume that we have lots of time and sophisticated health systems in which to do the evaluation. We have dedicated educational and research resources quickly during outbreaks but then taken our foot off the pedal when the outbreak is over. We have searched hard for a “silver bullet” that might cure certain infections and paid insufficient attention to supportive treatments that might help patients to fight off the infection on their own. Finally, we have sometimes reacted so quickly that regulatory systems in

affected countries have not been able to cope with a flurry of applications for research studies of new antimicrobial drugs. Thus far the world’s response has been inadequate and “stop start”.

So can we do better?

And if so, how?

According to the recent paper published by Rojek and Horby, there are a range of things that we can do better.¹ The authors start by pointing out the progress that was made during the recent outbreak of Ebola in West Africa and then come up with new potential solutions that they feel should be tried in the future. They ponder on the suitability and acceptability of randomisation in settings of “high mortality and community distrust”. They discuss a number of different potential trial designs that might be more suitable in the context of an outbreak. There is unlikely to be one single trial design that is suitable for all outbreaks; however, the authors praise the “aim of having off-the-shelf, operationally tested trial designs available at the onset of cases.”

This should enable clinicians and researchers to hit the ground running at the start of an outbreak. The authors also suggest that re-

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search doesn't just have to happen during an outbreak. To look at another clinical example, influenza occurs all the time and so research can be carried out on a continuous basis. Not all the research findings from seasonal influenza will be applicable to pandemic influenza – but some findings will be and it would be wise to use areas of overlap where we can.

There is also the issue of the education of doctors and other healthcare professionals both before and during an outbreak. Infectious disease specialists need to know about pandemic agents; however, the greater challenge is educating generalists in primary and secondary care. These generalists will be the first responders – they need to know when to suspect, how to assess and when and where to refer and report. There are large numbers of these generalists and so it is a continuous challenge to educate them. In this regard e-learning has a real role to play.^{2,3} E-learning on pandemic agents can be accessed by generalists as and when it is suitable for them. E-learning is also scalable – large numbers of doctors can access the content.

For these reasons we are delighted to announce the new BMJ Clinical Decision Support and Training Initiative in Pandemic Infectious Diseases. In collaboration with the Ministry of Health, we are making our clinical decision support resource (BMJ Best Practice) and our e-learning resource (BMJ Learning) available to selected healthcare professionals in Iraq. Both resources cover pandemic infectious diseases, more general infectious diseases and other non-infectious diseases.

BMJ Best Practice is clinical decision support that will work at the point of care. It provides evidence based, continually updated and practical advice to help doctors to help their patients. It covers over 1000 diseases and provides a wealth of other resources from medical calculators to patient information leaflets to videos that show how to do commonly performed medical procedures. It will work on a desktop or a mobile and there is an app as well. Finally, there is a Continuing Medical Education (CME) tracker so that you can track your use of the resource online and claim CME credits as a result of your searches.

BMJ Learning provides online interactive and multimedia learning resources on clinical and non-clinical topics so that doctors can stay updated and also get CME points. It contains resources in a range of different formats – including text, image, audio and video formats. One of the most popular formats is the interactive case history where the learner starts with a pretest to assess baseline knowledge, works through a number of clinical cases to train their practical skills, and finishes with a post-test to assess knowledge gained. On passing the post-test, the learner receives a certificate of completion. Both of these resources are accredited by the Ministry of Health.

Infectious disease pandemics are inherently unpredictable. However, the one thing that we can say for certain is that there will be more of them and that they will occur most years for the foreseeable future. And that we will need new methods of education to overcome them. If you want to find out more about the BMJ Clinical Decision Support and Training Initiative in Pandemic Infectious Diseases in Iraq, then please get in touch on kmwalsh@bmj.com.

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Abbreviation list: British Medical Journal (BMJ), Continuing Medical Education (CME), Middle East Respiratory Syndrome (MERS), Severe Acute Respiratory Syndrome (SARS).

Conflict of interest: Kieran Walsh works for BMJ, which produces BMJ Learning and BMJ Best Practice. Both resources cover a range of topics in infectious and non-infectious diseases.

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