

Forensic Pathologists in the Epicentre of a Pandemic: Operational, Occupational and Legal Challenges.

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The problem

Nearly four months after COVID-19 was characterised as a pandemic by the [World Health Organisation](#), its impact across different professional organisations has been pronounced. Due to the nature of the work, forensic pathologists may have been at [greater risk of exposure to the virus than many other professions](#). In this paper, we discuss how the work of forensic pathologists dealing with deceased bodies is impacted by the COVID-19 pandemic so far. More specifically, we look into operational, occupational and legal challenges and what we may learn from them in the short and long term. Such discussions can contribute towards ensuring the health and safety of forensic pathologists and their capacity to continue to perform their critical role in the crime reconstruction process and the legitimacy of the criminal justice system.

What we know about the challenges forensic pathologists have been facing during the pandemic and how we know it?

At an operational level, some evidence suggests that there may have been a lack of inter-departmental coordination and standardised approach to death investigations during the first pandemic wave. As a result, this may have led to [improper documentation and unintentional errors](#) in the management of the dead in some jurisdictions. In addition, due to the global lock down orders and travel restrictions, [supply chains](#) of necessary protective equipment have been disrupted. This has led to an inequitable supply of protective equipment, not only [across countries](#), but also among professionals, such as [forensic pathologists](#).

In dealing with the dead, forensic pathologists may have been exposed to both [physical](#) (e.g., contracting the virus) and [mental](#) (e.g., anxiety and work-related stress) risks. There is ample [published literature](#) on risk mitigation protocols and well-being of those involved in the management of the dead. However, there is still a need for empirical research to understand the effectiveness of such protocols. For example, preliminary evidence suggests that pathologists' use of specialised protective equipment can impair their sight, hearing and smell. This can potentially vitiate [smell related judgements](#), since smells often provide pathologists with important information about the body under examination.

From a legal point of view, evidence collected and produced by forensic pathologists is often essential to criminal investigations and proceedings. This includes a range of assessments, such as the cause of death (COD). As such, deficiencies or errors in the determination of COD can impact on the accuracy and legitimacy of the entire criminal process. For instance, preliminary evidence in some jurisdictions suggests the number of full autopsies has been greatly reduced during the pandemic. Instead, more limited external examinations are conducted to reduce potential risks to pathologists, such as those due to exposure to aerosols from body fluids. Pathologists themselves consider that this approach may risk the accuracy of their findings as a result of missing important information.

What we think might happen in the COVID-19 pandemic

Given the novelty of the virus and its uncertain short-term and long-term impact, forensic pathologists are predicted to adopt a preparatory stance in ensuring they are in a position to overcome potential operational, occupational, and legal challenges in the case of a second wave or future pandemic.

Operational challenges, such as disruption of supply chains for PPE, are not expected to persist to as great an extent as experienced during the first wave, given the ease of travel restrictions across a number of countries. However, due to the prolonged state of emergency we are experiencing, it is expected that some of the ad hoc death

investigation procedures that may have been adopted as a response to the pandemic, may become standardised and incorporated into routine operational practices. Examples may include, limiting the number of professionals who may be present in an examination room. [Quality assurance and risk assessment practices](#) are also expected to be modified, so as to accommodate these new procedures. Moreover, a number of forensic pathologists may not have had any [previous experience or sufficient awareness](#) in handling infectious diseases in their workplace, prior to COVID-19. Therefore, it is predicted that training will now be devoted to raising awareness regarding the risks of infectious diseases, as well as the requisite measures to be followed for prevention, containment and mitigation. Such training may also include ensuring forensic pathologists can handle the enhanced stress as a result of the COVID-19 pandemic.

There are also legal challenges that need to be anticipated. These could be manifested both in ongoing and closed cases, as COVID-19 may offer a competing cause of death. For instance, in an ongoing case, there might be indications that a deceased individual has died from suffocation, e.g. vague ligature marks around the neck or a history of domestic abuse. However, if it can be established that the deceased individual was COVID-19 positive, determining the COD may be challenging not only for the pathologists but also for prosecutors and judges who are to decide about prosecution and/or conviction. Similarly, it is possible that already closed cases may have to be reopened in the light of new evidence suggesting that an individual may have died from COVID-19 rather than a crime. Such legal uncertainties are clearly problematic not only because of the associated human suffering in terms of e.g. potential wrongful convictions and deprivations of liberty, but also for the rule of law and integrity of criminal proceedings in a wider sense.

Some ideas in response

[Disaster Victim Identification](#) (DVI) protocols may provide valuable insights to overcome operational challenges in the work of forensic pathologists during a pandemic. The DVI process is well-established and internationally recognised, as it has been tested in large scale disasters. Adopting and adapting some of the DVI protocols may improve the coordination of forensic pathologists' response to COVID-19, while some of its proposed quality assurance measures may assist in COD identification during the pandemic.

With regards to occupational health and safety risks, some risks stemming from the interaction with the deceased bodies may remain. Thus, the potential benefits of using advanced technology should be considered. For instance, pathologists may utilise [Virtual Autopsy Tables](#) to interact with the body, thus [reducing exposure to risks to their own health, as well as cross-contamination](#). However, it should be noted that there is no systematic empirical investigation as to the [effectiveness of virtual autopsies for establishing different COD](#), including COVID-19.

It is uncertain how legal challenges stemming from difficulties in evaluating COVID-19 as a competing cause of death are best solved. Possibly, upper Courts will have to set precedents as regards claims of COVID-19 as a COD. Ultimately, this is a question of whether a known or likely COVID-19 infection in a deceased individual can constitute reasonable doubt, and therefore result in an acquittal, or alternatively whether it constitutes sufficient reasons to reopen a closed case.

Relevant resources

- Finegan, O., Fonseca, S., Guyomarc'h, P., Morcillo Mendez, M. D., Rodriguez Gonzalez, J., Tidball-Binz, M., & Winter, K. A. (2020). International Committee of the Red Cross (ICRC): General guidance for the management of the dead related to COVID-19. *Forensic Science International: Synergy*, 2, 129–137.
- Xue, Y., Lai, L., Liu, C., Niu, Y., & Zhao, J. (2020). Perspectives on the death investigation during the COVID-19 pandemic. *Forensic Science International: Synergy*, 2, 126-128.

This is one of a series of short, speculative papers developed by the UCL Jill Dando Institute during the current pandemic. It is edited by Nick Tilley and Gloria Laycock and published by University College London. The raison d'être of the series is fully described at: <https://www.ucl.ac.uk/jill-dando-institute/research/covid-19-special-papers>