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Clinical virology in the pandemic response—a missed opportunity

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Doctors and scientists advising the UK government on covid-19 during the past two years have become household names. They are often mathematical modellers, statisticians, or epidemiologists. The covid-19 pandemic has also illustrated the need for a group of individuals trained in clinical virology and with experience in the epidemiology of infectious diseases to provide advice. Clinical virologists have extensive experience of laboratory diagnostic methods and clinical management of virus infected patients. Consequently, they should be of critical importance in combatting emerging infections, including, of course, SARS-CoV-2 and any future variants.

Surprisingly, clinical virologists are poorly represented on SAGE and other committees advising the government on pandemic response when compared to other specialties. At the same time, many are employed by UK Health Security Agency (UKHSA) and, as government employees, their freedom to publicly challenge government policy is restricted. Indeed 70 clinical virologists representing the UK Clinical Virology Network wrote to the chief medical officer and chief scientific adviser expressing their concerns about a lack of representation in planning and delivering the UK pandemic response.¹ A brief but unsatisfactory response was received.

Examples illustrate the lack of clinical virology input into the UK pandemic response. This includes the Test and Trace system, which delivered widespread community testing, was established in isolation from NHS and Public Health England clinical virology services, and headed by a person with little experience in healthcare. Test and trace spent £13.5bn in the first year with little evidence on reducing levels of covid-19 infection. The organisation was criticised by the House of Commons “Coronavirus: Lessons To Be Learned To Date” and the report of the Public Accounts Committee (Commons Select Committee).^{2,3} Both emphasised the importance of achieving a balance between centralised and localised facilities. Had emphasis been placed on achieving an integrated response from clinical virologists, health protection teams, infectious disease specialists and primary care, control of community transmission might well have been achieved at lower cost, and might have averted incidents such as that where an estimated 43 000 false negative covid-19 test results were released by a commercial laboratory.⁴

NHS services have well established procedures covering quality, logistics, procurement, and clinical leadership, which could have provided a framework for the Test and Trace service. Integrating pandemic response into existing services could also thus have enhanced the status of clinical virology, encouraging prospective trainees to specialise in this exciting and fast developing discipline.

Other pre-existing issues may also discourage trainees from a clinical virology career. Because pathology specialties, including virology, are often regarded as little more than NHS support services, they are targets for cost cutting or privatisation. Pathology centralisation, often at sites remote from acute services, particularly impacts smaller disciplines such as virology, and may discourage trainees who value patient contact, clinical interaction, and research. The medical establishment needs to be reminded that 70-80% of diagnoses in the NHS are made as a result of pathology investigations.⁵ It is therefore surprising that other Royal Colleges allowed the cost saving exercise resulting from the Carter Report to have gained favour.

Medical laboratory specialists are part of the clinical team and often play key roles in managing patients, including those who are immunocompromised, maternal and neonatal infections, and hospital acquired infections. Consequently, they need to be accessible and engaged with local services.

It is encouraging that there seems to be more hope in the development and use of antivirals and once again clinical virologists will have a key role analogous to medical microbiologists in recommending the use of antivirals and their resistance patterns for patient care.

What of the future? The specialty must not be slow to embrace new technology, but the advent of “mega” laboratories and so called “black box” technology must ensure that clinical virology, in common with other pathology specialties, is not at the mercy of cost cutting exercises which are administration led. Clinical virologists must be sure that they have an essential role in the selection and use of automated equipment; the selection of tests must be in the hands of the pathologists, in this case virologists, and not led by industry pressures.

The covid-19 pandemic should also provide an opportunity to reassess training programmes. It is encouraging that many trainees now opt for joint training in infectious diseases and microbiology or virology.⁶ However, it is a disadvantage if trainees in infectious disease and virology may not receive the practical laboratory experience gained by their predecessors. Having seen how well the university laboratories collaborated with NHS laboratories during the covid-19 pandemic,⁷ there is an opportunity to build on those relationships. Specialty trainees could gain first-hand practical experience in a less automated and commercial setting by spending a short period of time with the academic teams, really understanding and troubleshooting molecular and serology assays. They may also see virus isolation and other techniques that have been superseded by current technology. This can be readily assessed by a searching oral examination conducted

jointly by specialists in infectious diseases and clinical virology. Proficiency in such a training examination is a tall order, but the changing pattern of global infectious diseases must surely stress its importance.

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Provenance and peer review:

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