Houston we have a problem: coronavirus!

Philip Wiffen

The words ‘Houston we have a problem’ were made famous by a film about the USA’s Apollo 13 mission, though, in fact, it is a misquote of the words spoken by John Swigert to the NASA Mission Control Centre. His actual words were ‘Houston we’ve had a problem’. He was reporting an explosion in an oxygen tank on board the Apollo 13 spacecraft that was due to land on the moon in 1970. The challenge then began as how to manage the emergency. Amazingly, the crew all made it back safely to earth after aborting the moon landing. Such an event shifts a paradigm where many previously held values are no longer valid.

Similarly, we are experiencing a paradigm shift as we are facing a life-threatening situation with the novel coronavirus that was first reported in China at the end of January. Cities in China have been locked down and international travel has been curtailed. Many travellers have found themselves trapped, both unable to return home and at risk of a potentially fatal illness.

As I write this in early February, the virus has now infected some 20,000 people worldwide, with over 400 fatalities reported. The majority of cases have been in Wuhan, China, where it originated, though more are being identified across a dozen other countries.

Many of you will read this editorial in the congress edition of European Journal of Hospital Pharmacy, where you will have the benefit of hindsight. It is possible that the situation will be far worse, but of course, the outbreak may well have been contained due to urgent action in many countries; the trajectory is impossible to predict. The virus has been compared with the severe acute respiratory syndrome (SARS) epidemic in 2003 due to its nature and geographical origins.

Given the rapid developments in China and the potential for spread, WHO held a second emergency committee meeting on January 30 and declared the coronavirus an international global health emergency. WHO has declared five such emergencies in the past with the expectation of a strong public health response, urgent political action and a mobilisation of funding. It is thought that the virus transmission started with a non-human source, moved to a human and then cascaded with sustained human-to-human transmission.

Current estimates of the incubation period range from 2 to 10 days, with an estimated median of 5.2 days. It seems that men are more likely to be affected, and the median age range of patients is 49–59 years. The clinical symptoms are similar to viral pneumonia and can be mild to severe. Most at present appear to have mild illness. Approximately 20% of cases progress to severe disease, more likely in older people or those with underlying health conditions.

The most common symptoms are fever, cough and dyspnoea. Other less common symptoms include myalgia, fatigue, sputum production, confusion, headache, sore throat, rhinorrhoea, chest pain, haemoptysis, diarrhoea and nausea/vomiting. Approximately 90% of patients present with more than one symptom, and 15% of patients present with fever, cough and dyspnoea. It is thought that some patients may be asymptomatic.

So what does this mean for hospital pharmacists? Pharmacists will need to keep up to date with developments, and it might be sensible to appoint a staff member to be a point of reference, ideally a clinical pharmacist with respiratory disease expertise. Pharmacists may need to provide a range of services to patients in isolation and be responsive to requests for novel forms of medication, though there are no specific treatments for this condition.

In general, pharmacists can be reassuring to a wider public as it is likely that most cases have already been either in China or in contact with someone who have travelled to China. That situation might change if an epidemic takes off. In terms of protection, there is little reliable evidence that reusable face masks are of benefit, and for hand hygiene, soap and hot water remain the sensible option.

Members of the public who are concerned that they may be developing an infection must be instructed to avoid using general practitioner practices or emergency departments but instead to contact the health authorities by phone.

Readers might like to know that BMJ is offering a range of free online resources to support healthcare professionals on the topic. This is being updated regularly and the resources in a number of languages.

Given the fake news thriving around this global emergency, reliable sources are essential.

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