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HERITAGE

Guidelines for **COVID-19**



International alliance
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in conflict areas

HERITAGE

Guidelines for COVID-19

Iraq, Libya, Syria, Yemen

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PART 1
HERITAGE

Heritage Guidelines for COVID-19

MUSEUMS

Introduction

This chapter sets out the general situation of museums in the target countries of these guidelines (Iraq, Libya, Syria, and Yemen) that have resulted from the COVID-19 pandemic. It will begin by describing the situation, before suggesting advice for museum staff that is responding to the crisis, with links to further resources. It is primarily aimed at museum staff, or those interested in the effects of the pandemic on the museum sector of the target countries. The guidelines are compiled to serve as a tool to aid heritage practitioners and cultural institutions in responding to the double crisis – violent conflict and COVID-19 - that is affecting the daily operations of their museums. With evolving knowledge and updates concerning COVID-19, we are aware that these guidelines should also be an evolving tool. Many recommendations and suggestions in this chapter are similar to those in the chapter on libraries and archives as they have many characteristics in common, in particular in the areas of safety, security and preservation.

COVID-19 permeates our daily lives through the media and forces many countries to take precautions such as quarantines and the cancellation of many activities. It questions our certainties and will probably change our established way of life and the way that we interact with each other in the future. The closing of museums, restricted movement, and the distraction of law enforcement institutions and other authorities exposes heritage to greater risks. These will particularly affect those regions where museums are recent and few, and where structures are still fragile, including in the MENA countries. Museums have a special role in the resilience of societies in times of crisis. People depend on these cultural institutions for support and comfort. Coming into contact with culture is necessary for the self-development of individuals. Only then can we write a common history and see ourselves in the future. Physical accessibility of museums has never been as important as it is today.

Lockdown

Many museums were forced to close their doors to the public after the spread of COVID-19; an inevitable decision that will have immense repercussions after almost 3 months of income loss. Studies from UNESCO and the International Council of Museums (ICOM) report that 90% of all museums worldwide have been forced to close temporarily due to the corona-crisis (May 18 2020) and suggest that one in eight of the 90% will be forced to close permanently¹. Museums have also reported that they have had to cut down on staffing levels and reduce their programs once they reopen as a result of serious budget cuts. Some countries, mainly in the west, support their culture sector but their priority continues to be to give financial support to the economy. In order to mitigate these effects, some museums have been expanding their online presence, offering e-learning services and virtual tours amongst other services. Yet, half of the world population still has no access to the internet. Museum workers might also be working from home for the first time in their current positions. They should anticipate changes in areas such as: outreach and online services; finances and cash flow; reputational risk; security; preservation; and internal and external communications.

However, the top priority for museums should be the health and safety of their staff, and the diverse communities they serve.

Communication

The current outbreak of COVID-19 is spreading anxiety and uncertainty among quarantined communities around the world. People are being asked to stay at home and to adhere to social distancing to limit the spread of the virus; consequently, activities that attract large crowds, such as visiting museums, are closing for indefinite periods. Cultural heritage has always been a powerful means for coping, a psychosocial support in times of wars, disasters, and pandemics. This moment of crisis is another opportunity for museums to support and reach out to their public. It is essential to stay in touch with those who serve and those who are being served: communication is key in these unprecedented times in order to maintain a connection with the public that is served, ensure staff remain well-informed, and, ultimately, to ensure an easy return to work for the staff and a smooth re-opening for the museum. In addition to boosting online learning activities, sharing digital collections, virtual tours, and online exhibits, museums are advised to support state emergency response efforts.

For example, staff should consider the museum's role as a public health information source - take advantage of the existing communication channels, or establish new ones (like social media, newsletters or websites), to provide pandemic related information and updates. If museums have a digital presence, they are advised to put up COVID-19 resources, including updates and the local regulations on their home page, and on other online platforms such as tourism websites, and social media platforms. Issue alerts to notify the public of changes to the museum status keep in touch with visitors and staff, and manage their expectations. Update all of this information regularly, but also explain why the closure is important, what it means for the community, how to protect the staff, and how the museum is planning to protect visitors if and when they can come. Make sure the information telephone number remains adequately staffed. Make sure to share contact information to give people the opportunity to contact the museum with questions, concerns, or even ideas. Of course, do not forget to put up physical signs on the entrances of the building/s, communicating the reason for the closure. As many museums are (partly) dependent on volunteers it is important to keep them involved in the changes museums must undergo. (See **Resources Lockdown** – *American Alliance of Museums (AAM)* - COVID-19 and Museum Volunteers).

In addition, keep up the two-way communication with off-site staff and especially keep track of their mental health situation. Encourage staff to follow online workshops and seminars. For more information, see **Resources Lockdown** - *Heritage Foundation* - Crisis Communication for Leaders: Guidance in Responding to COVID-19 and Other Crises (webinar); *UNESCO* - How to communicate on COVID 19 crisis (webinar) and Museums facing COVID-19 challenges remain engaged with communities.

Activities

Museums have already responded incredibly well to the crisis, supporting staff and volunteers and ensuring their collections and spaces are safe and secure, as well as donating food and equipment to points of need. It's important to put the needs of staff and museum communities first in this crisis. As the lockdown continues, many museums, like archives, are starting to look at how they can document this extraordinary moment in time. They are looking to collect official signage and objects such as face masks, or are documenting responses to the crisis on social media platforms and elsewhere online

(for more information see **Resources Lockdown** - *Online Museum Activities - Atlas Obscura – How Museums Will Eventually Tell the Story of COVID-19; London Transport Museum - Contemporary Collecting: An Ethical Toolkit for Museum Practitioners; Museum of London - Museum for London: Collecting COVID; Science Museum Group - Collecting COVID-19; University of London - Department of History - Advice on remote oral history interviewing during the Covid-19 pandemic*).

In times of crisis, people count on cultural institutions for support and comfort. To fulfil this role, museums could develop creative activities to embrace local economic initiatives, as well as promoting and / or creating self-help networks using the symbolic power of heritage. Community should be at the heart of any activity in the heritage field, as it was *by* people that heritage was created, and it is *for* people that heritage is preserved and shared. Social media platforms give a unique insight into what people are generally interested in, as staff can study what questions people have and what content they find interesting. Engage the community in the museum's work - for example, invite them to send in questions about what they have always wanted to know. Share insights into particularly interesting artefacts or collections that the museum holds. Ask them what they would like to see in the future when the museum re-opens. Also, include the audience in the decision-making processes and integrate community perspectives in the museum's work. Often, people are more likely to help when they realize they can be part of the solution. This can be done simply, by posting questions on the institution's social media platform and asking people to respond in the comments section. Or the museum could create a poll with pre-determined options and invite people to participate in it. Listen to their views and try and incorporate them.

This pandemic is a historic opportunity to reinvent museum operations, programs, and activities to serve communities more effectively. Many museums and galleries have moved quickly to create huge swaths of online activities. They have also drawn on their existing resources, such as online collection portals and social media accounts (see **Resources Lockdown** - *Museum Discussion Groups*). Both the *Smithsonian* (Smithsonian Open Access, 2,8 Million images) and *Paris Musées* (Collections Portal, 331,864 works) have put works online since the start of the pandemic (see **Resources Lockdown** *Online Museum Activities*). Museums have also delivered new content, such as virtual exhibitions, curatorial talks, hashtags, podcasts, quizzes and virtual tours of their galleries via streaming platforms, and educational material for children and adults. While this indicates the ability to adapt to the crisis, it also highlights some of the structural weaknesses from before COVID-19, in that the sector lagged behind in developing digital content. This will, without a doubt, be just as true for our target countries that are still suffering from the „double crisis“ (see the many online-activities at **Resources Lockdown** - *Online Museum Activities - Family Days Tried and Tested* - Virtual museum visits; *International Council of Museums (ICOM)* - How to reach your public remotely; *Institute of Museum and Library Services* - Facing Challenge with Resilience: How Museums are Responding During COVID-19; *MCN (Blog)* - The Ultimate Guide to Virtual Museum Resources, E-Learning, and Online Collections; *Museum 140* - We strive to bring together museums and museum lovers; *Museum of English Rural Life (MERL)* - The history behind an absolute unit; *Rubber Cheese* - Useful resources for the attractions and travel industry during the Covid-19 outbreak; *World Digital Museum* - World Virtual Museum. Also see the resources listed at **Resources Lockdown** – *Digital heritage*).

A crisis can sometimes be an opportunity and staff can still work on alternative tasks during a lockdown, such as completing essential conservation tasks. It may also be a good time to provide extra training for staff, and to encourage them to diversify their responsibilities and experience by learning about and taking on essential tasks like site monitoring or

public relations. Switching tasks can give staff a chance to learn more about the work processes of the institution, which can be very advantageous for the whole team. In addition, while a building is closed, the management team can make new plans and design new strategies related to running the museum, develop and update the site's online presence, or develop educational material relating to the collections. This is also the time where long overdue research can be finished. Take advantage of social media tools to explain to the audience why cultural heritage in general is important, and what threats it is currently facing, in order to create awareness. Education actively change the way people will interact with heritage in the future. This doesn't just have to be about the museum. Do the collections relate to other institutions, sites or areas of the community that the museum could work with and mutually support? Start meaningful discussions with the audience about the role society can play in. Use relevant hashtags in order to be visible to communities of the same interest. Hashtags like #protectheritage, #cultureunderthreat, #culturalracketeering, #climateheritage or #unite4heritage are campaigns to raise awareness about the threats facing heritage worldwide; using them can help to enlarge the museum's audience and engage in online discussions. (For more information see **Resources** Lockdown *Digital Heritage* and Part III of the Guidelines - *Basic Digital Tools*.)

It is good to realize that other museums are also coping with the same problems. Staff could jointly plan protective measures or other activities. Hearing what other museum staff are doing in response to the crisis can be a useful learning opportunity. Similarly, they may find value in being part of a community of others going through the same situation. In addition to seeking guidance at regional or national level, contacting colleagues at the international level is unquestionably an asset to the institution's professional network. International allies and collaborative networks widen the scope of any cultural organisation. For example, crowd-funding will be much more effective if the museum can reach out to an international audience. A strong international network offers more opportunities in the future as well. Networks can be created at a horizontal level – conservators, curators – or at a vertical level – heritage wide, like all museum staff. Today social media is very useful to connect, to communicate quickly with, each other and to get organized in small groups. Next, create (closed) discussion groups on Facebook, LinkedIn (or similar) or join already existing groups. Be aware, however: many of them are not safe and anybody can „listen in“, and data often will be used for commercial purposes without the museum's knowledge. (For more information on discussion groups see **Resources** Lockdown - *Museum Discussion Groups* and for digital tools and how to use them see Part III of the Guidelines - *Basic Digital Tools*.)

Safety

During the COVID-19 pandemic, economies and employment have completely transformed all around the world. Given the personal and professional uncertainties we are now facing, safe and healthy working conditions are becoming ever more important. In crisis management, the health of staff are often overlooked - it is essential that the safety of staff and volunteers is prioritized. See for more information **Resources** Safety – *American Alliance of Museums (AAM)* - 13 Tips for Working Remotely; *Museum Association* - How are museum staff faring during closures; *The Institute of Conservation (ICON)* - Unable to do your normal work at the moment? Top tips for making the most of your time at home; *Tickbox* - Time to focus on non-contact participation?; *World Health Organisation* – Protect yourself and others.

To ensure the well-being of staff and visitors alike, the museum needs to follow the recommendations of governmental and health institutions first. In addition, the institution needs to communicate with their staff and listen to their needs in terms of their health and working conditions. Not all staff are able to work from home, especially if they need to take care of their children or the elderly. Make sure to distribute the workload efficiently; productivity needs to be adjusted for this new reality. It's also important to communicate with staff during periods of closure. Establish health and safety protocols and encourage staff to focus on their own physical and mental wellbeing. As humans, we need social interaction and, with the current remote working, social dialogue becomes even more critical. Fortunately, social platforms are well developed and are accessible for many today (see Part III of the Guidelines - *Basic Digital Tools*). Other concerned parties are cultural bearers, artists, and crafts persons. In particular, artisans often have a direct or indirect relationship with museums in the Middle East and should be incorporated into museum COVID-19 policies (see **Resources** Safety - *International Centre for the Study of the Preservation and Restoration of Cultural Property* - How to support cultural bearers, artists, and crafts persons during and following the COVID outbreak).

Physical health

Precedence in all safety regulations should be given to the physical health of all staff, paid and unpaid, working in museums and the visitors, like in any other institution. To stop the coronavirus from spreading, it is necessary for staff to frequently wash their hands, clean used surfaces and equipment, and keep a social distance of around 1.5 to 2 meters depending on the local guidance. The institution, therefore, needs to ensure that soap and, if possible, antiseptic hand gel, are available for use. Wearing a face mask or using barriers or screens to separate people from each other is important to prevent the virus from spreading through sneezing, coughing, or strongly exhaling air. A “back-to-back” or “side-to-side” working arrangement is recommended in offices with multiple people. Visitors and staff that do not feel well should stay at home. Vulnerable groups who are at higher risk, such as people with severe illnesses, compromised breathing (like asthma), or who are over the age of 60 should remain at home to minimize their risk of infection. It is common practice today that before entering people are asked if they have any coronavirus symptoms. A good measure to prevent the spread of the coronavirus is to check the temperature of everyone entering. To stay informed about the latest updates regarding COVID-19, next to national and regional updates from the authorities, see for international updates at **Resources** Safety - *World Health Organisation* – COVID-19 and Health Alert on WhatsApp (Arabic). Several institutions have offered guidance on safety measures at working places including museums. See **Resources** Safety below for helpful sources. For more on masks see **Resources** Safety *Aga Khan Development Network - COVID-19 information* - Information on homemade and disposable masks and *Science Advances* (07 Aug 2020) - Low-cost measurement of facemask efficacy for filtering expelled droplets during speech.

Mental Health

We cannot compare events such as wars, earthquakes, or hurricanes, which destroy the daily life and infrastructure of entire nations. However, this current pandemic not only leads to isolation, it also divides families and communities, causing loneliness, and devastating human loss and sorrow. The main psychological public mental health impact is the rise of stress and anxiety levels, but in countries already facing political instability and conflict, levels of feelings of loneliness, depression, alcohol and drug abuse and self-harm behaviour are also expected to rise. Physical activity is limited, social interactions are lacking, salaries are cut, food is scarce, and children are forced to stay home in small spaces.

Adapting to new routines, especially working from home, also means isolation whilst juggling home life is creating additional stress. Access to services, including mental health and psychosocial support and care, has stopped, leaving people untreated.

The Reference Center for Psychological Support of the Red Cross recommends the following “To Do’s”:

- Fact-check any news that is being consumed and self-educate with accurate information,
- Maintain a daily routine to remain structured and do not lose sight,
- Acknowledge your own fears and feelings of helplessness without denying what is going on,
- Actively stay in touch with friends and family virtually in order to maintain strong relationships; seek help from others and offer them help if they need it,
- Take care of your own physical and mental health.

For more see at *Resources Safety Centers for Disease Control and Prevention (CDC)- Coronavirus Disease 2019 (COVID-19). Coping with Stress; Disaster Ready Understanding Burnout During COVID-19. Self-Care & Resilience (AR); International Federation of Red Cross and Red Crescent Societies (IFRC) - Psychosocial Center and World Health Organisation - Looking after our mental health.*

Security

Threats

Since the beginning of the COVID-19 health crisis, 90% of the world’s museums have been forced to temporarily close their doors to protect their staff and visitors.²

Countries in conflict are already extremely weakened as a result of previous neglect, underfunding, damage, and other pressures. The need for isolation represents a huge challenge for museum professionals who must continue to ensure the security of their collections. Key risks are mostly related to the lack of occupancy in the buildings: criminals may take advantage of reduced staff presence on site, and the economic downturn may motivate criminal behaviour - in fact, several countries in the MENA region have reported an increase in vandalism and theft. In terms of the physical threats that the collections face, deterrents are important. Visible security cameras and signage indicating the presence of cameras can be powerful enough to put a criminal off, as can basic interventions such as bright lighting and fences. Next to breaking and entering, other risks during lockdown include untreated conservation threats - flood, fire, pests, damp and mould, dust, and light.

Preventive measures

Risks are always present, but, in more normal times, there are fewer worries because the building is occupied and staff are able to respond quickly. But when time is limited because management is forced to close the facility, concentrate on the areas that are the biggest risk or biggest priority for the institution. Only do that which feels safe and comfortable doing. In perfect circumstances the institution will have an emergency management plan and have already assessed the risks typical for the organisation. If not, it is highly advised to take this opportunity to draw one up now. Search the internet for emergency/disaster management plans where ample information and examples are to be found. See for some guidance on disaster management *Resources Security - American Alliance for Museums - Disaster Preparedness and Emergency Response Plan; Collections Trust – Emergency planning e-learning tool; National Park Service (NPS) – Museum Handbook, Part I, Chapter 10: Emergency Planning (2019).* However, please be aware that many plans and

recommendations have been designed within a western context and, often, for moderate climate zones (see *Resources Preservation – Teijgeler – Preservation of Archives in Tropical Climates*) – these must be adapted to the needs of the museum in the target countries.

A number of security checklists have been published, many of which are designed to help management think through some of the security risks to the museum during lockdown. The lists are not exhaustive, and each museum will have its own particular circumstances, so not all questions will be relevant. Most checklists are divided into security checks for the exterior and the interior of the premises. It is important to complete as many of the checks as possible before the museum closes, and then to continue to carry them out at regular intervals while the facility remains closed. Additionally, make sure to establish a means and process to record and share the results of security checks between relevant colleagues. What it all comes down to is: check, check, and check again (see *Resources Security - Arts Council England – Security in museums and galleries: the museum security toolkit; Claire Fry ACR and Spencer & Fry – Collection Care Guidance for Museums and Historic Properties during the Covid-19 Crisis; Collections Trust – The Security Audit; Museum Galleries Scotland – Security Checklist – short version for COVID-19 lockdown*). In order to know what is missing in case of theft, museums should, of course, take regular inventory of their collections.

For the interior, please check the following:

- check the window coverings (for example, are blinds down/closed or up/open),
- deploy glass security film which will slow down the perpetrators,
- ensure lights are turned off except for security lighting,
- ensure power is turned off where appropriate,
- remove all fresh food from the premises - empty refrigerators and leave the door open,
- check the climate control, including remote controls, temperature and relative humidity,
- remove high-risk collection items from display, and make sure any items on loan, returned items and valuable items are placed in (and remain in) secure storage. Also, think about collection items with respect to windows and ensure that no collection items are vulnerable to smash-and-grab thefts,
- secure valuables (cash boxes, computer screens, laptops and other electronic equipment),
- secure important sensitive documents and information,
- test fire and security alarms,
- ensure fire doors are closed,
- make sure flammable materials are stored in fire protective storage,
- cover collection items that may be vulnerable to light damage,
- cover objects on open display/storage with dust sheets,
- make sure water taps are turned off and dehumidifiers are turned off and emptied,
- check for mould infestations and rodents and check pest traps,
- clear debris and empty dust bins,
- and as you leave, make sure doors and windows are closed correctly (that is, are they locked, closed against dust, or unlocked, ajar or open).

Securing the premises

Security issues are currently of great concern to all museums. In particular, communications with the police, which may, in consultation with the heads of museums, provide for enhanced surveillance around areas particularly rich in cultural heritage. The majority of museums already have security protection plans.

Nevertheless, a recent ICOM survey related to the COVID-19 crisis showed that staff at around 10% of museums believes that currently additional security measures are insufficient.³ ICOM strongly recommends ensuring that procedures are adapted to confinement and availability of staff. For instance, museum management and security staff must establish a strict and clear list of staff those authorized to access the building, and the approach of vehicles in the surrounding area of the building should be prevented or restricted, if possible (with the help of the police). One of the key determinative factors in solving theft is how much time passes between the burglary and the realization that an object is missing: the bigger the window, the less likely it is to be solved. Therefore, management should make sure that security protocols and monitoring systems are maintained during lockdown and document all entry into the facility. In terms of physical security, it is recommended that institutions should consider installing temporary barriers at museum entrances to block entry and exit to institutions, which could slow down a theft and allow emergency services more time to respond to a break-in. As the target countries for these guidelines are countries also in conflict, never forget the precautions taken before the COVID-19 pandemic began (see for more information *Resources Security*. In many respects, libraries, archives, and museums are facing the same problems during a lockdown and that is why occasionally you will find references that are, in the first instance, meant for libraries and archives).

A summary of measures to take for the exterior include to regularly check to:

- close all external doors, windows, blinds and shutters and make sure they remain closed and secured;
- check gutters and drains for potential blockages;
- store sensitive materials and equipment, and ensure safe storage is maintained (including checks on flammable materials, power stations, and external equipment for air conditioning);
- check exterior devices for fire and security alarm systems;
- clear debris, dust bins and food stuffs, and clean the gardens, so as not to attract rodents and other pest hazards;
- demonstrate that the building is being monitored by maintaining walkways and landscaping.

Outside help

If you are lucky, the museum may have contracted a security service and they may still be on duty during the COVID-19 pandemic. Some institutions have contacted local authorities to request that police or security forces patrol the area to keep an extra eye on their premises. During violent conflicts, heritage institutions have been helped time and again by the surrounding community. Why not appeal to them in this crisis to assist in protecting the buildings and collections of your institution? Museums are vital social platforms within their communities. When a museum is located in a residential area, residents themselves, confined to their homes, could be made aware of the need to inform the police in the event of suspicious traffic or noise in or around the museum. Make sure the residents know who to call and that the museum staff can react quickly in case of suspicious activity. If physical surveillance is not possible, the museum could resort to closed-circuit television (CCTV) or other electronic monitoring systems. The institution may already have such a device installed. Bear in mind that during the coronavirus crisis, it will probably be difficult to have it installed if it isn't already; it can also be very costly. However, such systems may deter criminals, or allow staff to catch them and recover collections if it is recorded. In addition, it may allow the museum to detect whether someone has placed the facility under surveillance to check the museum's security – however there is a need to either monitor the premises in person, or

check the CCTV feed regularly to see if the museum is being watched. Bear in mind, once an irregularity is noticed, the museum needs to have a follow-up plan in place – who do you warn? The museum should work with the emergency response staff and outside services to develop procedures to handle such situations, and ensure all staff are aware of them. Nevertheless, even with electronic or in-person site-monitoring, some risks will remain, such as vandalism, burglary, lack of maintenance, and the standard threats to collections.

Digital Security

The increase in internet use has given museums the opportunity to reach out to wider audiences than has previously been possible. Digital transformation in the museum industry was already at its peak before the virus outbreak. In addition to enabling visitors to use tablets and smartphones to enhance their experience, museums have been digitizing their collections and making them accessible online. They have also been working on creating new channels to connect with their audiences before and after their visits (see **Resources** - [Lockdown](#) - *Online Museum Activities*). The pandemic has only highlighted the visibility and importance of this work, and the need for museums and their role in connecting to local and international publics in new ways. Digital access today is not only vital for museums but, during this time of crisis, online cultural experiences are becoming a lifeline for audiences.

The physical security of museums and galleries is not the only thing at risk right now, as more museums have rapidly transferred their day-to-day business operations to the digital marketplace. Unfamiliar settings, new routines, and increased reliance on third party technology all puts data privacy at risk. There has been an uptick in cybercrime across all industries and the (often less than tech-savvy) art world, particularly, needs to guard itself against attacks. It is of the utmost importance that the organisation is aware of the risks, both for data exchange within the organisation network and data entering the network from outside. In the rush to transfer the daily operations onto digital platforms, data privacy and security are getting lost in the process. The head of private client services and strategic risk and security at K2 Intelligence FIN, Jordan Arnold, has reminded museums not to neglect their cyber defences. He has said that museums should be wary of emails with links or attachments purporting to offer safety guidelines, preservation tips or even government bailout programs, which may turn out to be ransomware or other cyber-attacks. Arnold even predicts cyber criminals might set up hoax donation pages pretending to be in support of museums, galleries, and artists. He also points out that, while an in-person heist is limited to what a thief can carry out, it is easier to attack at any scale online. In the chapter *Basic Digital Tools* (Part III of the Guidelines), we have collected brief information on social media, digital communication services, digital filesharing, virtual workspaces, virtual private networks (VPNs) and decentralised solutions; we have also touched on privacy and security problems. We do not have the space here to go into detail on the very complicated issues of digital privacy and security. Fortunately, there is a great deal of technical information available on the internet. (For more information, see **Resources** Security – *Digital Security*; also check Part III of the Guidelines - *Basic Digital Tools*).

Preservation

During a lockdown, it is not sufficient to plan for the security of the premises and make sure that everything inside the museum stays secure (see above **Security** – [Preventive measures](#) - *Securing the premises*). Once the premises, inside and outside, have been checked and are secure, it still leaves the collection(s) to take care of, as several threats remain while the museum is closed.

In fact, there are increased risks from general deterioration caused by the environment, pollutants, and pests, as well as the risk of reduced levels of preventive monitoring and control, as no-one is present to observe them and limit them. While collections are not directly at risk, the pandemic complicates their care. It is important to assess the collection risks typical for the organisation, assuming the necessary prevention measures have been followed and implemented. Collection care should form a part of the preservation plan and emergency collection care a part of the emergency management plan.

If possible, two people should check the condition of the buildings and collections with a minimum interval of once a week. If local restrictions are tight, ask permission from the authorities to monitor the museum: the management team should prepare letters of permission for their staff to enter the museum.

During lockdown, check for the most obvious problems first, such as pest and mould infestation, water damage, dust, temperature (T) and relative humidity (Rh) and use all your senses, including sense of smell, to detect areas where mould might be growing and dust might be accumulating, and where extra ventilation or cleaning may be required – especially in collection storage rooms and exhibition halls. For large collections the museum could potentially use a sampling method - this way it can know the weakest points in the collection and take extra precautions. Turning off or blocking light in collection spaces, except for security lighting, can limit the effects of light and UV. It is also recommended not to move objects around. Climate control is a relatively easy way to mitigate some of the threats that collections are exposed to. Dropping the temperature a few degrees, if this can be done without increasing the risk of mould, slows degradation rates, reduces pest activity, and saves on heating costs. Decreasing air exchange rate provides a more stable, less dusty environment. To create a draft in the building is easy but, of course, increases the risk of burglary; however there are sometimes inconspicuous ways of doing so. In new buildings, HVAC systems can be monitored and adjusted remotely. Document these points by taking video or photographs, especially in collection storage areas.

Quite a few professional organisations have published guidelines on collection care during COVID-19, which can be found under ***Resources*** Preservation. If your institution has already a disaster management plan in place, emergency collection care should be part of that. However, if your museum has not been able to prepare and lacks a disaster management plan, it is highly advised to take this opportunity to draw one up now (for some guidance on Disaster Management Plans see ***Resources*** Preservation). Emergency management plan or not, the museum needs to have salvage materials ready. During the present crisis, this not only includes materials to fight flooding or fire, but also extra personal protective equipment (PPE) to prevent contamination from Coronavirus (see, for example, ***Resources*** Preservation – *Museum of London* – Pocket-salvage guide).

If pandemic measures mean the museum is closed, all activities in museums will be halted, including the restoration projects, unless your museum has the option of continuing projects. In that case, do so with at least two people (a „buddy“ system): before leaving the premises, staff should make use of the preventive and preservation checklists noted above. At the same time, staff should make contact (by phone, email, or a social media group) with the director or another designated person to tell them that they have left the premises. Similarly, they could take the task to monitor the premises and collections, taking the place of others who would have performed that duty. There might be a chance to outsource restoration projects to conservators working at home. If so, be sure that they follow the institution restoration standards. Before leaving, the conservation lab should be checked for any hazards.

Conservation equipment should always be cleaned, and materials should be safely stored. Remove perishable conservation materials or lock them in well-sealed tins/jars as they are prone to deterioration and mould.

It is important to make a checklist of all actions concerning preservation. Be sure to keep control at all times, consult with staff, and divide the tasks. The museum will, hopefully, not need to resort to them but, just in case, if a violent conflict reaches the area of the institution, there are some rather radical ways to safeguard collections (see *Resources Preservation – Teijgeler* – Preserving cultural heritage in times of conflict). Last, but not least, prepare for re-opening (discussed below). Being prepared prevents museums suffering from surprises, at least as far as is possible.

Sanitation

Throughout history, museums have been fighting the consequences of bubonic plague, tuberculosis, and other known contagious diseases after they realized that they were infecting their holdings (see *Resources Preservation – Sanitation - American Alliance of Museums (AAM) - Lessons from History: Museums and Pandemics*). A virus is a different story, but it is not a new one. Today, we are familiar with infestations of different pests like rodents and mould and know how to disinfect facilities and materials contaminated by these vexations. In this case, however, staff and users also need to be disinfected and protected, as well as the materials themselves. The recommendations below rest on the current understanding as of July 2020. As this strain of Coronavirus is new, virologists and micro-biologists are still struggling with how it will develop and how to counter it. So please, closely follow the advice of medical and museum professionals and museum associations as this can change overnight.

Several provisions against the virus should be made, after contamination is established, and each has their own process and reasoning: sanitation of facilities, sanitation of materials and quarantine. Yet, the first and most relevant question should be: is there any contamination risk with my museum objects? The answer is simple and straightforward: yes, there is. The coronavirus persists for a “few days”, depending on the types of surface. The highest risk for collections comes from proximity to infected people. Consequently, the first measure to take is to minimize contact between people and the museum objects. Obviously, once a member of staff has contracted the virus and there has been direct or indirect contact with collections, the holdings must be put in isolation just like the person him/herself. If isolation is absolutely not an option, proceed with caution. In general, sanitation of museum objects is **not** recommended, due to the damage this can cause to the artefacts. For more information on cleaning and disinfection after Covid-19 contamination, see *Resources Preservation – Sanitation*.

Infection

It is well-known that the most common way to contract the COVID-19 virus is from other people. Therefore, contamination by human agents should be the first concern. Minimize the virus risks by keeping a close watch on museum staff, following the general precautions on avoiding the virus and acting quickly when someone displays the slightest sign of a virus infection (persistent cough, temperature, breathlessness, loss of sense of taste/smell); see *Resources Safety - World Health Organisation – COVID-19*. If staff are at work while the premises are closed, carrying out tasks like checking security or finishing restoration projects, they should wear personal protective equipment (PPE), and only handle museum objects with disposable gloves. Once buildings have been empty for several days (considered to be a minimum of 3 days) it is very unlikely that live virus will still be present.

Air renewal (HVAC, draft) is a good way to mitigate the viral load in absence of people; but rotation and centrifugal forces (cleaning machines) on the shop floor will increase the chance to contract the virus if it is present.

Transmission through surfaces is much less likely than person-to-person contact in an enclosed space for a long period of time. However, the possibility still exists that the virus could be spread by touching contaminated surfaces and then touching your nose, mouth or eyes. The longest survival of the coronavirus found so far has been five days on ceramics (dishes, pottery, mugs), glass (drinking glasses, measuring cups, mirrors, windows), metal (doorknobs, jewelry, silverware) and paper (the length of time varies, some strains of coronavirus live for only a few minutes on paper, while others live for up to 5 days).⁴ It survives for much shorter periods on surfaces like aluminum (2-8 hrs.), copper (4 hrs.) porous cardboard (24 hrs.), textiles, and wood. The latest evidence shows that, in general, cool temperatures prolong viral persistence while very warm temperatures result in rapid loss of virulence. Low relative humidity also prolongs virulence but may reduce surface to surface transfer.⁵ Dust raised in such dry conditions can be problematic as it re-aerosolizes attached viruses. As elsewhere (such as shopping) the current advice is: if you wash your hands several times a day, particularly after handling objects that others could have touched, the risk of transmission is significantly lower from an already low risk of transmission.

Quarantine

Museum objects should be isolated after infection with COVID-19, and as a precautionary measure to prevent contamination of collection spaces and objects whenever possible. When contaminated objects are put in a quarantine room make sure that nobody enters the room - put up a sign.

There is some discussion on the ideal length of the quarantine period but in general the minimum recommended period is 5 days and, to be totally safe, 10 days would be good practice. Be aware, however, that the quarantine period might change over time with new scientific insights. Items can be placed on trolleys or put them on shelves with a clear indication when they arrived. If a dedicated quarantine space cannot be established, staff can place small items in bags or wrap them up in appropriate material until the quarantine period is over so that nobody accidentally handles the items. It is not advisable to tightly seal the bags or tightly wrap the objects because this can potentially create damaging microclimates. Clean and disinfect the quarantine space, if used, before using it for other purposes.

Sanitation rules

Sanitation - we prefer to speak of sanitation rather than disinfection - of collection materials and collection spaces has been a popular subject of conservation since the outbreak of COVID-19. The sales of disinfecting sprays and wipes have skyrocketed in recent months as the public have scrambled to more frequently disinfect commonly touched surfaces and items that could spread coronavirus. However, for museum buildings and objects different rules apply. There is a difference between cleaning and sanitation. Cleaning is a general reduction of filth including viral and bacterial loads on surfaces which makes subsequent disinfection more effective. Disinfection/sanitation is the application of a solution or method that kills/deactivates any pathogens that remain after cleaning.

Before we even consider sanitizing, we should ask ourselves why we need to and what needs to be sanitized? When the museum is fully closed for an indefinite time there is no need to clean or sanitize at all as there are no people present in the building and

the longest a coronavirus can survive on surfaces is 5 days. It is only when the museum is re-opening that it probably needs to clean facilities and/or objects. When staff are partly working while the institution is closed, in a conservation lab for example, they need to clean that facility before leaving, of course. The use of protective clothing and equipment should be sufficient to protect staff against the coronavirus. Still, if there is cause for sanitation, there are a few simple rules for museum objects.

Artifacts

In principle, sanitizing collection objects is NOT recommended. Practically all disinfection solutions contain alcohol, bleach, or other chemicals that can damage many of the surfaces and materials in heritage collections. It is strongly recommended to always consult a professional conservator before performing any kind of treatment and always use disinfectants that have been approved by appropriate authorities. If there is any doubt regarding the cleaning and disinfection processes, it is best not to do anything as an incorrect treatment can cause irrevocable damage to cultural property. It is also good advice for museums to inform the public about their approaches to disinfecting collection materials and to ensuring staff and visitors safety (for more information see the several resources in ***Resources Preservation - Sanitation***).

To reduce the risk of viral transfer from contaminated objects to people or the opposite from infected people to object, object quarantine is always recommended. Wait until the virus deactivates naturally on surfaces before handling any objects or resuming operations. When the museum does decide to sanitize:

- never forget to wear protective clothing and equipment; avoid direct contact with contaminated objects,
- always remove the dirt first, as only then are disinfectants most effective,
- hand sanitizers could leave residues on objects and damage materials,
- external surfaces of display cases that may have been touched by visitors must be cleaned. There is no need to clean inside the display cases,
- be aware that different surfaces require different lengths of time and different disinfectants in order to assess their compatibility - test first,
- do not apply chemical disinfection as disinfecting solutions will damage many heritage materials,
- diluted hydro-alcoholic solutions or neutral soap can be used but must always be applied with controlled pressure,
- nor should you utilize UV disinfection, ozone disinfection, electrostatic disinfectant sprayers, or powdered disinfectant,
- placing materials in a microwave oven is not recommended and may result in fire,
- do not use bleach on the surfaces; many cultural materials are sensitive to bleach,
- do not undertake large scale disinfecting actions of the entire collections, or entire museum spaces like wet fogging of a biocide solution,
- use methods that permit controlled application of approved cleaning solutions and disinfectants,
- after disinfection make sure to ventilate the space where sanitation has taken place to ensure that there is no accumulation of volatile organic compounds (VOCs),
- keep a record of what objects have been sanitized and when they are accessible again to staff.

Facilities

Cleaning and disinfecting museum facilities are not the same as cleaning and sanitizing office or household facilities. Best practice is to close off areas used by the infected person and increase air circulation with outside air - not air conditioning that mostly circulates existing air, which may contain the virus. Wait at least 24 hours before cleaning and disinfecting all areas accessed by the infected person. If it has been more than 7 days since the infected person was in the building, further cleaning and disinfecting is not required (see the section on Sanitation - Quarantine above). It is possible to safely disinfect non-heritage surfaces – tables, desks, and shelves – that are used for work with collection artefacts. As with artefacts, confer with a conservation specialist first and ask yourself why you want to sanitize and to which spaces you want to do it (for more information see the several resources in ***Resources Preservation - Sanitation***).

If it is advised to clean and sanitize certain rooms and spaces in the museum building(s), e.g. when the museum reopens and as long as the pandemic lasts, there are certain rules the museum has to keep in mind:

- never forget to wear protective clothing and equipment; avoid direct contact with contaminated objects,
- always remove the dirt first as only then do disinfectants work most effectively,
- start with painted surfaces, doorknobs, and handrails. You want to take note if they are metal or wood and if they have any unique finish,
- for cleaning, make up a soap and water solution from a mild or gentle soap; soap has a polar end and a non-polar end and so it tends to pull things into solution; do not use dish soaps because dish soaps have other additives in them that can leave a film,
- place the mixed solution in a spray bottle; take a paper towel, wet the paper towel (do not use cloth), with your solution and then wipe the surface or the railing; repeat after a minute,
- heavily touched hard surfaces may need regular cleaning and disinfecting; hard surfaces are the easiest to disinfect and they are also the surfaces on which the virus can persist the longest and with the highest transfer concentration to skin,
- disinfecting compounds (70% ethanol is recommended) and their application methods (wet spraying, wiping, contact times) have to be appropriate for the surface to which they are applied. Test first and be sure to consider the effects of overspray or dripping on any nearby collection items,
- cleaning and disinfecting should leave no potentially harmful residues on surfaces that will come into direct contact with collection objects (e.g. reading room tables, shelves for storing artefacts),
- do not use fogging, either for single rooms or the entire building: it will deposit chemicals on all the surfaces, which may be unpleasant for people and could be very damaging for objects in the collection,
- after disinfection, make sure to ventilate the space where sanitation has taken place to ensure that there is no accumulation of volatile organic compounds (VOCs),
- removal of artworks or furniture from rooms that need to be disinfected is, in most cases, not recommended: handling and transport of collection objects brings its own risks, and the objects themselves could potentially be contaminated,
- keep a record of what objects have been sanitized and when they are accessible again to staff.

Re-opening

With public institutions reopening with permission of the authorities, the prospect of reopening museums under the current circumstances raises unprecedented dilemmas. Even though there are guidelines developed by renowned cultural and museum institutions, it is important to always consider the local restrictions put in place by the official health authorities and to keep in mind that every museum may need to take a different approach based on their circumstances. Before resuming their activities, museums need to be ready and plan ahead.

First, museums should consider how and when they should reopen to the public. The reopening must ensure minimal risk to the safety of staff, volunteers, and visitors. A gradual approach allows the museum to ensure health and safety while taking progressive steps to reinstate usual operations. It is important to realize that, even though the museum may desire to return to their pre-pandemic normal routine, the operations may require change and adaptation. Be open to modifying plans or even postponing opening dates. Visiting museums will definitely become more difficult, many people will not be comfortable with public gatherings in indoor places. A successful return to business will depend entirely on good communication with the local communities and working on public confidence. Good and continuous communication will be the key to reassuring the community that the institution is proactive in taking measures to protect their staff, local communities and visitors. The museum needs to check the outside of their premises before proceeding to care for the interior (see above ***Security - Securing the premises***). Check that there are no traces of forced entries, no hazards or broken elements in the building and no damage to the garden. This means that the preventive measures that were installed for security before lockdown are working and should be maintained even after reopening (see ***Security - Preventive measures***). A second coronavirus wave is expected and the museum may soon face closure again. If there is any kind of damage, repair that first and review these measures.

Protective measures

Before reopening, be sure that your museum has a proper Re-entry Plan and a checklist to be reviewed beforehand. Several considerations need to be kept in mind including local context, public safety, worker's safety and wellbeing (including volunteers), risk assessment, personal protective equipment (PPE) and face coverings, building and process adaptation, transportation to the museum, etc.

Develop a phased timeline and a test run period where staff can assess risks and work on mitigating them. If staff are not completely ready, they can limit access to only certain areas of the museum to the public. Consider restricting capacity, especially in the first phase of reopening, to a level that management knows the site and staff can comfortably accommodate. Determine the opening hours and how many days a week the museum will be open. This might be influenced by the museum's ability to source masks, gloves, cleaning, disinfecting, sanitizing products and natural virus degradation. Consider different hours of operation for vulnerable populations (elderly or others medically compromised by other illnesses or diseases). Postpone access to the commercial and educational spaces located within buildings and postpone group tours (see for more at ***Resources Re-opening***).

Other potential changes the museum could make to prioritize visitor's health include:

- consider how many visitors the building can accommodate safely while maintaining distancing: this may be far fewer than were allowed in before, allowing appointment-only entry for visitors,

- control the use of entrances, passageways, stairs, and lifts,
- simple floor markings on the ground are easily prepared and can help to guide visitors through the property and remind them to keep a social distance of a minimum of 1.5 – 2 meters. This is especially important in waiting lines, or any narrow areas e.g. queuing for the entrance. They are easily set up with simple material such as labelled adhesive strips,
- train security employees to temperature check before entry and to not touch visitor belongings during bag inspection,
- remove any interactive objects and preferably cancel the use of audio guides,
- prioritize objects for exhibition that can be easily cleaned and maintained,
- visitors should be asked not to touch artefacts,
- visitors should be required to wear face masks in all indoor areas, and all areas that may be congested, and should be asked to frequently use antiseptic hand sanitizer (for example, at the entrance), if appropriate,
- consider stocking face masks and sanitary and protective equipment for sale,
- areas that are touched by many visitors, such as seats, handrails, and toilets must be cleaned regularly with antiseptic cleaner. This is particularly important for (interactive) media use, which may need to be limited,
- It may be necessary to close some areas if they cannot be opened safely and kept clean.

Check on and respond to the physical and mental health of staff returning to duty. Updates on the outbreak and advice on staff safety plays an important role before reopening. Instruct employees and volunteers to stay home if they are sick, have a high temperature or someone at home is sick. Consider limiting the number of personnel who are allowed, at first, to enter the collection and storage areas. Limiting personnel numbers will allow time to observe and document carefully any traces of damage e.g. insect damage or burglary, before too many people come in and disturb possible evidence.

Hand sanitizers for both staff and visitors at the entrance are an accepted way to reduce disease transmission from incoming visitors. Hand sanitizers, however, could leave residues on objects that could eventually damage them. That is why hand washing with soap and water, at least for staff, is recommended rather than using hand sanitizer because the former removes dirt and oils and the latter does not. Dirt and oils can transfer to collections and stain or damage them. Staff should wear disposable gloves when handling objects - before the pandemic, this was already common practice for handling valuable or vulnerable objects for both staff and visitors, and that precaution should be maintained. Review volunteer capacity as volunteers may be essential for the safe operation of the institution; some volunteers may be clinically vulnerable.

Other potential changes the museum could make to prioritize staff health include:

- staff should be healthy before returning to work and be tested for COVID-19,
- staff who meet visitors (at the entrance desk, guides, or café staff) should wear masks, and remind visitors to keep a safe distance from them; you may be able to installing Plexiglas shields between staff and visitors,
- areas restricted to staff should follow the strict regulations given by local authorities,
- limit access to storage and workrooms to essential personnel only,
- schedule longer-term exhibitions with objects that can remain on view for extended periods (not light sensitive),
- areas that staff may spend time in like break rooms, canteens, and other settings, may need to be closed in order to avoid staff socialising in groups,

- collections staff are encouraged not to touch artefacts unless absolutely necessary during this time. As few people as possible should be handling artefacts and no two people should handle the same artefact,
- take into account spatial distance of employees in workstations,
- outdoor spaces can be used to replace indoor meeting rooms,
- staggered breaks on a schedule for employees may help to strategically plan break timeframes for groups of people, in order to avoid bigger gatherings.

Be certain that all policies are reasonable and necessary for the safety of staff and members of the community. Workers who believe that their employer provides a safe and healthy workplace are more likely to report for work during a pandemic. Enforce policies consistently and provide staff training on how to enforce them. Regardless of the reopening stage of the museum, test runs are an essential part of a transition to ensure staff comfort and patron compliance. Consider the security implications of any changes the museum intends to make to their operations and practices in response to COVID-19, as any revisions may present new or altered security risks which may require mitigation.

Resources

Lockdown

- *American Alliance of Museums (AAM)*:
 - 13 Tips for Working Remotely: <https://www.aam-us.org/2020/03/12/15-tips-for-working-remotely/>
 - COVID-19 and Museum Volunteers: <https://www.aam-us.org/2020/05/28/covid-19-and-museum-volunteers/>
 - COVID-19 Resources & Information for the Museum Field: <https://www.aam-us.org/programs/about-museums/covid-19-resources-information-for-the-museum-field/>
 - Using Scenarios to Plan Your Museum’s COVID-19 (Coronavirus) Response: <https://www.aam-us.org/2020/03/13/using-scenarios-to-plan-your-museums-covid-19-coronavirus-response/>
- *Conservation Center for Art and Historic Artefacts*. COVID-19 Resources for Cultural Institutions: Advocacy, Communications, Funding, Professional development: <https://ccaha.org/covid-19-resources-cultural-institutions>
- *EU-LAC-MUSEUMS*: <https://eulacmuseums.net/index.php>
- *Heritage Foundation*. Crisis Communication for Leaders: Guidance in Responding to COVID-19 and Other Crises (webinar): <https://www.heritage.org/event/webinar-crisis-communication-leaders-guidance-responding-covid-19-and-other-crises>
- *International Council of Museums (ICOM)*:
 - Recommendations and resources: <https://icom.museum/en/covid-19/>
 - Museums, museum professionals and COVID-19 (report): <https://icom.museum/wp-content/uploads/2020/05/Report-Museums-and-COVID-19.pdf>
- *Institute of Museum and Library Services*. COVID-19 Resources for Libraries and Museums: <https://www.imls.gov/coronavirus-covid-19-updates/covid-19-resources-libraries-and-museums>

- *Museum of London*. Covid-19: Resources and Information:
https://www.museumoflondon.org.uk/download_file/view/8633/2171
- *Museum Study*. Cultural Institution Crisis Response (free course, login needed):
<http://www.museumstudy.com/courses/course-list/cultural-institution-crisis-response/>
- *The Network of European Museum Organisations*. Museums during COVID-19:
<https://www.ne-mo.org/advocacy/our-advocacy-work/museums-during-covid-19.html>
- *UNESCO*:
 - How to communicate on COVID 19 crisis (webinar):
<https://en.unesco.org/news/how-communicate-covid-19-crisis-webinar>
 - Museums around the world in the face of COVID-19 (report):
<https://unesdoc.unesco.org/ark:/48223/pf0000373530>
 - Museums facing COVID-19 challenges remain engaged with communities:
<https://en.unesco.org/news/museums-facing-covid-19-challenges-remain-engaged-communities>
- *World Health Organisation*. EPI-WIN: WHO Information Network for Epidemics:
<https://www.who.int/teams/risk-communication>

Museum Discussion Groups

- *Arts Marketing Association Coronavirus Support*. Facebook group:
<https://www.facebook.com/groups/AMACommunitySupport/>
- *Collections Stewardship*. Listserve:
<https://www.collectionsstewardship.org/listserve>
- *Cultural Heritage Conservation Science. Research and practice*. LinkedIn group:
<https://www.linkedin.com/groups/140198/>
- *Cultural leaders*:
<https://www.weforum.org/communities/cultural-leaders>
- *Heritage for All*. Facebook group:
https://www.facebook.com/groups/214091372432295/?ref=br_rs
- *International Council on Museums Arab*. Facebook group:
<https://www.facebook.com/groups/1207313432621070/>
- *World Economic Forum*. Arts & Culture Global Solidarity Network:
<https://www.weforum.org/covid-action-platform/projects/arts-culture-global-solidarity-network>

Online Museum Activities

- *Atlas Obscura*. How Museums Will Eventually Tell the Story of COVID-19:
<https://www.atlasobscura.com/articles/coronavirus-museum-collections>
- *Aliph*. E-learning resources from the web (heritage general):
<https://elearning.aliph-foundation.org/3/>
- *Family Days Tried and Tested*. Virtual museum visits:
<https://www.familydaystriedandtested.com/free-virtual-tours-of-world-museums-educational-sites-galleries-for-children/>
- *International Council of Museums (ICOM)*. How to reach your public remotely (many examples of nice experiments):
<https://icom.museum/en/covid-19/resources/how-to-reach-your-public-remotely/>
- *Institute of Museum and Library Services*. Facing Challenge with Resilience: How Museums are Responding During COVID-19 (Blog):
<https://www.imls.gov/blog/2020/04/facing-challenge-resilience-how-museums-are-responding-during-covid-19>

- *London Transport Museum*. Contemporary Collecting: An Ethical Toolkit for Museum Practitioners:
<https://blog.ltmuseum.co.uk/2020/03/31/contemporary-collecting-an-ethical-toolkit-for-museum-practitioners/>
- *MCN (Blog)*. The Ultimate Guide to Virtual Museum Resources, E-Learning, and Online Collections:
<https://mcn.edu/a-guide-to-virtual-museum-resources/>
- *Museum 140*. We strive to bring together museums and museum lovers:
 - Homepage: <http://www.museum140.com/>
 - Adopt-a-Museum: <http://www.museum140.com/portfolio/adopt-a-museum/>
 - Museums on Instagram: <http://www.museum140.com/resources/>
- *Museum of London*. Museum for London: Collecting COVID:
<https://www.museumoflondon.org.uk/discover/museum-for-london-collecting-covid>
- *Museum of English Rural Life (MERL)*. The history behind an absolute unit:
<https://merl.reading.ac.uk/news-and-views/2018/04/history-behind-absolute-unit/>
- *Rubber Cheese*. Useful resources for the attractions and travel industry during the Covid-19 outbreak:
<https://www.rubbercheese.com/insights/useful-resources-for-the-attractions-and-travel-industry-during-the-covid-19-outbreak/>
- *Science Museum Group*. Collecting COVID-19:
<https://www.sciencemuseumgroup.org.uk/project/collecting-covid-19/>
- *University of London*. Department of History - Advice on remote oral history interviewing during the Covid-19 pandemic:
<https://www.ohs.org.uk/advice/covid-19/>
- *World Digital Museum* <http://www.worldvirtualmuseum.com/>

Digital Heritage

- *Arts Council England*. Digital Culture Network (free resources):
<https://www.artscouncil.org.uk/digital-culture-network/resources-support-events#section-1>
- *Arts Marketing Association (AMA)*. Digital Heritage Lab:
<https://www.a-m-a.co.uk/digital-heritage-lab/>
- *Charity Digital*. Heritage Digital:
<https://charitydigital.org.uk/heritage-digital>
- *Digital engagement in culture, heritage and the arts (Jasper Visser /Jim Richardson)*:
https://digitalengagementframework.com/digenfra3/wp-content/uploads/2016/02/Digital_engagement_in_culture_heritage_and_the_arts.pdf
- *DigitalLearn*:
 - Tools and Resources for Trainers: <https://training.digitallearn.org/>
 - Use a computer to do almost anything!: <https://www.digitallearn.org/>
- *Digital Pathways*. Resources to help museum people understand and use digital tools and channels, hand-picked by Culture24:
<https://digipathways.co.uk/>
- *Drake Music*. Digital Accessibility – A call to action:
<https://www.drakemusic.org/blog/becky-morris-knight/digital-accessibility-a-call-to-action/>
- *Heritage Fund*. Digital resources for heritage organisations:
<https://www.heritagefund.org.uk/publications/digital-skills-heritage-digital-resources>

- *MediaTrust*. Digital Marketing Strategy Toolkit:
<https://mediatrust.org/resource-hub/digital-marketing-strategy-toolkit/>
- *Museums Association*. How can digital platforms help museums connect to audiences during Covid-19 emergency?:
<https://www.museumsassociation.org/museums-journal/news/2020/03/19032020-how-digital-platforms-be-used-to-support-musems-during-covid-19-crisis/>
- *New Generation Applications*. Digital transformation in the cultural sector (blog):
<https://www.newgenapps.com/blog/digital-transformation-in-the-cultural-sector/>
- *Nonprofit Tech for Good*. A Fundraising and Social Media Blog for Nonprofits:
<https://www.nptechforgood.com/>
- *Social Media Examiner*. A Guide to the Social Media Jungle:
<https://www.socialmediaexaminer.com/>
- *The Spektrix Ticket Converter* (free tool):
<https://support.spektrix.com/hc/en-us/articles/360006701377>

Safety

- *American Alliance of Museums (AAM)*:
 - 13 Tips for Working Remotely:
<https://www.aam-us.org/2020/03/12/15-tips-for-working-remotely/>
- *Aga Khan Development Network*. COVID-19 information:
 - Information on homemade and disposable masks:
<https://www.akdn.org/publication/covid-19-information-homemade-and-disposable-masks>
 - Staying safe at home and work: <https://www.akdn.org/publication/staying-safe-home-and-work>
- *Centers for Disease Control and Prevention (CDC)*. Coronavirus Disease 2019 (COVID-19). Coping with Stress:
<https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>
- *Construction Leadership Council*. Protecting your workforce during coronavirus Site Procedures:
<https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2020/05/Site-Operating-Procedures-Version-4.pdf>
- *Disaster Ready*. Understanding Burnout During COVID-19. Self-Care & Resilience (AR):
<https://ready.csod.com/ui/lms-learning-details/app/material/82ac32f9-1892-483a-87e0-2f8005ffe51d>
- *International Federation of Red Cross and Red Crescent Societies (IFRC)*. Psychosocial Center:
<https://pscentre.org/>
- *International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM)*. How to support cultural bearers, artists, and crafts persons during and following the COVID outbreak:
<https://www.iccrom.org/how-support-cultural-bearers-artists-and-crafts-persons-during-and-following-covid-outbreak>
- *Museum Association*. How are museum staff faring during closures:
<https://www.museumsassociation.org/museums-journal/analysis/2020/03/25032020-how-are-museum-staff-faring-during-closures/>

- *Science Advances* (07 Aug 2020). Low-cost measurement of facemask efficacy for filtering expelled droplets during speech:
<https://advances.sciencemag.org/content/early/2020/08/07/sciadv.abd3083>
- *The Institute of Conservation (ICON)*. Unable to do your normal work at the moment? Top tips for making the most of your time at home:
<https://icon.org.uk/news/icon-trustee-pierrette-squires-acr-15-ideas-for-conservators-at-home>
- *Tickbox*. Time to focus on non-contact participation?:
<https://www.tickboxmarketing.co.uk/time-to-focus-on-non-contact-participation/>
- *UK Department for Business, Energy & Industrial Strategy*. Working safely during the coronavirus – guidance on construction and outdoor working environments:
<https://www.gov.uk/guidance/working-safely-during-coronavirus-covid-19/construction-and-other-outdoor-work>
- *World Health Organisation*:
 - Covid-19:
https://www.who.int/health-topics/coronavirus#tab=tab_1
 - Health Alert on WhatsApp (Arabic):
wa.me/41225017023?text=
 - Looking after our mental health:
<https://www.who.int/campaigns/connecting-the-world-to-combat-coronavirus/healthyathome/healthyathome---mental-health>
 - Protect yourself and others:
<http://www.emro.who.int/health-topics/corona-virus/protect-yourself-and-others.html>

Security

- *American Alliance for Museums*. Disaster Preparedness and Emergency Response Plan:
<https://www.aam-us.org/programs/ethics-standards-and-professional-practices/disaster-preparedness-and-emergency-response-plan/>
- *Arts Council England*. Security in museums and galleries: the museum security toolkit:
https://326gtd123dbk1xdkdm489u1q-wpengine.netdna-ssl.com/wp-content/uploads/2016/11/TheMuseumSecurityToolkit_02.pdf
- *Claire Fry ACR and Spencer & Fry*. Collection Care Guidance for Museums and Historic Properties during the Covid-19 Crisis:
https://icon.org.uk/system/files/public/collection_care_guide_for_museums_and_historic_houses_during_covid-19_updated.pdf
- *Collections Trust*:
 - The Security Audit:
<https://collectionstrust.org.uk/resource/the-security-audit/>
 - Emergency planning e-learning tool:
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² See note 1

³ See note 1

⁴ For other materials see Nazario, Brunilda (August 21, 2020). How Long Does the Coronavirus Live on Surfaces? *WebMD Medical Reference*. <https://www.webmd.com/lung/how-long-covid-19-lives-on-surfaces>. Notice that this articles partly outdated the recommendations by the *National Center for Preservation Technology and Training (NCPTT)*: Covid-19 Basics: Disinfecting Cultural Resources listed in **Resources**-Preservation –*Sanitation*.

⁵ See note 4