

Forensic treatment and human identification in the age of COVID-19: difficulties and challenges for the forensic medical system in Mexico

Isabel Beltrán-Gil Grupo de Investigaciones en Antropología Social y Forense

María Alexandra Lopez-Cerquera University of Tennessee

Linda Guadalupe Reyes Muñoz Universidade Estadual de Campinas

Sandra Ivette Sedano Rios Escuela Nacional de Antropología e Historia

Nuvia Montserrat Maestro Martínez Escuela Nacional de Antropología e Historia

Diana Newberry Franco Southwestern College
isanthropology@gmail.com

Abstract

As a result of the SARS-CoV-2 (COVID-19) pandemic, in 2020 forensic institutions in Mexico began using extreme measures in the treatment of bodies of confirmed or suspected cases, due to possible infection. A series of national protocols on how to deal with the virus were announced, yet forensic personnel have struggled to apply these, demonstrating the country's forensics crisis. This article aims to reflect on two points: (1) the impact that COVID-19 protocols have had on how bodies confirmed as or suspected of being infected with the virus are handled in the forensic medical system; and (2) the particular treatment in cases where the body of the victim is unidentified, and the different effects the pandemic has had in terms of the relationship between the institutional environment and the family members of those who have died as a result of infection, or suspected infection, from COVID-19.

Key words: Mexico, forensics crisis, protocols, COVID-19, human identification, forensic services

Introduction

In Mexico, policies to deal with and reduce the spread of SARS-CoV-2 (COVID-19) were regulated at a federal level through the National Safe Distance Campaign,¹

which was launched on 23 March 2020. In contrast to other countries in Latin America, this containment policy was seen as being rather lenient, since, for example, quarantine measures were voluntary, which contributed to an increase in the number of confirmed cases and, subsequently, in the number of associated deaths. Nevertheless, there were much stricter protocols for the treatment of bodies, which changed the dynamics and structure of funeral rites, together with the grieving process. This meant that dignification actions relating to the bodies of those who had died or were suspected to have died as a result of COVID-19 were drastically altered. The scientificism of these protocols led to a series of technical categories being created, which meant the consequences of infection were somewhat invisibilised. Through incentivising systemic and 'good' practice for those who came into contact with COVID-19-infected, or possibly infected, bodies, the definition of such bodies has in some ways been impacted politically, socially and morally in a country already immersed in a forensics crisis. For example, those who had died or were suspected of having died as a result of infection started to be seen as contaminating entities which needed to be isolated, disinfected and immediately disposed of, leading to their dehumanisation as objectified beings.

The application of these protocols has been slow and has exposed institutional and social disarray which reflects the complexity of the bureaucratic management of death in Mexico. Furthermore, the management of death is also related to a serious forensics crisis in Mexico dating back a number of years, which is linked to the escalation of violence associated with the introduction in 2006 of a militarisation policy in the war on drugs. Since then, approximately 90,000 people have disappeared and forensic services across the country have registered a total of 38,500 unidentified bodies.² In recent years, a relationship has been noted between organised crime (linked mainly to drug trafficking) and migration to the United States in cases of disappearance and of the discovery of unidentified bodies as a result of kidnapping, people smuggling, trafficking rings and mass killings.

Thus, the build-up of violent acts (homicide, extortion, robbery, disappearance, rape, etc.) associated with drug trafficking, illegal migration, human trafficking, gender-based violence, etc. makes Mexico a country with one of the highest rates of forced disappearances. Specifically, there is now a long tradition of forced disappearances in Mexico, becoming firmly established during the 1960s and 1980s with a range of internal conflicts involving the political persecution of students and opposition groups, which in practice translated into numerous human rights violations committed by state agents against these groups.³ Moreover, as the Mexican Commission for the Defence and Promotion of Human Rights (Comisión Mexicana de Defensa y Promoción de los Derechos Humanos) states, 'Today, people with no social or political militancy are becoming victims of forced disappearance. The causes and reasons for this are not clear, none of the authorities has been able to explain this beyond denial and victim stigmatisation discourses.'⁴

Nevertheless, despite the apparent intention of the state to reduce criminal violence in its various forms, violent and criminal acts have not decreased as expected.

The situation persists and continues to produce innumerable victims, who are subject to psychological, economic, physical and social damage.⁵ The steady increase in disappearances – which culminate in the concealing of bodies and, therefore, in unidentified persons – represents a significant challenge for Mexico, whose forensic capacity is limited, primarily as a result of a lack of staff and financial resources in each state.⁶

In order to deal with the many cases of disappearances, a range of protocols and laws were developed in Mexico with the aim of improving guidelines for the investigation of intentional crimes and facilitating human identification. These protocols are management tools which provide a series of rules and guidelines regulated by international humanitarian law and by federal authorities. Thus, the Federal Government enacted, via Congress, the General Law on the Forced Disappearance of Persons, Disappearances Committed by Individuals and the National Missing Persons System,⁷ and also launched the Standardised Protocol for Searching for Disappeared and Missing Persons.⁸ In the area of forensics, this series of protocols and laws serves to standardise and systematise the expert implementation of methods of analysis using scientific research techniques and tools, with the aim of reinstating the identity of unidentified persons and returning their remains to their respective families.

Since the onset of the COVID-19 pandemic, new protocols⁹ and international recommendations¹⁰ have been issued to deal with the treatment of bodies confirmed as or suspected of being carriers of the virus.¹¹ In the face of these health- and mortuary-related measures aimed at containing the spread of the virus, Mexico's own protocols must also take into account the forensics crisis mentioned above. Thus, these procedural manuals, which will be detailed below, contain guidelines on how to act in cases where the victim of COVID-19 is also classified by forensic services as unidentified or unclaimed. Nevertheless, the efficacy of the protocols should not be measured solely by their content, but also by their applicability in different contexts. In this sense, it is argued here that the correct execution of the protocols is closely related to the administrative capacity of each state, and also to the degree of interest and political will of institutions to apply them.

In Mexico, public safety constitutes a model of administrative decentralisation,¹² stemming from ideas of modernisation and democratic openness advanced since the 1980s,¹³ and through which administration became the responsibility of federal, state and municipal authorities. Under this management model, and according to a study carried out by the National Council for the Evaluation of Social Development Policy (2019), social welfare benefits and access to public services, and the implementation of public policy, are designed and applied differentially, according to the population's needs and geographical and sociocultural characteristics.¹⁴

For example, journalistic sources show that in some areas on the outskirts of Mexico City the burial of people infected with the virus was not permitted. This meant that many families had to cremate their loved ones or take them to another cemetery in order to bury them.¹⁵ In terms of the final disposition of unidentified or unclaimed bodies, it was established that they should be buried in individual vaults, to be exhumed after a period of seven years. However, these guidelines will depend

on the infrastructure of each public cemetery and the configuration of the common graves. Particularly in Mexico City, burials are carried out in a single cemetery, and individual burial is not permitted, due to the scarcity of available land.¹⁶ Despite the fact that national protocols on this topic encourage good practice in forensic identification, there are still a number of difficulties and disruptions in terms of the correct application of the protocols.

The theoretical framework of this study is shaped by a body of work focused on the sociology of forensic science, which in recent years has examined the role of bodies in legal systems and a range of property-related issues pertaining to identified and unidentified remains in the context of disasters, among other topics.¹⁷ Since the turn of the century, a number of academics have examined topics that show how forensic science, bodies, standardisation, grieving families, kinship, bureaucracy, politics and legal decisions intersect in different global contexts.¹⁸

These studies are based on an analytical approach known as ‘management of the dead’, as part of the political structure of the nation-state. Usually, the management of the dead (i.e., the management of hundreds or thousands of corpses in the context of disasters) is one of the most difficult aspects to deal with, as it has significant consequences for the survivors and the local community. Indeed, in disaster situations care of the dead is commonly neglected and the need to treat the dead with dignity and to assist in the strict identification of all the deceased is forgotten.¹⁹ It is argued here that the management of the dead in a disaster situation such as the COVID-19 pandemic requires multidisciplinary intervention.

The results of the study highlight that, while Mexico has designed national protocols and has implemented other international protocols to systematise the actions of forensics experts in relation to the management of the dead during the COVID-19 pandemic, one of the main problems is the difference in the representation of, or even absence of, a social and cultural perspective in the guides, both in terms of the treatment of bodies and in terms of how relatives are cared for. In other words, while good practice was encouraged, a perception of the bodies as sources of contamination also emerged, which has led to them being dehumanised in public opinion. Furthermore, it can be seen that the dissemination of the protocols, together with related training and their subsequent implementation, was limited or very poor. This, it was found, is due to differences in how the pandemic is managed as a result of the country’s decentralised medico-legal system.

The qualitative and quantitative information that support these results and is presented here invites reflection on today’s changing patterns in the management of bodies and their identification, together with the institutional complexity this produces.

Methodology

With the aim of examining the management of the pandemic in terms of forensics, a review was carried out of some of the protocols implemented in Mexico and a range of journalistic sources were analysed which show the conflict that emerged as a result of the pandemic and the extreme measures applied to the bodies of

those who had died from COVID-19. In addition to these bibliographic and documentary sources, the data includes the results of sixteen questionnaires, completed remotely by forensics experts from state Public Prosecutor's Offices and Forensic Services from different regions of the country, in order to explore the differences and similarities in their experiences.

Information was gathered for the questionnaire via a survey created on the Google Forms platform, consisting of nineteen multiple-choice and open questions.²⁰ Basic information gathered at the start included sex, age, occupation within the Medical Forensic Service (Servicio Médico Forense, SEMEFO), length of time in current post, level of professionalisation and the geographical region in which the person was located, out of six regions provided (North, South, Centre, Gulf, Pacific and Valley of Mexico). In this way, the sample was selected by taking into account representativeness of SEMEFO expert staff according to these territories, and was restricted to those involved in the management of bodies, biological samples and attending relatives, including administrative departments and areas of forensic medicine and identification (forensic anthropology, forensic dentistry, dactyloscopy, photography and genetics).

Since the questionnaire was in digital format, special consideration was given to possible problems or biases resulting from its use, the way in which questions were phrased and the design and layout of the questionnaire. Actions to address these issues included testing the survey before use and the inclusion of control questions to avoid bias relating to a lack of objectivity in the questions or false answers.

As already mentioned, the questionnaire comprised nineteen questions, focusing on two main aspects:

1. The performance of COVID-19 protocols within institutions, in terms of how they were implemented in the Public Prosecutor's Offices and Forensic Services, both generally and in relation to identification, as well what obstacles there were in relation to the execution of the protocols, and what improvements and limitations could be identified in terms of the dignified treatment of bodies and care of relatives;
2. The responsibility of institutions towards their personnel, such as offering periodic testing for COVID-19, providing training on the protocols, supplying protective equipment and listening to their staff's concerns in relation to infection.

The majority of the sixteen responses to the questionnaire were from the Valley of Mexico region, followed by the Centre, South and North regions. Most questionnaire respondents were from Forensic Services attached to state Public Prosecutor's Offices, with fewer respondents from Forensic Institutes of state judiciary bodies. In terms of the characteristics of the sample, notably 73 per cent of respondents were female and 27 per cent male. The age of respondents ranged from 25 to 60, with the largest group being the 30 to 40 age range, which made up half of all respondents. In relation to specific areas of work, most respondents (73 per cent) worked in identification, followed by forensic medicine and genetics.

The use of a digital survey allowed us to explore the lived reality of specialists working in the field of forensics. However, the low participation rate is also an interesting reflection of the situation of forensics in Mexico. While an independent study is needed to deepen our understanding of the motivations and concerns of specialist and forensic staff, the low level of participation of staff in studies and projects aimed at visibilising their work situation contributes to the mechanisms that create the forensics crisis the country is experiencing.

Context and COVID-19 protocols in Mexico

On 24 March 2020, the World Health Organization (WHO) issued guidelines on 'Infection prevention and control for the safe management of a dead body in the context of COVID-19';²¹ in which it is stated that, given a lack of knowledge about the behaviour of the virus, caution should be exercised in order to protect staff and the virus is classified at biosecurity level 3, although it is also stated that since it is not a haemorrhagic death, dead bodies are not infectious and cremation should only be a matter of cultural choice and available resources.

Nevertheless, in Mexico the first clinical protocols emerged in early April 2020, published by the Federal Government and the Department of Health. Notable among these for its national relevance and impact is the first version of 'Guidance for the management of the dead due to COVID-19 (SARS-CoV-2)'.²² These guidelines set out the rules for the safe management, transport and final disposition²³ of those who had died in hospitals, when being transferred, or at home, assuming that relatives were present. Wakes were allowed both in homes and in funeral homes, following recommendations of the National Safe Distance Campaign, although it was stipulated that bodies must not be subjected to thanatopraxia or embalming procedures, and cremation was encouraged, going against international recommendations in stating that: 'Final disposition of the body will take place as soon as possible, preferably via cremation, or if this is not possible, by burial in a grave or vault.'

The contents of this clinical protocol, together with a range of statements made to the mass media by health authorities,²⁴ led to changes in how death due to COVID-19 was handled, since initially it was not treated as a matter of choice. Accounts published across the media at this time detail the problems which relatives encountered from the time the body of their relative was removed from the isolation chamber,²⁵ including the lack of an appropriate process to identify bodies in hospitals, confusion in the handing over of the body, the ban on holding wakes, together with corruption associated with this model of premature administration of death and a lack of knowledge among relatives about their freedom of choice regarding the final disposition of the body, among other situations which will be discussed below. All of these factors made it impossible to guarantee the dignified treatment of the body and to respect the right to an identity on the part of the deceased and their relatives.

This situation highlighted the need to remove cremation as part of an efficient management of the dead from the protocols. On the one hand, the bodies of people who had died from COVID-19 were a key new focus. Initially, the possibility

that these bodies would be unidentified or unclaimed was not taken into account, prompting the Federal Government to publish the 'Agreement on the prohibition of the cremation of unidentified and identified but unclaimed bodies of those who died as a consequence of illness due to the SARS-CoV2 (COVID-19) virus'²⁶ on 17 April 2020, and to suggest measures for registering deaths in the context of this health emergency.

This agreement establishes that, in cases where those who have died from COVID-19 are unidentified or unclaimed, it will be the responsibility of the General State Public Prosecutor's Office concerned, together with the Forensic Services, to produce a post-mortem form containing the individual's personal data for subsequent identification, stressing the importance that this be stored in a suitable place. The information collected must be sent to the National Commission for the Search for Disappeared Persons and the Local Commissions, in order that these institutions might locate the relatives within twelve hours, and so that the data may be centralised in the National Search System. As a result, on 21 April 2020 the Department of Health published a second version of the guidelines, in line with the General Law on the Disappearance of Persons and the Forensic Treatment and Identification Protocol.²⁷

Despite the cause of death being, or suspected as being, linked to COVID-19 and therefore not classed as a criminal issue, these bodies are still considered to be forensic cases, whether because the death occurred in a public place, because the bodies were not claimed by relatives or simply due to the absence of personal details of the deceased or because their identity could not be confirmed by those who witnessed the death.²⁸ Thus, alternative technical knowledge is needed to ensure the institutional safeguarding of the bodies.

Therefore, new forensic assistance and treatment protocols were created by experts in public health and from the National Public Security System. Particularly notable are the 'Guidelines for Medical Forensic services in cases of suspected, probable or confirmed coronavirus 2019 (COVID-19) at the Institute of Specialist Services and Forensic Science of the Mexico City Judiciary',²⁹ and the 'Protocol for interinstitutional intervention in the management of persons deceased due to suspected or confirmed COVID-19 in Mexico City', which establish specific processes in the legal sphere – for example, in order for the bodies of suspected or confirmed COVID-19 deaths to be subject to legal intervention – which may result in multiple difficulties.

These difficulties stem from differential treatment in the conduct of necro-surgical procedures, based on the documentary records of the person at the time of death. For example, those who have died in their home, in public or in hospital and who, in addition, have medical records or documents attesting to a respiratory illness, but who do not have relatives to claim them, will have their death certified from a medico-legal perspective. Likewise, bodies with clear documentary evidence of respiratory illness or disease will receive different treatment in terms of how the body, samples and final disposition are managed, regardless of whether or not they are the result of violent trauma.

Unfortunately, there are no data on the total numbers of people who have died from COVID-19 and whose bodies have not been identified or claimed. This is largely due to the dynamism of identification processes, together with the decentralisation of the medico-legal system as mentioned above, and the fact that the pandemic has overwhelmed the different government institutions responsible. Some journalistic sources have reported this relationship between death from COVID-19 and having shown some symptoms of the virus, and being unidentified, as will be explored below.

Forensic treatment and human identification

With the onset of the crisis and with forensic services having responsibility for guardianship of the bodies, certification of the cause of death and registration of data for identification, new institutional mechanisms were put in place to deal with the identification process and the protection of staff. Furthermore, since intervention in a forensic context is usually invasive, and knowing that the virus normally survives for a number of hours outside the host (extending to a period of days in cold, damp conditions), people who come into contact with the body must be extremely careful of bodily fluids and contaminated objects (cross-contamination) such as sheets, instruments, equipment, the belongings of the deceased or documents that have been in the contaminated area, since it is still not clearly known exactly how long the virus can survive on different materials and surfaces.³⁰

In this context, underpinned by issues of the welfare of personnel who work with these bodies in terms of suitable protection, equipment and infrastructure, the guidelines propose three directives: (1) obtaining data post-mortem for identification purposes, (2) maintaining traceability for unidentified or unclaimed bodies, (3) endeavouring to find relatives in order to release the remains, all with the aim of respecting judicial frameworks in relation to the mechanisms in place for forensic identification and the search for disappeared persons.

Thus, international bodies such as the International Committee of the Red Cross (ICRC) established 'Guidelines for the management of dead bodies in confirmed or suspected cases of COVID-19' specifically for Mexico, focused exclusively on identification. The text emphasises the necessary methods and precautions for the registration of data such as distinguishing features and dental, genetic and photographic information.

In general, documents in the area of forensics explain that personnel who are involved in the recovery and identification of bodies infected or suspected of being infected with COVID-19 must be specially trained in the management of dead bodies and in the use of personal protective equipment (PPE). The process should be supervised by qualified personnel and, at a minimum, a forensic professional who is trained and experienced in the management of dead bodies in situations of biological risk must participate. In addition, the person handling the bodies needs to understand the disease, the organism that causes it and the modes of transmission. Therefore, it is important to know the correct procedures for handling potentially

infectious dead bodies, including the correct way to put on and take off PPE, and to provide suitable training for staff dealing with these kinds of cases.

On the other hand, and in addition to institutional issues, the dead body is the greatest expression of human vulnerability, since it is unable to defend itself against violence and abuse. Thus, bodies entering the morgue that are confirmed to be COVID-19 cases must be subject to regulations that ensure that the dignity of the deceased person is respected. The categories which frame these unidentified or unclaimed bodies are a response to a contextual need stemming from media and social constructions relating to the virus. As a result, bodies are subject to a greater level of vulnerability than that related solely to their classification as known or unknown, and which is reinforced by the cause of death being related to a highly dangerous virus harbouring a 'level 3' biological agent that is considered difficult to contain. This vulnerability sometimes leads to families feeling stigmatised and revictimised, which means that they do not wish to claim the body, or they neglect to report that their relative has died as a result of the virus, as indicated by some specialists working in the Mexican forensics system³¹ and those interviewed for the present study.

Thus, the protection of personnel working in these institutions is brought to the fore as an important demand and frame of reference for the authorities, particularly as a result of the dynamics not only of registering unidentified or unclaimed persons, but also the cause or suspected cause of death itself, which completely changes how it is treated even when it is related to traumatic events, and where documentary or witness information plays a significant role in what is the correct medico-legal procedure performed on a body.

The problematic application of national and international protocols

While national guidelines and international protocols dealing with the handling of dead bodies with COVID-19 were developed gradually as the world began to learn more about the causes of the disease, its different vectors and ways in which it may be prevented, the process of dissemination and application of the protocols has encountered a range of problems. The present article, based on questionnaires completed by forensic staff working in the country's different forensic medical services, argues that knowledge, comprehension and application of the protocols for the general management of bodies in cases or suspected cases of COVID-19 has depended on different factors, many of which are characteristic of a medico-legal system that was already stretched beyond capacity and that was not at all prepared for the number of deaths brought about by this virus.

Two crucial points mentioned in the national guidelines and international protocols, including those mentioned above (by the WHO, ICRC and the Mexican Government), are: (1) to have all the necessary PPE and knowledge about its correct use, and (2) to have suitable spaces in which to provide both special areas in the morgue for the temporary storage of infected or potentially infected dead bodies and work spaces to be used exclusively for the analysis of these bodies.

While there ought to be clear access to and use of PPE in morgues across the world in non-pandemic times, it is the case that in the age of COVID-19 all staff handling the bodies of persons suspected or confirmed to have had the virus should, at least in theory, review and apply protocols for the handling of potentially infectious bodies and the correct use of biosecurity equipment.

In the Mexican context, based on preliminary interviews carried out and answers to the survey applied in this study, it has been seen that, before the pandemic, the use of biosecurity equipment – including N95, FFP2 or type 2 (similar or superior) masks; face shields; disposable caps, gloves and coveralls (including Tyvek³² and shoe covers) – depended on the generally limited budget assigned to each forensic medical service. The forensic personnel surveyed reported that, as a result of the pandemic, there has been an improvement in access to biosecurity materials, and greater control on the part of morgue authorities in reinforcing the daily use of this equipment. However, respondents claimed that although their institutions had provided biosecurity equipment, it was often in short supply, and they decided to procure additional equipment on their own initiative in order to feel more protected.

Moreover, the appropriate use of this equipment (how, when and where to use PPE and how to remove it) and its correct disinfection – especially during a pandemic – was not commonly disseminated by the institutions; rather, it was assumed that personnel knew how to use PPE and safely dispose of it once used. This certainly represents a risk for staff, and although to date it has not been shown that the bodies of people who died of COVID-19 are a vector of infection, there is increased risk for staff who come into contact with these bodies.

The correct use of biosecurity equipment is also related to the dissemination of national guidelines for the management of dead bodies suspected or confirmed to be cases of COVID-19, which, according to our interviewees, did not take place within forensic medical services, at least not formally. One third of respondents reported having no knowledge of the protocols and guidelines mentioned above, having instead followed the internal protocols of their institutions. This again raises the issue of administrative decentralisation in the management of the pandemic, which affects forensic institutions.

Another key point highlighted in the international guidelines is the need for separate spaces where these bodies may be analysed, as well as special areas for their storage. Areas for analysis should, according to Mexican protocols and as explained by the Spanish medical examiner Dr José Luis Prieto,³³ have enough ventilation to allow air to flow outside. Interviewees did not know whether their work areas had the ventilation needed to ensure adequate air circulation. Furthermore, they indicated that there was generally no control of the number of people working in the same space or at the same table in the morgues. Some reported that there were fewer staff members in the morgues, or that shifts had been modified, but that the morgues still lacked spaces large enough to be able to maintain a minimum safe distance between workers and thus prevent them from infecting one another.

On this point, according to the protocols, the number of people who may be in any space at the same time should be established based on the size of the area, allowing, as the regulations dictate, a minimum distance of two metres between people.

This is especially important, given that staff at the morgue, particularly doctors, usually also work shifts in hospitals or medical centres where there is a very high risk of infection. Disregarding distancing measures between staff means a rise in infection levels, but the conditions of the infrastructure in forensic service facilities in Mexico mean this cannot be effectively applied.

On the other hand, it is standard that forensic staff should attend to relatives coming to claim the body of someone who has died or is suspected to have died of COVID-19. Despite rules stipulating the permanent use of face coverings, clearly, people may be infected without their knowledge or may not say they are, putting forensic personnel at risk. In this sense, some of those surveyed reported a constant underlying fear of infection from their constant interaction with relatives and between staff members. Two-thirds of those surveyed stated that, throughout 2020, they had never been tested for COVID-19 at work, or they had been tested only once.³⁴

Moreover, 87 per cent of respondents indicated that at least one member of their team had been infected with the virus. As a result, they would like tests to be carried out more frequently, since their work continues regardless. This also depends on how forensic services are managed in bureaucratic and budgetary terms, since they do not all receive funding from the same institutional body and are often subordinated to state Public Prosecutor's Offices or the state-level Public Health sector, which creates differences between them.

At a federal level, in Mexico the National Public Security System coordinates and allocates public spending on security matters³⁵ via a fund of specific contributions to that sector, but the financial distribution is made according to the number of inhabitants, prison occupancy rates, the amount of resources dedicated to crime prevention programmes and the areas of professionalisation, equipment, technological modernisation and infrastructure.

In this distribution, with pervasive inequalities in the allocation of human and material resources to public security institutions, judicial investigations (and with these medico-legal services) are managed by autonomous state governments through their executive bodies, made up of public security departments, courts of justice, Public Prosecutor's Offices, defence institutes and prisons, which, as well as receiving money from a single fund also supplement it through their own projects.³⁶ This leads to differences in how specialist forensic services, and now the pandemic, are managed, demonstrating the administrative complexity of a system in which resources are heterogeneous and in which, as a result, each entity creates its own guidelines and initiatives in terms of the treatment of these bodies.

Death, dignification and pandemic

An understanding of the treatment of dead bodies during the current pandemic brings such discourses into question, with the idea, on the one hand, of infection, contamination and crisis in relation to a political and moral rationality in which institutions prescribe and guide the treatment of bodies in a kind of mitigation of the damage they may cause to a society with the intention of benefiting the survival

of the population, and, on the other hand, the way in which institutions are built through certain authoritative practices when assuming their responsibility for the transition from life to death.³⁷

Despite populations historically having suffered a range of pandemics which have depleted them demographically, regulations in place since the nineteenth century in relation to public health highlight the dignity of the dead through making responsibility for the dead body part of the modern state and its comprehensive, supposedly efficient structure.³⁸ Understanding the epidemiological causes of death among the population has led to a certain sense of human invulnerability. However, the epidemiological outbreak of COVID-19 in late 2019 has highlighted that we remain a fragile species and subject to environmental stressors in survival.

The biological fragility and social nature that define us are the key drivers for societies developing rules and protocols to regulate actions. In this context, historical factors associated with accounts of past epidemics and pandemics also support conditions for the creation of these health guidelines. Therefore, political rationality is underpinned by the implementation of specific strategies, as a necessary tool for the survival of the population, to tackle the effects of the pandemic. Conversely, the efficiency and efficacy of the protocols is subject not only to the necessary technicality of their elements, but also their adaptation to the particular social and cultural context where they are implemented. For example, in clinical and forensic protocols there is a widespread notion of cultural sensitivity, respect of the dignity of the body and the relatives, but it can be seen from the following principles how a scientist structure invariably has an impact on the dynamics of care shown towards relatives.

As stated in the 'Management of COVID-19 bodies protocol' of the National Institute of Respiratory Diseases:³⁹

- The dignity of the dead, their culture, religion and traditions and their families must be respected and protected at all times.
- To date, there is no evidence of anyone having been infected as a result of being exposed to the bodies of those who have died of COVID-19.
- Do not touch the body; leave this to hospital staff and funeral services.

In the area of forensics, the 'COVID-19: General Guidance for the Management of the Dead' states:

- Cultural Sensitivity Principles should be applied. If the family wishes to see the body after it is removed from the isolation room or related area, this is permitted, taking all the standard precautions (PPE, hand washing). The family will be given clear instructions not to touch or kiss the body.
- Allowing families to see their deceased loved ones will avoid any concern that they have been given the wrong body, thus avoiding future exhumations and/or lawsuits.
- In terms of funeral rites, the body is to be placed in a disinfected body bag which is then placed inside the coffin. Further measures to observe are: keeping a safe

distance, continual hand washing, use of face coverings and gloves; in relation to the body: not touching the coffin, the body bag and, least of all, the body itself.

The latter shows how staff establish the dignity of the bodies and relatives by applying extremely stringent sanitary controls.

In this sense, on asking interviewees how they adapted, for example, the principles of cultural sensitivity to their work, they reported that the process of gathering information for the identification of unidentified bodies had become much more impersonal than before. During an identification interview, rapport⁴⁰ ought to be established between the interviewer and interviewee, whereby cooperative communication between both parties results from creating an atmosphere of trust and through body language and indications of empathy. However, due to preventive measures such as maintaining a 'safe distance' and the use of face coverings, this process is weakened by the fact that the interviewers must increase the distance between themselves and the relatives.

Having the mouth covered to a large extent hides facial expressions, and can also distort the tone of voice, meaning the specialist takes on the figure of an insensitive bureaucrat,⁴¹ unwilling to help. In addition, specialists are afraid of infection when dealing with relatives of confirmed COVID-19 cases. This is because the emotional reaction of relatives on receiving the news often leads them to remove their face masks, so that they can express their emotions. This fear is also reflected in specialists' responses to questions about the worry caused by working 'close' to the virus, in which they expressed anxiety about the possibility that they could infect their own families.

The protocols indicate that familial and cultural traditions must be respected at all times. Specifically, Mexico has the second-highest level of cultural diversity in the world.⁴² The pluri-ethnic nature of the country heightens the need to respect at all times a range of rites and beliefs relating to death. The General Law of Culture and Cultural Rights,⁴³ which is recognised in the Political Constitution, highlights cultural pluralism, which impacts directly on the creation of protocols that are inclusive and respectful of difference. Nevertheless, forensic specialists have seen the difficulties relatives face in providing a dignified burial for their dead, which they link to the fact that relatives are unable to take the body back to their place of origin. For example, if a death occurs in Mexico City the body cannot be transported to another part of the country, something which again encourages cremation as a permitted means to transport the remains. In addition, as mentioned above, the burial of people who have died of COVID-19 is not permitted in certain areas.

So the idea of a 'contaminated body' means symbolic grieving processes are disrupted, as is the viability of funeral rituals. Through fear of infection, and in line with established guidelines on epidemiological safety, wakes are cut short or foregone completely, and the 'contaminated body' must be disposed of and removed without delay.

Psychologically, but also from a social and community perspective, people need to ritualise each stage of life through rites of passage. This is a mechanism of

adaptation and acceptance of life changes, which makes it possible to end one phase and move on to another. When this right is obstructed, those affected become emotionally trapped. The need to channel the pain of loss and to give the deceased a dignified parting has contributed to cases of relatives not registering the death,⁴⁴ and has led to the emergence of a black market in death certificates that do not mention COVID-19 symptoms.

In this respect, at the beginning of the pandemic the WHO recommended that the administration process of death not be speeded up. However, the fact that institutions in Mexico are not able to store the bodies, due to the consistently high levels of human loss caused by the virus and, above all, a lack of knowledge about the existence of the virus in dead bodies, means the bodies must be isolated and quickly disposed of.⁴⁵

For example, interviewers – who attend to relatives needing to identify and claim a body – had noted an increase in corruption among state Public Prosecutor's Offices, which are the entities responsible for storing bodies and where people must apply to reclaim them. It was reported that, hoping to receive monetary compensation, officials would threaten relatives, saying their dead would be cremated, or encourage the cremation of those who had died of COVID-19, thus failing to respect the dignity of these bodies and the relatives' cultural practices.

Although the protocols and guidelines described above emphasise the need to provide dignified treatment and to respect cultural choices, media constructions of COVID-19 have meant that the management of death has become rushed at both an institutional and family level, affecting family dynamics.

Finally, tackling the impact which the pandemic has had on the world requires characteristic cultural, social, economic and political diversity to be taken into account. In this way, COVID-19 becomes subject to observation through different lenses (scientific, social, cultural, political, etc.), meaning that although the same phenomenon is being observed (the pandemic itself), interpretations vary, since they are conditioned by the context of the observer.⁴⁶ In this sense, proposals must be encouraged which approach the pandemic holistically, and which enable the development of protocols adapted to the specific needs of each society, allowing for the different aspects of each focus employed. Thus, taking cultural, political and economic variation into account is necessary for protocols to be more efficient and effective.

Conclusions

On the one hand, this article has shown that full compliance with the guidelines is made difficult by a lack of suitable training in the use and disinfection of PPE. On the other hand, where the establishment of areas dedicated exclusively to the storage and analysis of bodies with COVID-19 has taken place (for example, in the Institute of Forensic Science, Mexico City), this has been delayed. Moreover, data from the questionnaire indicate that there is no guarantee that minimum requirements relating to adequate ventilation and maintaining a safe distance in autopsy rooms are uniformly met. What is certain is that violence in the country continues unabated,

and forensic medical services still receive dozens of bodies each day, in addition to cases of COVID-19 which are sent for possible identification. This situation has revealed the lack of capacity of the forensic medical services to deal not only with cases of violence but also with the many cases relating to deaths resulting from the pandemic.

A lack of monitoring of the health of workers in the forensics sector (through periodic laboratory tests to detect infections) shows a general lack of governmental interest in the comprehensive care of staff whose work exposes them to greater risk of infection. This situation is further complicated by the mental health of these workers, who have to deal every day with the latent fear of getting infected and then infecting their families, which inevitably creates periods of stress and anxiety.

In spite of these problems, it is important to recognise that during the pandemic the Mexican state has recognised the existence of unidentified and unclaimed bodies, as is seen through agreements to not cremate bodies and therefore to maintain their traceability. Nevertheless, as has been shown, in practical terms this guidance is not always followed, since even in cases where the body has been identified relatives are still encouraged to cremate it as a 'health measure', even though it has been stressed that it has so far not been proven that the body is a vector of the virus, making cremation unnecessary.

As noted, failure to follow international recommendations prohibiting the cremation of bodies disrupts rituals relating to death and the dignification of bodies. Yet, on the other hand, it should also be stressed that experiences with the management of bodies in suspected cases of COVID-19 in relation to the application of protocols and the interaction between forensic staff and relatives has in some ways led to an idea of the body as a contaminated object or instrument which ought to be quickly disposed of.

In the midst of this pandemic, Vicente, Irrazábal and Olmos⁴⁷ noted the difficulties experienced by relatives in holding wakes, leading to the potential absence of a grieving process. These researchers have also questioned what the cost will be of people being unable to say goodbye to loved ones, process their grief and resume their day-to-day life. In the case of Mexico, an implicit cost is the growing mistrust of institutions due to, for example, cases of negligence or corruption which have already complicated the identification of dead bodies.

Inevitably, the cultural cost of the pandemic has made us rethink death in relation to this and future viruses, and the management, in institutional terms, of these bodies and their families. While, in a quest for technical and scientific rigour, protocols seek to mechanise or systematise actions in terms of best practice in the management of unknown or unclaimed bodies having or suspected as having COVID-19, this article has reflected on the dehumanisation that may be caused by the handling of these bodies. On the one hand, it has emphasised the necessity of dealing with the need of relatives to carry out suitable funeral practices, and on the other hand, it has stressed the obligation of the Mexican state to ensure (not only in theory but also in practice) the welfare of personnel in the health sector, and particularly of forensics staff, such that in the midst of a pandemic they are able to carry out their work within a framework of welfare at work that dignifies and visibilises their actions.

Without a doubt, no country was prepared for a pandemic of this magnitude and its social, political, cultural and economic effects. In the case of Mexico, the most significant institutional problem for forensic services has been how to define the guidelines or protocols to be followed, given the problems faced with regard to equipment, as well as the availability of supplies and application of preventive measures according to the budget granted by the national government. Without an associated policy on evaluation or auditing, there are no figures available on the excessive burden on forensic services.⁴⁸

Forensic staff were confronted with the fear of losing their jobs, fear of infection and vulnerability and uncertainty in the face of the unknown. Families of COVID-19 victims were also affected in various ways, having to deal with a lack of psychological support, the need to go to institutions where there was a high risk of being infected, fear of stigmatisation, a lack of knowledge about the protocols, a lack of empathy, corruption, the prohibition of burial or long delays in carrying out burials of loved ones, the absence of traditional parting customs for the bereaved and an increase in funeral costs, among other social and political factors impacting on their family and community context.

It can be seen that, based on the protocols reviewed here and on the survey carried out with forensic specialists, even though Mexican institutions and medico-forensic services were unprepared for the many effects of the pandemic, this cannot and should not be an excuse for their lack of attention and responsibility in their dehumanising treatment of bodies and relatives and, much less, an excuse for their failure to guarantee the health and care of public servants in the forensics sector.

Notes

Edited and translated by Cadenza Academic Translations.

- 1 The National Safe Distance Campaign (Jornada Nacional de Sana Distancia) is a programme implemented in Mexico by the Ministry of Health to encourage social distancing between people in order to contain the COVID-19 (SARS-CoV-2) pandemic.
- 2 Crisis Forense Series. Quinto Elemento. www.quintoelab.org/crisis-forense/ (accessed 20 September 2021).
- 3 L. Corrales Blanco y Padilla, 'Desaparición forzada en México: Aportaciones desde la antropología física forense en el contexto de Ciudad Juárez, Chihuahua' (thesis, ENAH [Mexico City]) 2019); C. Vicente Ovalle, *Tiempo suspendido: Una historia de la desaparición forzada en México, 1940–1980* (Mexico City: Bonilla Artigas Editores, 2018).
- 4 A. Muñoz, 'Sólo hay seis sentencias por casi 30 mil desaparecidos: ONG' (2016). Sourced from: www.e-consulta.com/nota/2016-07-01/nacion/solo-hay-seis-sentencias-por-casi-30-mil-desaparecidos-ong (accessed 7 June 2021); M. Hernández Reyes, 'México ante las consecuencias internacionales por la

- omisión de las recomendaciones emitidas por la Corte IDH en el caso, Rosendo Radilla Pacheco, y el aumento de casos de desaparición forzada, 2006–2012’ (thesis, UNAM [Mexico City], 2018).
- 5 G. González-Pérez, M. G. Vega-López, E. Ramos de Souza and L. Wernersbach-Pinto, ‘Mortalidad por violencias y su impacto en la esperanza de vida: una comparación entre México y Brasil’, *Revista Ciência & Saúde Coletiva*, 22:9 (2017), 2797–809, doi: 10.1590/1413-81232017229.12172017.
 - 6 D. del Mar Vélez Salas, M. A. Vélez Salas, L. J. Ambrosio Jaramillo, N. O. Guerrero Rojas, F. Acosta Chávez, N. A. Bautista Santiago, L. J. de la Peña Rodríguez, Y. E. Canizalez Madrigal, J. A. Fernández Hernández, E. Levoyer and J. Monterrubio Salazar, *Desapariciones forzadas e involuntarias. Crisis institucional forense y respuestas colectivas frente a la búsqueda de personas desaparecidas* (Mexico City: Observatorio Nacional Ciudadano de Seguridad, Justicia y Legalidad, 2020), <https://onc.org.mx/uploads/digital-dfi-fasc3.pdf> (accessed 7 June 2021).
 - 7 www.diputados.gob.mx/LeyesBiblio/pdf/LGMDFP_200521.pdf (accessed 10 June 2021).
 - 8 www.dof.gob.mx/nota_detalle.php?codigo=5601905&fecha=06/10/2020 (accessed 15 June 2021).
 - 9 See, for example, ‘Lineamientos de manejo feneral y masivo de cadáveres por COVID-19 (SARS-CoV-2) en México’, *PERSEO*, 87 (2020), Secretaría de Gobernación, Secretaría de Salud.
 - 10 See, for example, World Health Organization, ‘Infection Prevention and Control for the Safe Management of a Dead Body in the Context of COVID-19: Interim Guidance’, 24 March 2020, WHO, <https://apps.who.int/iris/handle/10665/331538> (accessed 20 June 2021).
 - 11 ‘México reporta un 1.86 millones de casos confirmados y un estimado de 177 mil muertes’, <https://datos.covid-19.conacyt.mx/> (accessed 31 January 2021).
 - 12 A. Schneider, ‘Decentralization: Conceptualization and Measurement’, *Studies in Comparative International Development*, 38:3 (2003), 32–56 and D. Treisman, *The Architecture of Government: Rethinking Political Decentralization* (Cambridge, Cambridge University Press, 2007) note that the concept of decentralisation refers to a complex process including the transfer of authority over economic resources from central to local governments to decide on social and economic issues, divided into fiscal, financial and administrative issues. For the latter, responsibility is transferred for both the functions and implementation of central policies; Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL), *Estudio sobre el proceso de descentralización en México 1997–2017* (1st edn, 2019).
 - 13 E. Cabrero Mendoza, ‘Los dilemas de la descentralización en México’, *Organizações & Sociedade*, 7:19 (2000), 123–52.
 - 14 Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL), *Estudio sobre el proceso de descentralización en México 1997–2017* (1st edn, 2019).
 - 15 Source: www.eluniversal.com.mx/metropoli/edomex/ante-demanda-ixtapaluca-pone-en-funcionamiento-crematorio-municipal (accessed 20 September 2020).

- 16 Source: heraldodemexico.com.mx/cdmx/a-fosa-comun-22-cadaveres-covid-19-o-sospecha-forenses-emergencia-sanitaria-violencia-mujeres-victimas-actividades/ (accessed 25 July 2020).
- 17 M. Lynch and S. Jasanoff, 'Contested Identities: Science, Law and Forensic Practice', *Social Studies of Science*, 28:5–6 (1998), 675–86; M. Petrović-Šteger, 'Anatomizing Conflict – Accommodating Human Remains', in H. Lambert and M. McDonald (eds), *Social Bodies* (New York, Berghahn Books, 2009), pp. 47–76; J. Leach Scully, 'Naming the Dead: DNA-Based Identification of Historical Remains as an Act of Care', *New Genetics and Society*, 33:3 (2014), 313–32; L. A. Smith, 'The Missing, the Martyred and the Disappeared: Global Networks, Technical Intensification and the End of Human Rights Genetics', *Social Studies of Science*, 47:3 (2017), 398–416.
- 18 V. Toom, 'Whose Body Is It? Technolegal Materialization of Victims' Bodies and Remains after the World Trade Center Terrorist Attacks', *Science, Technology & Human Values*, 41:4 (2016), 686–708.
- 19 www.icrc.org/en/doc/assets/files/other/icrc_002_0880.pdf (accessed 21 June 2021).
- 20 Questionnaire, <https://forms.gle/CBE4Ektbx2qez6567> (accessed 29 June 2021).
- 21 <https://apps.who.int/iris/handle/10665/331538> (accessed 4 July 2021).
- 22 First version issued on 5 April 2020, https://coronavirus.gob.mx/wp-content/uploads/2020/04/Guia_Manejo_Cadaveres_COVID-19.pdf (accessed 30 April 2020).
- 23 The guidance mentions the bioprotection equipment that ought to be used, its ideal characteristics, the necessary ventilation in rooms where necropsy is carried out (to be considered only in cases where it is strictly necessary), the correct use of necropsy materials and their disinfection.
- 24 Source: www.gob.mx/issste/prensa/implementa-el-issste-guia-sectorial-operativa-para-el-manejo-de-cadaveres-por-covid-19 (accessed 20 August 2020).
- 25 Source: www.animalpolitico.com/seguridad-180/mexico-entre-la-crisis-forense-y-las-personas-fallecidas-por-covid-19/ (accessed 15 June 2020).
- 26 www.dof.gob.mx/nota_detalle.php?codigo=5591880& (accessed 17 April 2020).
- 27 www.dof.gob.mx/nota_detalle.php?codigo=5601905&fecha=06/10/2020 (accessed 8 July 2021).
- 28 Article 347, 'Ley General de Salud', [Diario Oficial de la Federación]. Mexico, 7 February 1984.
- 29 www.medigraphic.com/pdfs/forense/mmf-2020/mmf203d.pdf (accessed 20 September 2020).
- 30 www.latercera.com/que-pasa/noticia/puede-seguir-contagiando-una-persona-que-fallecio-de-covid-19/RD566VZ6XZFUXF4NVA5CD6UJ3Q/ (accessed 12 July 2021); www.elsoldemexico.com.mx/doble-via/salud/me-puedo-contagiar-con-un-cadaver-con-covid-19-muerto-coronavirus-velorio-funeral-medidas-proteccion-5142735.html (accessed 12 July 2021); www.sabervivirtv.com/actualidad/covid-19-cuanto-dura-horas-virus-activo-diferentes-superficies-ambientes_4836 (accessed 13 July 2021); www.infobae.com/salud/ciencia/2020/10/25/covid-19-y-superficies-las-respuestas-a-las-dudas-mas-frecuentes/ (accessed 15 July 2021).

- 31 M. Morales Oriol, 'Manejo de personas fallecidas y atención a sus familias en el marco de la pandemia por COVID-19'. Academic session, Subdirección del Instituto de Servicios Periciales y Ciencias Forenses, 28 January 2021.
- 32 The trade name for a fully synthetic material made from high-density polyethylene fibres that are held together by a process to form a non-woven fabric.
- 33 J. L. Prieto, 'Gestión y manejo de cadáveres con COVID-19', Asociación Latinoamericana de Antropología Forense Conference, ALAF, 22 July 2020. <https://alafforense.org/es/quienes-somos/noticias/56-conferencia-gestion-y-manejo-de-cadaveres-con-covid-19-dr-jose-luis-prieto-espana>.
- 34 During 2021, and due to the lower cost of 'rapid' tests, access to tests to detect COVID-19 increased.
- 35 Made up of the President of the Republic and their ministers, state governors, and the military, www.gob.mx/sesnsp/acciones-y-programas/quienes-integran-al-sistema-nacional-de-seguridad-publica.
- 36 *Ibid.*
- 37 F. Stepputat (ed.), *Governing the Dead: Sovereignty and the Politics of Dead Bodies* (Manchester: Manchester University Press, 2016), p. 256.
- 38 *Ibid.*
- 39 'Protocolo para manejo de cadáveres COVID-19', Instituto Nacional de Enfermedades Respiratorias, Mexico, 2020.
- 40 M. P. S. Mejía Jiménez and A. Ortega Palma, 'La entrevista a familiares en la búsqueda e identificación de personas extraviadas o desaparecidas', *Dimensión Antropológica*, Year 25, 72 (January–April 2018), 141–72.
- 41 M. Herzfeld, *The Social Production of Indifference. Exploring the Symbolic Roots of Western Bureaucracy* (Chicago: University of Chicago Press, 1993).
- 42 M. Zaragoza, 'La diversidad cultural en México', <http://ticambia.org/itinerario/la-diversidad-cultural-en-mexico/#:~:text=M%C3%A9xico%20es%20el%20segundo%20pa%C3%ADs,de%20la%20poblaci%C3%B3n%20de%20M%C3%A9xico/> (accessed 27 July 2021); www.biodiversidad.gob.mx/pais/quees (accessed 27 July 2021).
- 43 www.diputados.gob.mx/LeyesBiblio/pdf/LGCDC_040521.pdf (accessed 16 August 2021).
- 44 "'15 mil y te doy el certificado de defunción": Así operan "coyotes" ante muertes con síntomas de COVID-19', www.animalpolitico.com/2020/05/coyotes-certificados-defuncion-neumonia-atipica-covid/ (accessed 31 January 2021).
- 45 The death toll from COVID-19 in Mexico stands at 84,898 since the pandemic began, datos.covid-19.conacyt.mx (accessed 15 October 2020).
- 46 N. R. Hanson, 'Observación', in L. Olivé and A. R. Pérez Ransanz (eds), *Filosofía de la ciencia: Teoría y observación* (UNAM-Siglo XXI: Mexico, 1989).
- 47 A. Vicente da Silva, G. Irrazábal and A. L. Olmos Álvarez, 'Velórios em tempos de Covid-19', *Ciências sociais e coronavírus*, Boletim n. 25 ANPOCS, 22 April 2020. www.anpocs.com/index.php/ciencias-sociais/destaques/2753-publicacoes/boletim-cientistas-sociais/2339-boletim-n-25-cientistas-sociais-e-o-coronavirus (accessed 18 August 2021).

- 48 States report on the use of the budget allocated to the Federal Government by means of annual reports, but, due to the complexity of the public security system, there is no evaluation policy to measure this, although it can be observed qualitatively; see <https://quintoelab.org/crisisforense/> (accessed 22 August 2021).