

RESEARCH ARTICLE

Ebola in the rear-view mirror: how epidemic pasts shaped Sierra Leone's preparedness and response to Covid-19

Fred Martineau¹ , Annie Wilkinson²  and Lawrence Babawo³

¹Global Health and Development, London School of Hygiene & Tropical Medicine, Faculty of Public Health and Policy, UK,

²Institute of Development Studies, University of Sussex, UK and ³Njala University, Sierra Leone

Corresponding author: Annie Wilkinson; Email: a.wilkinson@ids.ac.uk

(Received 3 June 2025; revised 26 November 2025; accepted 4 December 2025; first published online 26 March 2026)

Abstract

This paper examines how past experience and legacies of epidemics shaped Sierra Leone's response to COVID-19 and how these influences evolved over time. COVID-19 unfolded in the wake of the West African Ebola epidemic (2013–2016), a crisis which was unprecedented in scale. Despite differing markedly in both transmission patterns and clinical outcomes, the Sierra Leonean government repeatedly invoked Ebola when responding to COVID-19, framing the new outbreak through the lens of the old. Drawing on ethnographic fieldwork and interviews with policymakers, response personnel, health workers, and members of the public, the paper analyses how Ebola's imprint surfaced across four domains of the COVID-19 response: public and governmental framings, the design and implementation of key control measures, disputes over incentives and hazard pay, and practices of data and testing. It shows that when confronting a new outbreak, the past manifests in diverse ways. The analysis reveals how these 'epidemic pasts' – contained in lessons, memories, legacies, and assumptions – actively constitute 'epidemic presents'; and should be understood as politically mobilised and socially contested, shaping responses in both enabling and constraining ways. As such, it is suggested that past experience has been under-explored in preparedness and response, and that formal 'lessons learned' exercises offer a limited view of how the past is relevant.

Keywords: Pandemic preparedness; COVID-19; Sierra Leone

Introduction

'I was trying to straight away have in the rear-view mirror, the Ebola situation, so that no chances were taken'. Foday (Participant names have been changed to protect anonymity.), a senior member of one of the National COVID-19 Response Centre (NaCOVERC) pillars, reflected on his response to the first confirmed case of COVID-19 in Sierra Leone in 2020. Talking of the *'Ebola scar that has been left on people'*, the way that COVID-19 *'ignited all ... we experienced during Ebola'*, Foday referenced Ebola frequently when talking about the early days of the COVID-19 outbreak – despite not having been in Sierra Leone himself during the 2014–16 Ebola epidemic. Foday had been working overseas at the time and returned to Sierra Leone only after the 2018 election changed the political party and president in power. Nevertheless, memories of Ebola – even from afar – were active in his mind when working on COVID-19 responses. He talked of

such memories in largely beneficial terms, working to guard against complacency and to encourage people to ‘*caution themselves*’.

Today did, however, recognise some negative impacts of drawing parallels between Ebola and COVID-19. For example, the new outbreak had reactivated fears of contagion in health centres for both health workers and patients. The level of funding received from international donors by the government during COVID-19 did not match the level remembered during Ebola, leading some members of the public to question the adequacy of the response and whether resources were actually being redirected into private pockets. That concern was borne of longstanding suspicion over government (in)action and interests, where visibly under-resourced programmes were often interpreted as evidence of misdirected external funding, rather than an absence of that funding. ‘Emergencies’ are by nature out of the ordinary. What forms of attention and resources a given crisis draws inevitably lead to comparisons with previous ones; there have been many in Sierra Leone, with each leaving different traces and affecting opinions and trust in future responses.

This article examines how experiences of past outbreaks shape responses to new epidemics, exploring the diverse forms these ‘pasts’ take – whether as codified lessons, institutional legacies, or lived memories – and the roles they play in influencing present action. Specifically, it explores Sierra Leone’s COVID-19 outbreak and response through the lens of the country’s recent experience during the West African Ebola outbreak only six years earlier (2014–2016). Reflecting on the links between the past, present, and future in epidemic preparedness and response, this article highlights that while the future has received considerable attention, the past is a neglected angle in preparedness scholarship. Drawing on ‘lessons learned’ literature, as well as studies of history and memory, some reflections are offered on how the past informs preparedness and response. The paper suggests that epidemic memories are politically mobilised and contested, shaping response strategies to reflect broader social and institutional dynamics, and in ways which cannot be reduced to neutral or technical lessons, as is attempted in post-hoc ‘lessons learned’ exercises. First, the Ebola outbreak and its legacies in Sierra Leone are outlined, before turning to the COVID-19 pandemic. For COVID-19, the general trajectory of the outbreak in Sierra Leone is described before analysing four examples where the past was brought into the COVID-19 response with different implications: 1) framings of Ebola and COVID-19, 2) control practices, 3) disagreements over incentives and hazard pay, and 4) data and testing.

How is the past part of preparedness?

Preparedness in global health emerged from a distinct set of political, technical, and security concerns in the latter part of the 20th century (Lakoff, 2007). The central logic of preparedness as an explicit policy concern was the notion that potential future health challenges could and should be addressed in the present. A set of anticipatory actions became standard to the preparedness approach, including, for example, scenarios and simulations, early warning systems, stockpiling of relief supplies, plans for coordinating response among diverse entities, crisis communications systems, and preparedness assessment metrics. These practices rest on speculative assumptions about what future epidemics will look like and normative judgements about which interventions will be effective in controlling them. In this way, preparedness policies provide a road map for (subjectively) imagined futures to structure action in the present.

Preparedness has become increasingly dominant in global health and has attracted significant resources, though not without criticism. An early accusation was that the preparedness agenda was led by the Global North, driven by a fear of contagion from the Global South, and that in prioritising imaginary future threats, it directed resources away from real and present problems in already marginalised populations, especially those which were not deemed risks to Global North populations (IDS, 2023). Preparedness policies were viewed as being overly technical, expert-led and top-down, and not inclusive of diverse views and forms of knowledge (MacGregor *et al.*, 2022). When it came to preparing and responding to disease outbreaks in practice, preparedness

plans often fell apart in the face of real-world politics, leading to further criticism that there was a need to pay more attention to power, heterogeneous contexts and uncertainty in outbreaks and how these required adaptation and non-standardised approaches (MacGregor *et al.*, 2020). With COVID-19, these criticisms have intensified. Indeed, the failure of preparedness indicators to predict successful COVID-19 responses is particularly damning (Bollyky *et al.*, 2022).

Whereas preparedness explicitly tries to bring the future into the present, in practice, it relies more on the past as a pillar for preparations for the future. As Lynteris (2016) observes, *‘What renders the next pandemic a “preparable” catastrophe is precisely the fact that it is projected as something which is not (at) all-new’*. Preparedness draws most consciously and obviously on the past through formalised ‘lessons learned’ exercises, intended to shape future responses. Past experience is often referenced as being influential in how and why people, organisations, or countries are able to respond to new outbreaks. Of the SARS, MERS, and Ebola outbreaks, the Independent Panel for Pandemic Preparedness and Response had this to say: *‘Response models developed in relation to earlier outbreaks, including SARS and MERS, were rapidly adapted to the specific characteristics of this novel virus and its pathways of transmission Even though Ebola virus disease is a very different type of disease to COVID-19, countries with that experience drew on it to rapidly establish coordination structures, mobilize surge workforces and engage with communities’* (IPPPR, 2021, 31). It is taken as given that after an outbreak there should be attempts to ‘learn lessons’ to inform future preparedness efforts, as in this report to the G7 countries: *‘While there will always need to be adjustments for specific diseases, we can predict the key issues we are likely to face, learning from COVID-19 and past pandemics, and agree on guidance’*. (Pandemic Preparedness Partnership, 2021, 51)

‘Lessons learned’ inquiries are almost a ritual part of the preparedness-response-preparedness cycle, with high-profile panels and reports called for, especially when things have been seen to go wrong. This is despite the frequent complaint that the same lessons are repeated with each epidemic and are never learned. For example, in Canada, learning from SARS and H1N1 was contested, with experts disagreeing on whether recommendations were implemented or ignored in the COVID-19 response (Just and Boothe, 2020). As a process, some of the major learning exercises have been critiqued as involving too narrow a range of experts, some of whom had no on-the-ground experience of the crisis being discussed (Hutton, 2018). Indeed, the approach in such reports is often to make ‘lessons’ generalisable by decoupling them from the specific context and time in which they arose. So detached from context and realities, they have been labelled ‘fantasy documents’ (Birkland, 2009). Aside from the practical questions of what purpose they serve, ‘lessons learned’ exercises represent a very limited approach to the past, telling us little about how the past actually informs future action. Furthermore, their processes for gathering and capturing evidence open up questions about whose memories and lessons are sought, recorded, and learned.

Despite its perceived importance, both good and bad, there has not been much systematic thought about the different ways that the past manifests or is brought to bear in epidemic preparedness, and how it can help or hinder adaptive responses. In contrast to the prevailing view that experience is unproblematically beneficial, people involved in epidemic responses frequently express frustration at a tendency for measures to be taken that respond to ‘the last epidemic’ rather than the one in front of them. Le Marcis (2023) describes Guinea’s response to COVID-19 as being partially hindered by their Ebola experience, *‘when it materialized as the reproduction of old recipes it had detrimental effects on the institutional capacity to analyze and act reflexively’*. Past experience can be a double-edged sword.

In focusing attention on the past, and mindful of criticisms of preparedness as relying on narrow forms of expertise, this analysis aligns with Le Marcis’s in wanting to expand preparedness to include consideration of population or lay memory (Le Marcis, 2023). Le Marcis draws attention to the importance of trauma in shaping how populations respond to an epidemic, be it trauma from a past epidemic or from longer historical processes. Indeed, the relevance of history has been

a strand in much anthropological commentary on epidemics, which has argued that it needs to be considered as part of context-specific responses, for example, how past experience of abuse and violence fosters mistrust (Fassin, 2007; Wilkinson and Leach, 2015; Richardson *et al.*, 2016; Desclaux *et al.*, 2017). Drawing on Richards (2016, 2020), Le Marcis likens lay memory to ‘social knowledge’ which Richards has highlighted as shaping population responses to epidemics. Social knowledge is that which is borne of collective experience and shared within social groups, and with such knowledge comes a related capacity for adaptation and learning afresh.

The anthropology of memory and interdisciplinary memory studies provide some further insights. Historical legacies can take many forms, with colonial scholars offering many of these examples: *‘in material culture, in monuments, architecture, libraries, archives and museum collections, in alimentary diet, dress and music, but also in continuing flows of commodities, images and people. In perhaps less tangible but no less crucial ways, it shapes politics, economics, artistic and intellectual life, linguistic practices, forms of belonging or international relations’* (De L’Estoile, 2008). From these diverse reminders, memories and memorialisation processes can be individual or collective and shared (Halbwachs, 1992; Bosch, 2016), formal or informal, official or unofficial (Linke 2015). The past, therefore, is inevitably frequently contested. There is no one history and memory, but it is multiple and political. In these contestations, the past (or how it is remembered) has a social function in defining oneself, one’s communities, or one’s nations in relation to that past (Hobsbawm, 1972). Hacking (1995) emphasises the political role memory plays, both communally in cementing group identity, and personally in claims of knowledge about individual pasts. Memories of the past are, therefore, as much about the present as they are the past. As Fassin (2008) succinctly phrases it, ‘Memory of the past belongs to the history of the present’.

There is, it seems, considerable scope for thinking more thoroughly about the role of the past and the forms it can take, for example, as learned behaviours, sensibilities, or as artefacts and forms of material culture. An understanding of how these multiple pasts interact with the present is needed, and how they are mobilised, contested, or disregarded in response to new epidemic circumstances. While Le Marcis contrasted institutional memory (which, in his paper, was defined as pertaining to the state) with population or lay memory, in this paper, the focus is on the different forms that the past takes and how people – be they officials or members of the public – draw on various historical resources. The concern is not with static repositories of ‘the past’, ‘experience’, or ‘knowledge’, but with learning and adaptation processes.

Methods

Research on COVID-19 took place from January 2020 to May 2022, and combined participant observation with formal and informal discussions with actors active in national policy discussions or their implementation. The study was originally intended to focus on pandemic preparedness activities in general. With the emergence of COVID-19 as a global and national priority in Sierra Leone, fieldwork was redirected to focus specifically on COVID-19 preparation and response activities.

Key informant interviews were conducted with 17 participants either as one-off or repeat interviews to chart changes over time and to capture different moments within the COVID-19 epidemic. Participants were purposively selected to cover a range of perspectives, including Sierra Leonean and international, male and female staff from governmental, non-governmental, multilateral, and private sector organisations involved in the formal response. Most interviews were conducted face-to-face, with some conducted by telephone or through audio-visual conferencing software when travel restrictions limited in-person discussion. In-person interviews took place in private settings agreed with the interviewee, such as a private office at their place of work or a quiet space in a hotel. All interviews were conducted in English, were audio-recorded and transcribed

for analysis, complemented by reflective fieldnotes written during and immediately after each interview to capture non-verbal information and interactions.

Participant-observation was also conducted, for example, by sitting in as observers during surveillance meetings and forums for early policy discussions around COVID-19 preparations. However, the extent to which it was possible for FM and AW to engage in formal participant observation was severely constrained by travel restrictions throughout much of the study period. LB remained in Sierra Leone throughout the study period and was actively involved in the response, most notably as a member of Sierra Leone's Scientific Technical Advisory Group for Emergencies, which informed the analysis. This paper also draws on memories and experiences of the authors while working with the 2014–16 Ebola epidemic response as well as longstanding research and professional relations in Sierra Leone (see, for example, Martineau *et al.*, 2017; Wilkinson and Fairhead, 2017; Babawo *et al.*, 2022).

The study received ethical approval from the Institute of Development Studies, UK and the Sierra Leone Ethics and Scientific Review Committee. Free and informed consent was given by all research participants.

Results: legacies and response

Ebola in Sierra Leone

The West African Ebola outbreak began in December 2013 in the eastern forest region of Guinea, near the border with Liberia and Sierra Leone. It is the largest Ebola outbreak ever, with 28,600 recorded cases and 11,325 recorded deaths (World Health Organization, n.d.). In the first few months of 2014, the virus was spreading largely undetected before a cluster of cases gained sufficient attention, and the mystery disease was eventually diagnosed as Ebola virus. At this point, there were already many chains of transmission, likely in all three countries. Yet, the response from WHO and national governments was lacklustre and uncoordinated. For example, it took another three months before the WHO held a regional meeting on controlling the outbreak, and at least eight months before they developed a roadmap for containment (Wilkinson and Leach, 2015). By June 2014, the outbreak was rapidly growing, causing social unrest and finally raising alarm nationally and internationally. Aid agencies evacuated their staff from all three countries, airlines stopped flights, and non-affected countries imposed travel restrictions. This meant that countries that were already ill-equipped to deal with an Ebola outbreak – lacking personal protective equipment and other medical supplies, appropriately trained healthcare workers, sufficient isolation infrastructure, or the systems to manage this – now faced even more acute resource challenges (Farmer, 2014).

As conditions in the three countries worsened and threatened to spiral (further) out of control, an unprecedented international response architecture swung belatedly into gear. In August 2014, the WHO declared the outbreak to be a Public Health Emergency of International Concern (PHEIC). In September 2014, the U.N. Security Council passed a resolution declaring the outbreak a 'threat to international peace and security'. Also in September, the UN Mission for Ebola Emergency Response (UNMEER) was created, the first-ever UN Emergency Health mission (World Peace Foundation, 2017). By the end of 2014, money, resources, and people from across the world had begun to arrive in the region, and the response in the three countries was large-scale and radically better equipped. For the UK, which, due to colonial ties, was the main donor and primary international partner in Sierra Leone, the increased aid they were channelling into the country was done on a 'no-regret' basis (Raine, 2016), a term which captured the perceived severity of the situation as requiring more money, faster, and without some of the usual controls which can cause delays.

In the final tally, Sierra Leone had the highest number of cases of the affected countries, at over 14,000. Although official case numbers are likely lower than actual cases, due to chaotic early data

collection and hiding of some cases by families and communities, the basic trajectory of the Ebola outbreak in Sierra Leone is fairly well documented and agreed upon. The first cases were detected on 25th May and came from east of the country, which bordered Guinea (Wauquier *et al.*, 2015). With Kailahun and Kenema districts as the early epicentres, treatment and isolation were initially centred around Kenema Government Hospital, where there was an established treatment unit for Lassa fever, a viral haemorrhagic fever thought to be similar to Ebola. There were also ‘holding centres’ in Kailahun, and MSF established a treatment centre there in June.

These facilities were soon overwhelmed, however: Dr Khan, the doctor in charge of the Lassa ward, who became the doctor in charge of the Ebola unit in Kenema, contracted Ebola and died on 29th July 2019. This, plus the deaths of other experienced Lassa fever nurses such as Mbalu Fonnies, sent shockwaves around the country. The president declared a State of Emergency on 30th July and began to enforce quarantines on regions, mostly in the East, where Ebola was rampaging. However, the disease had already spread, and the first cases in Freetown were reported on 23rd June (WHO, 2015). By August, cases were increasing at an ever faster rate, especially in Freetown. On 19th–21st September, the government enforced a three-day national lockdown to allow surveillance teams to identify cases, including going house to house to search for cases, as there were concerns that infected people were being hidden. An enduring point of tension between the public and response workers/organisations was the attempt to enforce control strategies which were deemed unsafe, undignified, or socially intolerable. For example, patients were taken without choice to hospitals which were unclean and often hundreds of miles away, mass and medicalised burials were conducted, and cases where patients were lost to families and never returned from treatment centres. These problems added to the already significant distrust people had in health systems, governments, and outsiders in general (Wilkinson and Leach, 2015).

There were also problems in the health workforce. Nursing staff and doctors contracted the disease and died. The result of this was not only to reduce an already insufficient pool of expertise, but also to cause the remaining colleagues to strike in demand for hazard pay and better conditions, given the risks they were facing on the frontline. Some were also motivated by seeing the increasing influx of money into the country, and frustration that it was not reaching them. Some of this money was clearly going into much expanded response operations. Huge Ebola Treatment Units were being built around the country, although controversially – for instance, at the flagship Kerry Town facility outside Freetown – this was a slow process. The dire situation also brought about innovations in the way Ebola had always been treated. The inability to build treatment centres fast enough, combined with public fears about using them, and many cases therefore being treated at home or in communities, led to the creation of ‘Ebola Community Care Centres’ across the country. These were smaller and had more minimal biosafety and treatment options, and could be staffed by a combination of community members and health care workers. Although ‘not ideal’, they were deemed to be a more pragmatic approach given the circumstances (Whitty *et al.*, 2014). The other major innovation was the roll-out of vaccine trials, which by the end of the outbreak had proved to be effective and produced the first-ever vaccine for Ebola (Gsell *et al.*, 2017).

The location of the National Ebola Response Centre (NERC), set up partway through the Ebola epidemic when the control of the response was taken out of the Ministry of Health and Sanitation’s hands and given over to military command, was also revealing. The NERC headquarters was established in the buildings that originally housed the Sierra Leonean ‘Special Court’, a one-of-a-kind institution created by the UN to try war criminals implicated in Sierra Leone’s civil war. The building had only been formally handed over to the Sierra Leonean government in December 2013, just as the Ebola outbreak was beginning (Special Court for Sierra Leone, 2013). The use of this building – and turning the former courtroom into the Ebola situation room – was a physical representation of the parallels many people drew between the fight against Ebola and the fight against the rebels: both originating from and spilling over the country’s Eastern borders,

before taking hold throughout Sierra Leone. But in contrast to armed forces, Ebola was ‘the enemy you cannot see’ (Richardson *et al.*, 2016).

After a peak around the end of 2014 and beginning of 2015, cases began to decline, and the country entered a period of very public countdowns and flare-ups until the country was finally declared ‘Ebola free’ on 17th March 2016. The story of Ebola followed what might appear to be an archetypal epidemic (Wald, 2008) arc: it starts in a remote corner of the world, travels to urban centres, spreads like wildfire causing death and wreaking panic and disruption, until finally it is brought under control – and ‘to zero’ no less – by concerted efforts from scientists, governments, and international agencies. ‘Heroes’ were deployed, and scientific and technological advances, for example, the vaccine and treatment centres, ultimately ‘saved the day’. The national and international response to Ebola is now often framed as a success, by this happy ending: that there were great achievements against the odds, important lessons were learned, and further untold harm was avoided. Yet this ‘success’ has also been narrated very differently: national and international actors alike initially acted far too slowly; many international organisations deserted the country at the time it most needed support; billions of dollars of international funding translated into little tangible benefit for most of the population; and chaotically thought-through containment measures, regardless of their eventual impact on disease transmission, caused major physical, emotional, and social suffering for many. (Abramowitz *et al.*, 2017; Bolten and Shepler, 2017; Martineau *et al.*, 2017; Wilkinson and Fairhead, 2017). Narratives that focus narrowly on national and international actors arguably elide the role that local organisation and action, social knowledge and ‘people’s science’ played in reducing transmission rates and improving care of those affected (Richards, 2016).

In practice, multiple narratives co-exist and continue to evolve in Sierra Leone concerning the Ebola epidemic and its responses. The next section summarises the COVID-19 experience in Sierra Leone, before turning to examine how Ebola legacies, and different perspectives on them, intermingled and shaped the COVID-19 epidemic and response in Sierra Leone.

COVID-19 in Sierra Leone

The Sierra Leone government held its first meetings dedicated to COVID-19 at the end of January 2020, in the week prior to the WHO declaring COVID-19 a PHEIC. Sitting in as observers to the Emergency Preparedness and Resilient Response Group (EPRRG) meeting, the business-like agenda and efficient running of the meeting were apparent, with discussion rapidly moving through the agenda points. Seated at the main table were a mix of Sierra Leonean government officials, with only a small number of representatives of international NGOs and donors. The discussion emphasised the need for concrete and costed plans for what Sierra Leone would need to respond to this still relatively unknown virus, focusing mainly on surveillance, with a particular focus on the main international airport, risk communication and case management.

The key outcomes of these early meetings were to activate the Emergency Operations Centre to a Level 2 state of emergency in early February and commence airport screening of all passengers. The phoneline used during Ebola to report symptoms and deaths, ‘117’, was relaunched with a focus on COVID-19. Overall, the Sierra Leone government was notably quick to respond, even before there was a confirmed case in any neighbouring country. The President was visibly involved with preparation activities, including performing an assessment tour of the Infectious Disease Prevention Centre at ‘34 Military’, the army’s main medical hospital in the capital, Freetown. The President made regular public broadcasts at this time, emphasising both the deadly nature of COVID-19 and drawing explicit parallels with Ebola.

One ‘lesson’ from the Ebola epidemic that was felt strongly at senior policy levels in both government and international organisations was the danger in acting too late in an epidemic. Indeed, being seen to react strongly, even over-reacting to a threat that later did not materialise, was talked about as being desirable.

‘What it felt like to me, was, because of Ebola, our response was [to] overreact so that this doesn’t happen again. . . . Like, don’t let it happen. Don’t let it spread. So that was really good. I think that was really positive. And I think that feels like there’s a preparedness culture in partners and donors in the government’. (Senior manager, international organisation).

Relatively early on in the outbreak, the Health Development Partners group of major international donors in SL met to coordinate who would fund what and, importantly, what no one would fund. The global nature of the COVID-19 pandemic precluded the levels of donor funds mobilised during the Ebola outbreak. Nevertheless, donors and project implementers were, to an extent, able to redirect funds intended for other projects toward Covid-specific objectives. This was helped by the fact that many funding streams and planned projects by international organisations had a primary aim to address health security and/or post-Ebola recovery. It was more straightforward bureaucratically to leverage such funds to respond to the unexpected emergency than it had been in 2014 at the onset of Ebola.

‘we had a global health security element of a reproductive maternal and child health programme, which I previously thought was a bit weird, and that you know, we should just have a separate programme. But what it essentially meant is that [having these funds within a bigger pot] gives you the mandate to respond and flex without having to do a whole other business case, even a rapid one. So we had a lot of adaptability, and flexibility. And we were able to respond very, very quickly with our existing partners in every district, which was great’. (Senior manager, international organisation).

Nevertheless, the levels of funding available were substantially lower than people had become accustomed to during the Ebola outbreak. At the policy level, the disconnect between expected and available funding led to the pre-emptive approval of some initiatives on the expectation of funding which never materialised, most notably on hazard pay for health workers. At a more local level, frontline response personnel managed similar infection control measures with notably fewer resources than they had during Ebola.

The president formally declared a state of public emergency in March 2020, soon after concerns about symptomatic aviation passengers, but before the first confirmed case of COVID-19. The president appointed an official COVID-19 response team, initially led by the Minister of Defence, a retired army brigadier, building on the perceived success of positioning the military at the centre of the Ebola response (see e.g., Boland *et al.*, 2024). Local chiefs re-enacted bylaws that had been established during Ebola, such as alerting the chief if anyone is sick. International flights into Sierra Leone were halted, and all land borders were closed for an initial period of one month. Restrictions on activities and movement increased rapidly after the first confirmed case of COVID-19 in SL on 31st March 2020. The confirmation of a second case shortly afterwards prompted a three-day lockdown on 5th April. The government introduced a nationwide night curfew and restrictions on travel between districts.

The increasing intensification of response measures coincided with a number of violent events, including: riots in Freetown’s main prison, after one inmate tests positive; in a fishing town near Freetown when local official extended lockdown restrictions on working but only for fishermen; and multiple protests in the northern part of the country, generally considered to be a stronghold for the opposition political party. Regardless of the actual causes of these events, narratives quickly circulated of their party-political undertones. In an address in May 2020, the President attributed these ‘violent terrorist attacks’ as orchestrated by ‘known agents and associates of the [opposition] party’ (Government of Sierra Leone, 2020b).

For health workers and those involved in the response, the potential for COVID-19 to become a major epidemic in Sierra Leone felt all too possible, in some cases reactivating traumatic memories. The first death due to COVID-19 was recorded on 22nd April. Health care workers were

genuinely concerned for their health, with some doctors refusing to see patients in person and consulting only over WhatsApp. A second three-day lockdown took place in early May, justified in terms of allowing the intensification of response efforts rather than due to any direct impact on viral transmission. Multiple treatment centres opened in Lungi, near the international airport, in central Freetown and on the outskirts of the capital. These and subsequent Covid centres were established at different sites from previous Ebola Treatment Centres during the Ebola outbreak, as the latter had been abandoned rather than integrated sustainably into the health system. In contrast to Ebola, Covid treatment centres were led by Sierra Leoneans rather than by international organisations, as the majority of Ebola Treatment Centres had been. By the end of May, only one district had yet to have a confirmed COVID-19 case. Response personnel were *'feeling the load, you get that sense [of health system overload]'* particularly around bed capacity.

'March, April, May, particularly April of May, was a lot of work. It had a lot of national attention, had a lot of attention within the medical community and within society as a whole. People were working at a very frenetic speed and getting a lot done. And there was a lot of pressure and priorities. And we were starting to see very high positivity rates, very high numbers of admissions coming into hospitals, we were rapidly trying to expand treatment bed capacity and referral systems and improve the quality of service. And then from June onwards, there was kind of this expectation of this is just the beginning and the worst has to come. And then from June onwards, things just seem to wind down, positivity rates dropped' (international health worker).

Somewhat surprisingly to many in the response, COVID-19 case rates reversed rapidly in July 2020 (Liu *et al.*, 2022). Concerns about a sufficiently catastrophic rise in cases that would overwhelm the health service never materialised. To an extent, this reflected a peak in reported cases across sub-Saharan Africa, although reported case numbers dropped more rapidly in Sierra Leone than the regional average, and many country caseloads peaked later in 2020 (WHO AFRO, 2020). The Government of Sierra Leone began to ease control measures, with commercial flights resuming at the end of July 2020 and the land border reopened with Guinea in September 2020. By November 2020, the night curfew had been lifted indefinitely and the US CDC reclassified Sierra Leone as a low-risk country for COVID-19. In contrast to the highly publicised countdown to the official end of Ebola, this time there was no clear event or point at which COVID-19 was no longer a concern. Life returned to 'normal' at different times and speeds for different people.

Despite a seemingly strong pre-epidemic response, many Sierra Leoneans nevertheless held considerable mistrust in, and disengagement from, official containment measures. The next section looks at four elements of the response in particular: the way in which COVID-19 was explicitly compared to Ebola in early communications and policy discussions, how early experiences with COVID-19 cases clashed with planned responses, hazard pay as an example of the changing global context, and finally, how shifts in testing and reporting shaped perceptions of the epidemic.

Framings: narrating COVID-19 as Ebola

The strength of the association between COVID-19 and Ebola permeated the whole early response. Even in meetings where people explicitly warned against treating the two epidemics as the same, policy discussions still turned towards the relatively familiar processes and structures of the Ebola response.

'Even the conversations that said, we have to stop only talking, only treating the last disease, then continue to talk about the last disease, because that's where we have the most recent lessons, because it was the big one that made everyone stand up and pay attention'. (Senior manager, international organisation).

This included assumptions that COVID-19 would require a similar allocation of resources among the ‘pillars’, the key response areas that high-level operations are organised around, themselves largely unchanged from the Ebola response. For example, one early draft budget reportedly allocated roughly 60% of the total response budget to burial teams – perhaps proportionate to the importance of safe burials during an Ebola outbreak, but vastly disproportionate to the main priorities in managing the COVID-19 epidemic.

The explicit and calculated blending of the two viruses extended to early public communications concerning the pandemic and its response. For example, in one speech on the 18th March 2020 (Government of Sierra Leone, 2020a), two weeks before the country’s first confirmed case, the President stated that:

‘Like the Ebola virus, [COVID-19] is easily transmitted from person to person. Like Ebola, it is spread through social contact. . . . Like the Ebola virus, the Corona virus can be deadly. . . . Corona, like Ebola, is a highly infectious and deadly virus. . . . This is not a time to panic. I have held consultative meetings with fellow Sierra Leoneans right across board including those persons who managed the Ebola crisis’.

Such narratives solidified connections between the present outbreak and people’s experiences and learning from living through the Ebola epidemic. Early government messaging, coinciding with vivid news reports of chaotic scenes of the outbreak spiralling out of control in economically much richer countries such as Italy, prompted many members of the public to re-enact local control measures established during Ebola, for example, widespread reinstallation of handwashing stations and ‘Veronica buckets’ outside hotels, restaurants and on entering some neighbourhoods in January and February 2020.

The tactical deployment of communication narratives that strengthened the association between COVID-19 and Ebola seems to have played a key role in people’s early engagement with, and broad acceptance of, COVID-19 response measures. Once questions began to emerge about the similarity of COVID-19 to Ebola, however, such narratives weakened people’s trust in the necessity of, and motives underlying, the severe restrictions imposed. As the government’s messaging had been replicated by local authority figures, this further embedded associations between COVID-19 response measures and party politics.

‘What we see in Covid, was politicians taking most of these things, they had honourables [members of parliament], giving money to sensitise the people, you have counsellors giving money to sensitise people. And as I said, when you do this, you have a different opinion. You can have the whole community supporting one political party, and even when you call for meetings, you can only have those who are within your political party and not the others’. (Laboratory worker and Ebola Survivor).

Control strategies

Connections between Ebola and COVID-19 were made not just in external-facing communications but in internal policy discussions concerning the COVID-19 response. Many early outbreak control practices closely echoed those used during the Ebola epidemic. In other words, measures implemented pre-emptively to contain the present outbreak, COVID-19, were better adapted to a previous one: Ebola. Turning to familiar forms of control techniques, even if designed to respond to a different virus, had important benefits in terms of speed and acceptability of their implementation. Again, however, people’s familiarity with Ebola-era response measures encouraged a direct comparison between the two outbreaks. The material legacies of both the Special Court and the Ebola response were reminders of extraordinary outside interventions in the country’s troubles, interventions which for COVID-19 were conspicuously absent. When people’s

experiences with COVID-19 began to depart from those they remembered during Ebola, this threatened their trust in the entire response.

The reimplementation of relatively intensive containment measures used during the Ebola epidemic had pragmatic implications for the COVID-19 response. Concerted case finding, contact tracing, and case management played a key role in bringing the Ebola epidemic under control – but were also implemented in a very different global context, particularly in terms of resources available. For example, there were initial plans to release an alert and test for every death, regardless of cause, as there was with Ebola. This became increasingly challenging to implement, and less of a priority for a virus that does not have a peak contagious period immediately before and after the moment of death as with Ebola (Vetter *et al.*, 2016). The relaunching of the ‘117’ telephone alert system, first launched during Ebola, was considered by many ministry officials as an important early success within the response. Choosing the exact same number for the alert as during the Ebola response was considered helpfully familiar to the general public. For many outside of the ministry, however, 117 was remembered far less favourably, having become synonymous with social rifts caused by neighbours or family members alerting the authorities of someone showing symptoms of Ebola, perceived to be, at times, an act of betrayal or denunciation more than one of public duty.

In terms of case management and quarantine, the decision was made early on to isolate every confirmed case in a health facility, regardless of the severity of their symptoms, in a notable departure from what was considered appropriate in Europe and North America. Concerns with the feasibility of this approach from international medical staff in an early EPRRG meeting were given short shrift, with the meeting chair asserting that the decision had already been made at the ministry level that all confirmed cases would be treated as inpatients. This echoed the policy that had been in place during Ebola, a virus with a very different pattern of contagion, where nearly all positive cases would develop severe symptoms, underpinned by low levels of trust Sierra Leonean government workers had in their citizens to voluntarily abide by infectious control measures. It also illustrated a pattern across the government’s early plans, which assumed that any COVID-19 outbreak in the country would be relatively small and quickly contained. A great deal of focus was given to how to identify and contain people arriving internationally with COVID-19. Much less policy space was given over to thinking about how proposed approaches would play out when community transmission occurred.

Lockdowns were one intervention where experiences of the same intervention during the Ebola response helped manage an appropriate departure from what had become a global norm in responding to COVID-19. Initial plans for a lengthy period of lockdown after the first case of local transmission in Sierra Leone were rethought after concerns were raised about the harms that 21-day quarantines had caused during Ebola, particularly in terms of food security. The government still implemented lockdowns, but for only three days – the same duration as had been implemented during Ebola. While it is unclear how helpful these short lockdowns were to wider control measures, this at least avoided more widespread collateral harm. Nevertheless, this compromise generated a mismatch between the ostensible logic of short lockdowns to break transmission chains and the known incubation period and transmission dynamics of COVID-19, leading people both inside and outside of the response to further question the efficacy and intent of government policy.

The fact that the first confirmed cases of COVID-19 were amongst health workers had particular implications for how the response subsequently unfolded. Contact tracing of these first cases identified the majority of frontline health workers in the country’s main children’s hospital as contacts who needed to isolate, leading to the complete closure of the hospital. Furthermore, nurses who had tested positive for COVID-19 and were held in treatment centres, despite being asymptomatic or with mild symptoms only, were vocal on social media about what they perceived to be unacceptable care there. Videos and messages circulated about how little medical treatment they received and how few health personnel cared for them, prompting senior members of the

response team to visit them in person and listen to their concerns. While clinical treatment may not have been indicated for such patients with mild symptoms, the sparse care they received was felt to be at odds with the importance given by response personnel that they remain in a care setting. For many, the tangible harms from conforming to response protocols outweighed the apparent severity of COVID-19 in Sierra Leone.

'We were seeing pictures on social media that people in the quarantine homes are not, they're not treated humanely . . . people were just comparing those things to what was happening at the earlier stage of Ebola. . . . They were put in quarantine homes, no water no food, people were really struggling just like at the initial stage [of Ebola]'. (National public health worker).

'When I worked with [Ebola], I used to work at [a major government hospital], we used to have a bed capacity of 19. And more than half of them would die every night. A whole family would be wiped out during Ebola. . . . But in terms of Covid, the recovery was very fast. People will go after two, three days, then discharge. And people expect that when you get Covid you should be very sick. And that's why people rejected, we had some of our ambulances broken because of resistance. Somebody will say, Look, I'm healthy. Look, I'm fine. Why do you want to take me to a treatment centre. And that actually led to policy change in terms of home isolation' (Laboratory worker and Ebola Survivor).

Such dissonance between continued government rhetoric of the similarities between COVID-19 and Ebola, and what people were experiencing on the ground, fuelled more generalised suspicion of the government's response to COVID-19. People's day-to-day tangible experiences with COVID-19 began to diverge markedly from their experiences during Ebola. Although excess mortality in Sierra Leone during COVID-19 is likely to have been far higher than officially reported figures suggest (Wang *et al.*, 2022), deaths that were clearly attributable to COVID-19 were not only lower than during Ebola, but dispersed across the country rather than clustered in particular neighbourhoods or villages.

'There was a boy . . . I think he was around 3, he was always playing the boy was very active. People were saying, look at the boy they said, he has Corona look as him playing. So they see these things as people trying to frame the outbreak. So once they are not seeing people dying in numbers, they will not believe. . . . In my community in Goderich, there were some quarantined houses. Since they took the first corona case away, nobody was infected anymore. So people were saying, how is this true?' (National public health worker).

As one health worker, himself a survivor of both Ebola and COVID-19, responded:

'Because of what had happened for Ebola, at the beginning, it created panic, because people knew what happened during [Ebola]. That's why at the beginning, people were respectful of the law, the rules. But they suddenly realized that with Covid the fatality was very low. This is a joke' (Laboratory worker and Ebola Survivor).

Where policies during COVID-19 did depart from those during Ebola, this could also foster distrust. During the Ebola epidemic, anyone admitted to an Ebola Treatment Centre received all their treatment free of charge, whether Ebola-related or not. In COVID-19 treatment centres, only COVID-19 treatment was given free, with treatment for other conditions charged as normal. When patients who were expecting all their care to be free were asked for money before being treated, this led to accusations of corruption. Occasions when senior government officials and response personnel were seen to be ignoring their own response measures added both to people's

frustration with the restrictions, and to questions about the severity of the disease, if even those implementing control measures were not worried enough to conform to them.

Incentives and hazard pay

The issue of hazard pay became a particular point of contention between different groups within the COVID-19 response. During the Ebola response, health workers working with Ebola patients received an additional salary to compensate for the additional personal risk this entailed. This, however, was in the context of ‘no regrets’ funding by major international donors. The global financial situation was far more constrained during the COVID-19 pandemic. Early on in the COVID-19 response, major international donors agreed that they would not fund hazard pay for health staff. Ministry of Health and Sanitation officials, however, felt this was sufficiently important to maintain a functioning health system, with an established precedent, that they announced such a policy anyway, leading to a breakdown in trust with both donors and the Ministry of Finance, as it was unclear how the policy would be funded.

‘There were points where we quite clearly said to government, do not incentivize health workers to work with Covid. Because we know what happened in Ebola, you had a strike, same happened. But incentivizing of healthcare workers was ... I think part of that was a misunderstanding of Covid right at the beginning’. (Senior manager, multilateral organisation).

The extensive verification checks needed to confirm eligible staff members led to substantial delays before the promised benefits were received by health workers. Similar verification checks used when distributing hazard pay during the Ebola response had also led to delays in paying response staff what they were owed, even with a well-resourced programme. Continued inquiries into corruption during the Ebola response, however, made such checks even more important – even without the resources to do so in a timely manner.

‘This happened in the Ebola response. They did verification even after Ebola. There was verification. And up to last year, there was this commission of inquiry looking into Ebola funds. And I believe if maybe there is a change of government, you will still have investigation into Covid funds. So this is happening because of some of this incentive thing’. (Laboratory worker and Ebola Survivor).

Rather than boosting morale, delays in hazard pay contributed to a further breakdown in trust between health workers and the Ministry, resulting in strike action. Nevertheless, this was arguably a locally justifiable policy at the time, given the deep-seated fears held by the health workforce, even if it was deemed to be ‘bad practice’ globally. It also illustrates the challenges that resource-constrained national actors face when attempting to depart from global norms.

Data and testing

An enduring memory from the Ebola epidemic is of the daily reports of confirmed cases of Ebola, where numbers were rising and which areas had reached ‘zero’. Laboratory-confirmed cases became one of the key ways in which both the epidemic and progress in its containment were made tangible. Laboratory-confirmed COVID-19 cases continued to play an important role in how the epidemic was perceived, but in a very different context. In particular, a large majority of people with Ebola developed severe symptoms. The case fatality rate was high enough to reasonably assume that anyone dying *with* detectable Ebolavirus died *of* Ebolavirus disease. With COVID-19, this was more debatable. Official COVID-19 figures were therefore more contestable and less clearly aligned to how people perceived the epidemic through other means.

For example, in June/July 2020, not only were Covid-attributed deaths rising, but the case fatality rate – a sign of the quality of the response – was also starting to rise higher than in neighbouring countries. This led to a marked change in how official deaths from COVID-19 were decided. Before being reported, COVID-19-related deaths had to be confirmed by a committee. With decreasing community testing and inconsistent testing of people dying outside of Covid treatment centres, in effect, the only COVID-19 deaths reported became those who had been admitted to a treatment centre.

‘There were also issues . . . of the politics of death numbers and numbers and competition between different countries and classifying a death became slightly more political and needed to be approved by a committee as being a Covid related death. . . . There was a point there where the death numbers suddenly didn’t keep on rising as expected. And I think that that was a perceived political directing [i.e. perceived to be the result of political interference]’ (Senior manager, multilateral organisation).

The need to be confirmed by committee also led to delays from the time of death to that person’s death being officially reported. There were occasions when someone high profile would die with COVID-19, whose death was known about and discussed publicly, but daily sit rep reports would still report zero deaths for several days until the ‘death committee’ officially confirmed it. This further undermined trust in the legitimacy of reported numbers.

Discussion

This paper has charted ways in which Ebola – as remembered and memorialised – shaped how the COVID-19 epidemic was perceived and how responses to it played out in Sierra Leone. Early on in the epidemic, memories of the Ebola epidemic were not only inscribed in emergency response configurations but also actively deployed by the government response as a means to instigate public conformity to containment measures. Parallels between Ebola and COVID-19 helped ease the reintroduction of familiar means to control an unfamiliar disease. As people’s experiences of the COVID-19 epidemic began to depart from their memories of life during Ebola, however, so too did lay and state perceptions diverge regarding the proportionality of these response measures, compounding differences in how Ebola response measures were remembered.

Many research participants spoke about the difference between plans ‘on paper’ and what actually happened, what they knew, or what they decided to do. In analysing epidemic pasts and their role in informing responses, it is helpful to distinguish between sharable ‘codified’ knowledge and tacit embodied knowledge. Codified forms of the past are intentionally developed to share knowledge and plans from previous epidemics. Codified knowledge is explicit, structured, and designed to be transmissible. Examples include ‘lessons learned’ reports, written policies and plans, response organisations and structures, and therefore tend towards the more formal; yet it may also include material artefacts and legacies such as handwashing stations or repurposed equipment. Tacit or uncoded forms of the past are embodied, experiential, and harder to share or explain. Tacit knowledge includes memories of personal hygiene practices, participation in collective action processes such as community surveillance, or performing roles on a contact tracing team, but also being the subject of restrictions or heavy-handed treatment by authorities. It also includes embodied memories of individual or collective experiences of pain and suffering, ill-health, death, and mourning. In this research, codified and tacit knowledge are not conceptualised as dichotomous or as polar opposites, but as co-existing and mingling in practice. For example, tacit knowledge is often needed to understand and operationalise codified knowledge. Indeed, it is this spectrum and these contestations which were particularly revealing during this enquiry.

This article has attempted to unpick what it means to have ‘experienced’ an epidemic and the ways that experience becomes relevant when a new epidemic arises. Different people in different spaces experienced and remembered Ebola in multiple and often competing ways, each holding its own implications for how people made sense of COVID-19. Remembered through varying codified and tacit means, different forms of past knowledge travelled and interacted with a new scenario in distinct and unpredictable ways. What is more predictable is that memories have social and political lives. Articulations of the past are rarely neutral; they are politically primed and strategically mobilised. Which and whose experiences gain more prominence than others is continuously contested and recontested.

Although attention here has focused on how memories of the Ebola epidemic left material, rhetorical, and institutional traces that shaped Sierra Leone’s experience of COVID-19, an obvious question emerges: what traces will COVID-19 itself leave? The answer remains uncertain until the next outbreak (the 2025 mpox outbreak in Sierra Leone might have offered some insights, but was outside the scope of this research). One striking contrast between Ebola and COVID-19 lies in how each epidemic ended. Ebola’s conclusion was highly public and ritualised; it was marked by a 42-day countdown after the last case, the end of strict response protocols, and a widespread sense that collective adherence to these measures had helped bring the epidemic to an end. COVID-19, by contrast, faded more quietly. The downturn in cases was poorly understood, and the response was gradually disbanded without formal closure or public recognition. Yet, this does not mean COVID-19 will leave no traces; rather, its legacies may be less codified and more diffuse. As Vargha (2016) argues, ‘[epidemic] endings are often messier than any international, national or local governing body would care to admit . . . Endings hardly mean that the story is finished’.

Constraints on trust – whether in institutions, messaging, or interventions – are a persistent feature across outbreaks, and can be reinforced through accumulated outbreak experience. Divergences in how Ebola and COVID-19 were experienced contributed to varying levels of trust in the COVID-19 response. A key insight for future preparedness is the need to consider how a spectrum of previous epidemic experiences shapes the tacit trust landscape for subsequent responses. Operationally, this requires acknowledgement that the past cannot be reduced to a single narrative or set of lessons. Instead, preparedness efforts must consider and engage with the diversity of past experiences, recognising that these can be enabling or constraining, empowering or alienating.

Conclusion

Memories of past epidemics shape response practices during future crises in important – but not necessarily helpful or singular – ways. What, then, might a more thoughtful engagement with past epidemics look like for those seeking to better prepare or respond to a present disease outbreak? Lachenal and Thomas (2020) argue against an over-reliance on the ‘comforts of comparison’ with epidemic precedents, encouraging instead the tracing of how past outbreaks have ‘shaped the present conditions, landscapes and protocols of our hospitals and cities, and remained embedded in public memory’. Navigating between understanding how the past shapes the present, while resisting the impetus the past holds to (mis)represent the present, requires attending to both more obvious and accessible codified forms of memory, and more complex but tacitly held experiences. Given the political and social functions history and memory play, it is all the more important to recognise and engage with the multiple forms they take – in particular, thinking about whose interests different accounts of the past serve.

Every epidemic is different, so each needs to be approached with open eyes while being cognisant of how the past persists in the present. The ‘past’ is multiple, but rarely codified as such: the way in which prevailing notions of the past are captured by dominant voices, and dominant forms of memory, can be dangerously reductive. ‘Lessons learned’ exercises tend to consolidate a

partial, singular and normative account of a given epidemic and its responses. In doing so, they arguably perform a form of forgetting. Privileging the accounts of some obscure the experiences of many (Vargha, 2020); attending only to more formalised ways of knowing represses memories of more situated suffering. Learning from the failures or shortcomings of a past epidemic should not entail forgetting that those shortcomings were actually experienced, nor their persisting impact on present epidemic understandings outside of official channels. The question is less whether past experiences of epidemics make a society better or worse at responding to an unknown future epidemic, but *how* the past impacts present practices and understandings of epidemics, for good or bad, and ‘who and what gets left out of the master narrative’ (Vargha, 2016). Epidemic pasts are usually messier than those presented in rationales for policy.

Data availability statement. The qualitative interview transcripts underpinning this study’s findings are not publicly available due to confidentiality and privacy restrictions. Participants consented to take part under the condition of strict anonymity, and the transcripts contain personal information that cannot be effectively anonymised for public sharing. Consequently, the data are securely stored on a restricted-access institutional repository accessible only to the research team.

Funding statement. This research was funded by a Wellcome Trust Collaborative Award (212536/Z/18/Z) on ‘Pandemic preparedness: local and global concepts and practices in tackling disease threats in Africa’.

Competing interests. The authors have no conflicts of interest to declare.

Ethical approval. Ethical approval has been granted by the Institute of Development Studies (NH/17033/Research Ethics), the Sierra Leone Ethics and Scientific Review Committee, and the Njala University Institutional Review Board. Verbal informed consent was obtained from all participants. Privacy and confidentiality of information was guaranteed to them. Participation was voluntary and participants could opt out at any stage.

References

- Abramowitz S, McKune SL, Fallah M, Monger J, Tehoungue K and Omidian PA (2017) The opposite of denial: Social learning at the onset of the Ebola emergency in Liberia. *Journal of Health Communication* 22(sup1), 59–65.
- Babawo LS, Kamara FM, Mokuwa EY, Mokuwa GA, Nyakoi MB-M and Richards P (2022) Ebola in Sierra Leone: Leveraging community assets to strengthen preparedness and response. In Manoncourt E, Obregon R and Chitnis K (eds), *Communication and Community Engagement in Disease Outbreaks: Dealing with Rights, Culture, Complexity and Context*. Cham: Springer International Publishing. 111–128. https://doi.org/10.1007/978-3-030-92296-2_6.
- Birkland TA (2009) Disasters, lessons learned, and fantasy documents. *Journal of Contingencies and Crisis Management* 17(3), 146–156.
- Boland ST, Mayhew SH, Rohan H, Lillywhite L and Balabanova D (2024) Enmity then empathy: How militarisation facilitated collaborative but exclusive exchange in Sierra Leone’s Ebola response. *Disasters* 48(4), e12643.
- Bollyky TJ, Hulland EN, Barber RM, Collins JK, Kiernan S, Moses M, Pigott DM, Reiner Jr RC, Sorensen RJD, Abbafati C, Adolph C, Allorant A, Amlag JO, Aravkin AY, Bang-Jensen B, Carter A, Castellano R, Castro E, Chakrabarti S, Combs E, Dai X, Dangel WJ, Dapper C, Deen A, Duncan BB, Earl L, Erickson M, Ewald SB, Fedosseva T, Ferrari AJ, Flaxman AD, Fullman N, Gakidou E, Galal B, Gallagher J, Giles JR, Guo G, He J, Helak M, Huntley BM, Idrisov B, Johanns C, LeGrand KE, Letourneau ID, Lindstrom A, Linebarger E, Lotufo PA, Lozano R, Magistro B, Malta DC, Månsson J, Mantilla Herrera AM, Marinho F, Mirkuzie AH, Mokdad AH, Monasta L, Naik P, Nomura S, O’Halloran JK, Odell CM, Olana LT, Ostroff SM, Pasovic M, de Azeredo Passos VM, Penberthy L, Reinke G, Santomauro DF, Schmidt MI, Sholokhov A, Spurlock E, Troeger CE, Varavikova E, Vo AT, Vos T, Walcott R, Walker A, Wigley SD, Wiysonge CS, Worku NA, Wu Y, Wulf Hanson S, Zheng P, Hay SI, Murray CJL and Dieleman JL (2022) Pandemic preparedness and COVID-19: An exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, from Jan 1, 2020, to Sept 30, 2021. *The Lancet* 399(10334), 1489–1512.
- Bolten C and Shepler S (2017) Producing Ebola: Creating knowledge in and about an epidemic. *Anthropological Quarterly* 90(2), 349–368.
- Bosch TE (2016) Memory Studies, A brief concept paper. Working Paper. MeCoDEM. Available at <https://eprints.whiterose.ac.uk/117289/> (accessed 12 May 2023).
- De L’Estoile B (2008) The past as it lives now: An anthropology of colonial legacies. *Social Anthropology* 16(3), 267–279.
- Desclaux A, Diop M and Doyon S (2017) Fear and containment. In Hofman M and Au S (eds), *The Politics of Fear: Médecins sans Frontières and the West African Ebola Epidemic*. New York: Oxford University Press. pp. 115–128.
- Farmer P (2014) Diary: Ebola. *London Review of Books* 36(20). Available at <https://www.lrb.co.uk/the-paper/v36/n20/paul-farmer/diary> (accessed 13 September 2014).

- Fassin D** (2007) *When Bodies Remember: Experiences and Politics of AIDS in South Africa*. Berkeley, CA: University of California Press.
- Fassin D** (2008) The embodied past. From paranoid style to politics of memory in South Africa. *Social Anthropology* **16**(3), 312–328.
- Government of Sierra Leone** (2020a) *Broadcast by his excellency, Dr. Julius Maada Bio, President of the Republic of Sierra Leone, on enhanced public health and safety measures to prevent the Corona virus (covid-19)*. Freetown, Sierra Leone. 18 March 2020.
- Government of Sierra Leone** (2020b) *National Broadcast His Excellency, Dr. Julius Maada Bio, President of the Republic of Sierra Leone on the State of Law and Order in the Republic*. Freetown 8 May 2020.
- Gsell P-S, Camacho A, Kucharski AJ, Watson CH, Bagayoko A, Nadlaou SD, Dean NE, Diallo A, Diallo A, Honora DA, Doumbia M, Enwere G, Higgs ES, Mauget T, Mory D, Riveros X, Oumar FT, Fallah M, Toure A, Vicari AS, Longini IM, Edmunds WJ, Henao-Restrepo AM, Kieny MP and Kéïta S** (2017) Ring vaccination with rVSV-ZEBOV under expanded access in response to an outbreak of Ebola virus disease in Guinea, 2016: An operational and vaccine safety report. *The Lancet Infectious Diseases* **17**(12), 1276–1284.
- Hacking I** (1995) *Rewriting the Soul: Multiple Personality and the Sciences of Memory*. Princeton: Princeton University Press.
- Halbwachs M** (1992) *On Collective Memory*, Coser L (ed). Chicago and London: University of Chicago Press.
- Hobsbawm EJ** (1972) The social function of the past: Some questions. *Past & Present* **55**(1), 3–17.
- Hutton J** (2018) Knowledge Accumulation from Disease Outbreak Response. PhD thesis. University of Sussex, Brighton.
- IDS** (2023) *Pandemic Preparedness for the Real World: Why We Must Invest in Equitable, Ethical and Effective Approaches to Help Prepare for the Next Pandemic*. Brighton, UK: Institute of Development Studies.
- IPPPR** (2021) *COVID-19: Make it the Last Pandemic*. Geneva: Independent Panel for Pandemic Preparedness and Response.
- Just D and Boothe K** (2020) What did we learn from SARS and H1N1? Policy Options. Available at <https://policyoptions.irpp.org/2020/12/what-did-we-learn-from-sars-and-h1n1/> (accessed 23 October 2025).
- Lachenal G & Thomas G** (2020) COVID-19: When History Has No Lessons Facing a crisis without precedent. Available at <https://publicseminar.org/essays/covid-19-when-history-has-no-lessons/> (accessed 25 September 2023).
- Lakoff A** (2007) Preparing for the next emergency. *Public Culture* **19**(2), 247–271.
- Linke U** (2015) Anthropology of collective memory. In Wright JD (ed), *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)*. Oxford: Elsevier, 181–187. Available at <https://www.sciencedirect.com/science/article/pii/B9780080970868120367>.
- Liu Z, Gao L, Xue C, Zhao C, Liu T, Tia A, Wang L, Sun J, Li Z and Harding D** (2022) Epidemiological trends of Coronavirus Disease 2019 in Sierra Leone from March 2020 to October 2021. *Frontiers in Public Health* **10**. Available at <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2022.949425/full> (accessed 9 April 2024).
- Lynteris C** (2016) Untimely ends and the pandemic imaginary. Available at <http://somatosphere.net/2016/07/untimely-ends-and-the-pandemic-imaginary.html> (accessed 19 October 2018).
- MacGregor H, Leach M, Akello G, Sao Babawo L, Baluku M, Desclaux A, Grant C, Kamara F, Martineau F, Yei Mokuwa E, Parker M, Richards P, Sams K, Sow K and Wilkinson A** (2022) Negotiating intersecting precarities: COVID-19, pandemic preparedness and response in Africa. *Medical Anthropology* **41**(1), 19–33.
- MacGregor H, Ripoll S and Leach M** (2020) Disease outbreaks. Navigating uncertainties in preparedness and response. In Scoones I and Stirling A (eds), *The Politics of Uncertainty: Challenges of Transformation*. London: Routledge, 113–127.
- le Marcis F** (2023) Expanding epidemic preparedness to include population memory: A key for better epidemic management. In Roulleau-Berger L, Peilin L, Kim SK and Yasawa S (eds), *Handbook of Post-Western Sociology: From East Asia to Europe*. Leiden, the Netherlands: BRILL, 937–955. Available at <https://brill.com/view/title/63690> (accessed 12 May 2023).
- Martineau F, Wilkinson A and Parker M** (2017) Epistemologies of Ebola: Reflections on the experience of the Ebola response anthropology platform. *Anthropological Quarterly* **90**(2), 475–494.
- Pandemic Preparedness Partnership** (2021). *100 Days Mission to Respond to Future Pandemic Threats*. United Kingdom: Pandemic Preparedness Partnership.
- Raine J** (2016) *GA Conference 2016 Public Lecture: Bumpy Road to Zero - Tackling Ebola in Sierra Leone*. Sheffield: Geographical Association. Available at <https://www.ocr.org.uk/news/ga-conference-2016-public-lecture-bumpy-road-to-zero-tackling-ebola-in-sierra-leone-john-raine-obe/> (accessed 28 September 2023).
- Richards P** (2016) *Ebola: How a People's Science Helped End an Epidemic*. London: Zed Books.
- Richards P** (2020) Ebola and COVID-19 in Sierra Leone: Comparative lessons of epidemics for society. *Journal of Global History* **15**(3), 493–507.
- Richardson ET, Barrie MB, Kelly JD, Dibba Y, Koedoyoma S and Farmer PE** (2016) Biosocial approaches to the 2013–2016 Ebola pandemic. *Health and Human Rights* **18**(1), 115–128.
- Special Court for Sierra Leone** (2013). Special Court hands over courthouse and complex to the Government of Sierra Leone. Available at <https://cocorioko.net/special-court-hands-over-courthouse-and-complex-to-the-government-of-sierra-leone/> (accessed 28 September 2023).
- Vargha D** (2016) After the end of disease: Rethinking the epidemic narrative. *Somatosphere*. Available at <https://somatosphere.net/2016/after-the-end-of-disease-rethinking-the-epidemic-narrative.html/> (accessed 1 May 2021).

- Vargha D (2020) Reconsidering the dramaturgy. *Bulletin of the History of Medicine*. **94**(4), 690–698.
- Vetter P, Fischer WA, Schibler M, Jacobs M, Bausch DG and Kaiser L (2016) Ebola virus shedding and transmission: Review of current evidence. *The Journal of Infectious Diseases* **214**(s3), S177–S184.
- Wald P (2008) *Contagious: Cultures, Carriers, and the Outbreak Narrative*. Durham, USA: Duke University Press.
- Wang H, Paulson KR, Pease SA, Watson S, Comfort H, Zheng P, Aravkin AY, Bisignano C, Barber RM, Alam T, Fuller JE, May EA, Phan Jones D, Frisch ME, Abbafati C, Adolph C, Allorant A, Amlag JO, Bang-Jensen B, Bertolacci GJ, Bloom SS, Carter A, Castro E, Chakrabarti S, Chattopadhyay J, Cogen RM, Collins JK, Cooperrider K, Dai X, Dangel WJ, Daoud F, Dapper C, Deen A, Duncan BB, Erickson M, Ewald SB, Fedosseva T, Ferrari AJ, Frostad JJ, Fullman N, Gallagher J, Gamkrelidze A, Guo G, He J, Helak M, Henry NJ, Hulland EN, Huntley BM, Kereselidze M, Lazzar-Atwood A, LeGrand KE, Lindstrom A, Linebarger E, Lotufo PA, Lozano R, Magistro B, Malta DC, Månsson J, Mantilla Herrera AM, Marinho F, Mirkuzie AH, Misganaw AT, Monasta L, Naik P, Nomura S, O'Brien EG, O'Halloran JK, Olana LT, Ostroff SM, Penberthy L, Reiner Jr RC, Reinke G, Ribeiro ALP, Santomauro DF, Schmidt MI, Shaw DH, Sheena BS, Sholokhov A, Skhvitaridze N, Sorensen RJD, Spurlock EE, Syailendrawati R, Topor-Madry R, Troeger CE, Walcott R, Walker A, Wiysonge CS, Worku NA, Zigler B, Pigott DM, Naghavi M, Mokdad AH, Lim SS, Hay SI, Gakidou E and Murray CJL (2022) Estimating excess mortality due to the COVID-19 pandemic: A systematic analysis of COVID-19-related mortality, 2020–21. *The Lancet* **399**(10334), 1513–1536.
- Wauquier N, Bangura J, Moses L, Humarr Khan S, Coomber M, Lungay V, Gbakie M, Sesay MS, Gassama IA, Massally JL, Gbakima A, Squire J, Lamin M, Kanneh L, Yillah M, Kargbo K, Roberts W, Vandi M, Kargbo D, Vincent T, Jambai A, Guttieri M, Fair J, Souris M and Gonzalez JP (2015) Understanding the emergence of Ebola virus disease in Sierra Leone: Stalking the virus in the threatening wake of emergence. *PLoS currents* **7**.
- Whitty CJ, Farrar J, Ferguson N, Edmunds WJ, Piot P, Leach M and Davies SC (2014) Infectious disease: Tough choices to reduce Ebola transmission. *Nature* **515**(7526), 192–194.
- WHO (2015). Ebola in Sierra Leone: A slow start to an outbreak that eventually outpaced all others. Available at <https://www.who.int/news-room/spotlight/one-year-into-the-ebola-epidemic/ebola-in-sierra-leone-a-slow-start-to-an-outbreak-that-eventually-outpaced-all-others>.
- WHO AFRO (2020) COVID-19 WHO African Region External Situation Report 34.
- Wilkinson A and Fairhead J (2017) Comparison of social resistance to Ebola response in Sierra Leone and Guinea suggests explanations lie in political configurations not culture. *Critical Public Health* **27**(1), 14–27.
- Wilkinson A and Leach M (2015) Briefing: Ebola–myths, realities, and structural violence. *African Affairs* **114**(454), 136–148.
- World Health Organization (n.d.) Ebola outbreak 2014–2016 - West Africa. Available at <https://www.who.int/emergencies/situations/ebola-outbreak-2014-2016-West-Africa> (accessed 28 September 2023).
- World Peace Foundation (2017) United Nations Ebola Emergency Response (UNMEER). *Short Mission Brief*. Available at <https://sites.tufts.edu/wp/f/files/2017/07/United-Nations-Ebola-Emergency-Response-brief.pdf> (accessed 28 September 2023).