

## Covid-19 current advice for pathologists

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The emergence of a new variant of Coronavirus from its first appearance in Wuhan province, China in December 2019<sup>1</sup> has become pandemic as judged by the World Health Organisation<sup>2</sup>. The virus has been named Severe Acute Respiratory Syndrome Coronavirus 2 and the disease Covid-19<sup>3</sup>. There is no current vaccine and the best means of preventing the illness is avoiding contact with the infected person<sup>4</sup>. Whilst the overall mortality rate is significantly below previous similar outbreaks of coronavirus such as the Middle Eastern Respiratory Virus (MERS) and Severe Adult Respiratory Syndrome-associated coronavirus (SARS-CoV)<sup>5</sup>, there is a higher risk of mortality in the elderly and those with comorbidities<sup>6</sup>. As well as guidance on patient management<sup>7</sup> the World Health Organisation (WHO) gives a high priority to the protection of healthcare workers and there has been a large number of documents published by WHO which is freely available<sup>9,10</sup>, as well as from the European Centre for Disease Control<sup>11</sup>. It has long been recognised and planned for in the UK that Pandemic Flu may lead to an excess death rate over a 15 week period. For the current pandemic the mortality rate is in keeping with the estimate of 2.5% and these extra deaths will put an increased burden on public and hospital mortuaries<sup>12</sup>.

Deaths in hospitals from pandemic flu is likely to be assessed as a natural cause of death though some EU member states have given out their own statement regarding Covid-19 Deaths with respect to referral to the Coroner or Medical Examiner, as a notifiable disease and the need for a medico legal autopsy. This will vary from state to state<sup>13</sup>. It is inevitable that autopsies will be performed on patients succumbing to Covid-19 and mortuary staff and pathologist will be exposed to potentially infective material from cadavers. Whilst it is still unclear the degree that one can be infected through touching inanimate objects it has been shown that the virus can persist for up to 4-5 days on a variety of surfaces<sup>14</sup>.

As well as the UK government (HMG) giving general infection and prevention advice reference is also given to the handling of dead bodies in its most recent publication<sup>15</sup>. In addition the HMG has published a document regarding investigation and initial clinical management<sup>16</sup>. However neither document gives significant guidance on autopsies.

The Royal College of Pathologists of the United Kingdom has produced a very valuable briefing regarding autopsies on cases or suspected cases of Covid-19<sup>17</sup>. The document is very useful in giving the most up to date information for the Pathologists and Mortuary technician but also begs the question of whether an autopsy should be done beyond taking the appropriate swabs to exclude or confirm Covid-19. Particularly for

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deaths in the community brought into the mortuary or sudden deaths in the emergency department, where the length in hospital may be short and the clinical history is vague, consideration should be made to perform nasal and oral swabs post mortem and await the results. Only after the results of these swabs should the pathologist then perform the autopsy, if necessary after consultation with the Coroner or their equivalent. This process should be strongly considered<sup>17</sup>. A further article is due to be published in the next two weeks which will consolidate this<sup>18</sup>.

At the time of writing this Pandemic Flu has already had a devastating effect globally both at a society level and an economic level. This pandemic may well exceed the impact of the 1918 flu pandemic<sup>19</sup>. However the expertise and devotion of healthcare workers will eventually restore order and balance, though probably the world will have changed in some way as it has from previous pandemics.

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