

Coronavirus: reducing the impact of quarantine

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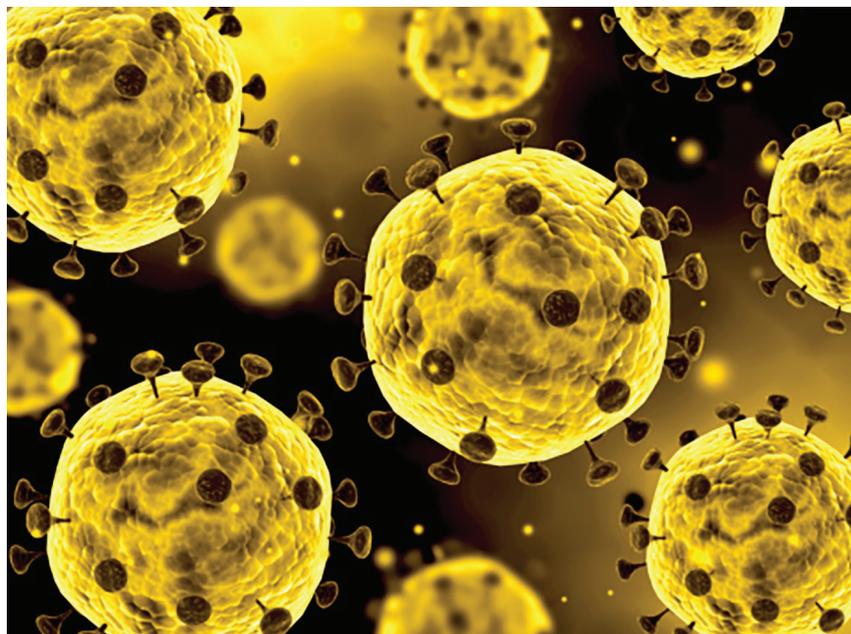
On the 26th February 2020, a meeting was held at the Royal Society of Medicine between key advisers in UK healthcare and law enforcement to discuss quarantine measures in the UK in response to the current COVID-19 outbreak. This article is a brief summary of the comments and questions raised at the meeting.

Prior to this outbreak of COVID-19, there have been no recent precedents for the use of group quarantine measures in the UK other than case-by-case isolation of individuals for treatment or pending results of tests for notifiable infections. This is in contrast to other countries that have taken dramatic measures to quarantine people (for example, Singapore's reaction to SARS).

However, with COVID-19 we now find ourselves in a 'living laboratory of quarantine', with people quarantined in a range of countries, cities, villages, ships, hotels, etc, around the world. As such, lessons are being learnt about quarantine logistics including transfer and entry planning, media reaction, security, provision of supplies and standards of living for those who have symptoms, and quarantine discharge arrangements.¹

What are the legal issues?

The key legal issue on quarantine revolves around individual versus



Typically, quarantine measures have been enacted on a case-by-case isolation of individuals for treatment. However, the current outbreak of COVID-19 is presenting new challenges to quarantine procedures both in the UK and internationally

societal rights. In the UK, the legal structure of quarantine powers is covered by domestic laws and the European Convention on Human Rights (ECHR). The 1984 Public Health (Control of Disease) Act also gives the Secretary of State powers to make regulations, including the power to enforce quarantine measures.

In February 2020, in reaction to the current coronavirus outbreak, the Secretary of State enacted the Health Protection (Coronavirus) Regulations 2020, which enables the authorities to quarantine individuals at risk of the transmission of Coronavirus who are considered to constitute a serious and

imminent threat to public health. The powers are effective immediately. Confirmed infection with the COVID-19 virus is not required to enact these measures lawfully, and clinical suspicion, or other justifiable circumstantial suspicion that individual(s) may have been exposed to the virus, would be sufficient grounds for quarantine. Legal advice has confirmed that the new regulations are ECHR compliant.

What are the side effects of quarantine?

Studies show that the short-term negative psychological impact of

quarantine includes frustration, boredom, anger and confusion.² Some smaller studies also show that long-term impacts, such as PTSD symptoms, can be a result of quarantine - although they do not always necessarily meet criteria for PTSD diagnosis.³

The key factors that influence the impact of quarantine on the individual are: its duration; an understanding of the risks; frustration and boredom; availability of supplies and activities; clarity and availability of information; financial loss and the inequity of financial impacts between individuals (for example, individuals who can work from home versus those who cannot); and social stigma (how people react to individuals who have completed their quarantine period).

Although quarantine may be successful from an epidemiological perspective in controlling transmission, it is important to remember that authorities have previously been accused of overreacting (such as with the H1N1 Swine Flu pandemic).

Key issues facing the UK Who is responsible for enforcing quarantine?

Usually it is the role of the police to protect the public in the domestic societal sphere; however, this is not realistic at such a significant scale. A self-policing public would help greatly, but the military could provide logistical and infrastructure support to help enable police powers. It will require broad cooperation between the public and enforcement agencies.

Trust and confidence need to be maintained

Continued public trust in government institutions, like the NHS, is vital. Of equal importance is the role of news agencies and the impact of key opinion leaders on public opinion. Science journalists, for example, have generally been well briefed in the UK during this outbreak; however, experience with Zika virus has shown

that countries can place different political steers on interpreting and implementing the scientific evidence.

The challenge is to maintain public trust while coherently communicating a dynamic situation, providing clear

correspondence about adapted public health guidance.

Equally important will be citizen-to-citizen trust (termed 'social trust'). Public willingness to engage in protective behaviours, including

Group of behaviours	Behaviour
Hand hygiene	1. Wash hands regularly with soap and water for at least 20 seconds
	2. Always wash hands: <ul style="list-style-type: none"> - after coughing and sneezing - after touching nose or mouth - after caring for the sick - before, during and after food preparation - before eating - after using the toilet
	3. If soap and water are not available, use an alcohol-based hand sanitiser. This is particularly important after taking public transport
Surface hygiene	4. Clean and disinfect frequently touched objects and surfaces in the home and work environment
Respiratory	5. Cough or sneeze into tissue (or crook of elbow if you don't have a tissue). Stifle sneeze as much as possible
	6. Immediately dispose of tissue into closed bin after coughing or sneezing
Touching	7. Do not touch mouth, eyes or nose with unwashed hands
Self-isolation	8. If symptomatic or otherwise advised to, stay at home for 14 days
Social distancing	9. If not caring for a symptomatic person, avoid contact and proximity. Maintain distance between yourself and other people, particularly those who are coughing, sneezing or have a fever
Healthcare	10. If experiencing a fever, cough and difficulty breathing seek medical advice early and describe previous travel history to the healthcare professional
	11. If recently arrived from specified countries within the last 14 days, call a telephone helpline
Personal protective equipment	12. If a healthcare worker (or in specific occupations) caring for someone who has been diagnosed with COVID-19, follow professional advice and wear prescribed protective equipment that may include facemasks, eye protection and gloves
Food safety	13. Avoid eating raw or undercooked animal products. Handle raw meat, milk or animal organs in such a way as to avoid cross-contamination with other foods

Table 1. Summary of current WHO, CDC and PHE advice to the public aimed at reducing COVID-19 transmission¹

self-isolation, will depend on beliefs that others are doing so. As such, it is hypothesised that low social trust countries (such as in Southern Europe) will have more difficulty in containing a spread than high social trust countries (such as the Nordic states). The UK is currently a mid-rank social trust country.⁴ Campaign activity that signals that members of the public are cooperating with behaviour guidance, and for altruistic reasons, will likely increase compliance.

Can hospitals cope with a sudden influx of patients?

If the NHS has to turn patients with other clinical needs away due to increased service demand in response to the COVID-19 outbreak, then the challenge would be to communicate how the NHS is shifting priorities while managing public perception that the NHS is not coping.

Increased support for digital technologies could successfully enable a higher uptake in consultations progressed online and by telephone. If managed appropriately, these could also offer long-term benefits for the sustainability of the NHS.

Communication on the spread of infection

Communication with the public needs to offer clear, practical guidance that reflects up-to-date information. There is a need for more clarity on transmission risks so that questions can be addressed with clear advice; for example, 'Should I wear gloves?'; 'If so, in what circumstances?'. Advice will also need to be segmented – it will be different for those in hospital than for those self-isolating, and for the wider general public.

When senior medical figures are speaking on the media, or when poster campaigns are being run, messages should aim to be clear. One useful example is to specify the situations in which individuals should wash their hands (following a journey, for example), with the BMJ recently

publishing a table to outline proper hygiene behaviours (see Table 1).¹ The aim is to embed hygiene behaviours by encouraging people to build the practice into current routines.

Should we consider school closures?

Current data suggests that children are at low risk of serious morbidity and have low rates of mortality from COVID-19. However, children may be a source of asymptomatic transmission of the infection.

The decision for school closure has significant ramifications for societal functioning, not least with police and hospital staff needing to stay at home as carers, as well as impacting the life chances of individuals taking key examinations.

There is limited evidence available to support general school closures as a public health measure. There are currently a range of social-distancing measures, such as banning large-scale gatherings like football matches and concerts, that are being considered by decision-makers.

Is there a risk of panic?

Panic can be a societal response to trauma and crises, and should be differentiated from goal-directed behaviour (for example, stocking up on essential supplies or a desire to leave an at-risk area is not necessarily an irrational response to a situation).

At present, most sections of the public seem more likely to underestimate the risks, and there are great efforts being implemented to encourage the public to develop improved infection-control hygiene related behaviours.

How is this virus going to impact society?

Horizon-scanning to realise the short-, medium- and long-term opportunities that this crisis presents, may be valuable. This could involve identifying the benefits of embedding new systems (such as effective systems for

remote working for a wider range of activities, including phone/digitised clinics for the NHS for some outpatient interactions) and behaviours (such as reducing travel, while increasing the demand and supply of local resources).⁵

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Declaration of interests

The comments here do not represent a consensus view on topics, nor do they collectively represent the view of any individual or institution present at the meeting. Attending the meeting were senior personnel from Public Health England, the Department of Health and Social Care, the legal profession, police and academics/clinicians/practitioners specialising in vaccination, infectious disease, behavioural medicine and behaviour change, epidemiology, history, psychology and ethics.

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