

TECHNICAL REPORT



Evidence-based advice processes for long-term care facilities in the COVID-19 pandemic

Aggregate report from the After-Action reviews
in Georgia and Norway during the emergence of the
Omicron variant of concern of SARS-CoV-2

ECDC TECHNICAL REPORT

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This report was commissioned by the European Centre for Disease Prevention and Control (ECDC) and coordinated by Agoritsa Baka, Anne Ingenbleek, Favelle Lamb and Svetla Tsolova. The report was produced by Daniel de Vries, Olivier Rubin and Luisa Toro-Alzate.

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Abbreviations

AAR	After-Action review
AIGHD	Amsterdam Institute for Global Health and Development
EBDM	Evidence-based decision-making
EBPH	Evidence-Based Public Health
LTCF	Long-term care facility
MoHLSA	Georgia Ministry of Internally Displaced Persons from Occupied Territories, Labour, Health, and Social Affairs
NCDC	Georgian National Centre for Disease Control and Public Health
NDH	Norwegian Directorate of Health
NIPH	Norwegian Institute of Public Health
WHO	World Health Organization
WHO/EURO	WHO Regional Office for Europe
UNDP	United Nations Development Programme
US CDC	US Centers for Disease Control and Prevention

Executive summary

This report is based on the findings from two focused After-Action reviews (AARs) in Norway and Georgia that discussed the use of evidence in the advice-making process for long-term care facilities (LTCFs) during the start of the COVID-19 Omicron wave in early 2022. Both countries responded to a call for expression of interest by ECDC to participate in the project, which focused on the generation and use of the best available evidence to provide advice rather than the policymaking process. Country visits were organised to Norway in June and to Georgia in September 2022.

Norway and Georgia have quite different LTCF structures and faced the Omicron wave at different times; Norway right at the emergence of the variant at the end of 2021 and Georgia with some weeks delay in 2022. In both countries, there was a sentiment that the advice-making process was supported by the best available evidence at the time. The interpretation of epidemiological data in real time, as well as drawing on relevant international evidence is considered key to advice-making. Social and behavioural sciences together with the lived experience of people within LTCFs were less systematically and rather insufficiently integrated into the advice-making process. Risk communication was considered a challenge in both countries.

New digital tools assisted greatly in the training and coordination of LTCF staff; however, staff burn-out was a risk at all institutional levels. A clear distinction of institutional roles and active collaboration is a key factor for a smooth response.

Learning from the crisis is essential. AARs within and across agencies are needed to amend emergency plans involving LTCFs.

Background

After-Action reviews (AARs) are considered an important element for collective learning and improvement. AARs support analyses for revisions and updates of public health emergency preparedness and response policies and practices. The COVID-19 response provides a valuable opportunity to assess how public health experts utilised evidence that was emerging, evolving, unavailable or of questionable quality. What types of evidence were available to public health experts when advising policymakers? What value and weight did public health experts place on different pieces of evidence? How did they adapt evidence to be applied to their own context? And, what happened when there was no conclusive scientific evidence available?

This aggregate report is based on two focused AARs in Norway and Georgia that discussed the use of evidence in the advice-making process for long-term care facilities (LTCF) during the start of the COVID-19 Omicron wave in early 2022. This project is not focused on the policymaking process itself nor an evaluation of the decisions made. Instead, it focuses on the evidence-based decision making (EBDM) process of public health experts when generating advice that informs policy or programming. EBDM requires that decisions are made based on the 'best available scientific evidence,' which generally means up-to-date and peer-reviewed research [1,2]. A more comprehensive understanding of EBDM not only highlights this need, but also emphasises the importance of a systematic and transparent use of data, community engagement in the process and effective mechanisms for evaluation and dissemination [3]. During major cross-border public health emergencies, EBDM are challenged by uncertainty, urgency, complexity, and difficulties related to coordination [4]. EBDM is often most fragile when it is needed the most.

The AARs in the two countries focus on LTCFs, as residents in these facilities have a much higher risk of severe COVID-19 infection and mortality than those living in other community settings [5,6]. During the early wave of the COVID-19 pandemic, evidence of high mortality in LTCFs led many governments across the world to resort to an unprecedented closing of these facilities to visitors [7,8]. Decisions regarding reopening were often not mandated by the government though, but left to the discretion of LTCF staff, with little consistency on whether COVID-19 community transmission rates were considered low enough for safe reopening [9]. In the winter of 2021/2022, the quick spread of the new Omicron variant of concern (B.1.1.529) led to a renewed sense of scientific uncertainty and general anxiety for the LTCF sector about the course ahead. At the same time, political pressure for relaxation of NPIs was rising across Europe and the LTCFs needed urgently updated advice about the decisions to be taken, such as their re-opening and management of cases.

Country reports were developed for both AAR reviews ([Report from the after-action review \(AAR\) in Norway during the emergence of the Omicron variant of concern of SARS-CoV-2](#)). This aggregate report aims to present findings from a comparative perspective to shed light on the use of evidence in the advice-making process underlying decisions, as seen in two rather different contexts. In particular, the report aims to (i) highlight the challenges faced by Norway and Georgia in the process of collecting evidence and providing advice for the continued operation of LTCFs during the Omicron wave; (ii) discuss the similarities and differences in the use of evidence when it comes to the advice on LTCF interventions; (iii) compile some lessons learned for future pandemic preparedness and response building on the Norwegian and Georgian experiences.

Methods

Focused AAR methodology

The focused AAR's core methodology used in this project builds on the previously developed and published report 'Protocol for a focused after-action review on evidence-based decision-making for selected COVID-19 response measures' [10]. The AAR is a process-driven learning exercise that builds on a qualitative review of a delimited case: the advice-making process for LTCFs during the COVID-19 Omicron wave. The case study approach allows for in-depth explorations of how key advice is produced across relevant organisations as well as how it changes over time considering new evidence. This involves identifying and making explicit any external pressures, informal practices, and networks (both within and across key stake holders) that affect the advice-making process. The central question of the focused AARs is to determine the role of scientific evidence in the deliberations and decisions made by public health authorities in the process of informing policy.

ECDC has previously outlined five central questions that a general AAR approach should address [11]. These also pertain to this case-specific focused AAR on EBDM:

- **What happened?** This phase seeks to establish in detail and in chronological order, the details of a given decision and what happened before, during and after a decision was made. The focus is on collecting as much information as possible to establish an agreed-upon account of what occurred. A timeline of events is typically based on country-specific preparedness and response documentation (emergency plans, protocols, action plans), personal testimony (individual or group interviews, discussions, or consultations) and external sources (e.g. COVID-19 Health System Response Monitor [12]).
- **Why did it happen? Why was the decision taken?** This phase seeks to establish the main (immediate cause) and contextual (contributory factors) reasons why the emergency decision-making process unfolded the way it did. Was there deviation from emergency protocols? Did decision makers know about action plans or were these overlooked because they were not recognised as relevant? This examination is usually more qualitative in nature, relying on personal testimony. Best practice seeks to go beyond identification of immediate causes, unsafe acts or latent failures, and to explore the array of contributory factors that led to system success, failure or omission (i.e. the root causes).
- **What can be learned?** What can be learned from the information gathered in response to the previous two questions that can help improve pandemic preparedness in the future? What was effective and what was not? Why? This often takes the form of a 'lessons learned' section of the final report that describes the various successes and failures and their relative impact on the decision and its outcomes, as well as how this could apply to future pandemics.
- **What should change?** What procedures or ways of working need to change to mitigate any problems identified in the decision-making process to reduce the impact of similar events in the future, as well as to generally improve pandemic preparedness? For example, was surveillance capacity sufficient to identify the threat in good time? Were the organisational structures optimised for decision-making under stress and with limited evidence?
- **How can change be implemented?** This phase involves creating a plan for how the changes suggested by the focused AAR can be implemented and monitored. This completes the review and enables a continuous quality improvement cycle. How can lessons learned be implemented in the form of real improvements in emergency preparedness capabilities or capacities? What is needed to improve EBDM in future health emergencies?

Periods of analysis

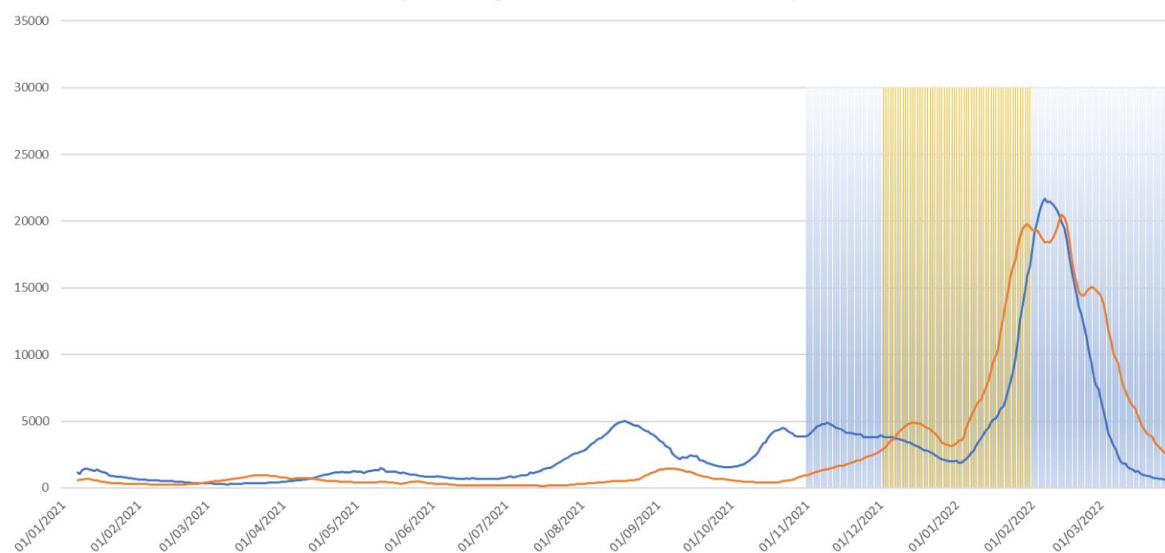
Norway and Georgia responded to a call for expression of interest issued by ECDC to conduct AARs within the overarching theme of evidence-informed advice-making processes for the operation of LTCFs during the COVID-19 pandemic. Within the project, there was room for selecting the most interesting period for an analysis of evidence in the advice-making process. In consultation with counterparts in both countries – the Georgian National Centre for Disease Control and Public Health (NCDC), the Georgia Ministry of Internally Displaced Persons from Occupied Territories, Labour, Health, and Social Affairs (MoHLSA), and the Norwegian Institute of Public Health (NIPH) – it was decided that the AAR should focus on the COVID-19 Omicron wave (November 2021 to April 2022).

Several arguments were made for this choice: (i) the advice-making process was still relatively fresh in participants' mind and there was a higher likelihood that key actors would still be accessible and in the same positions as during the Omicron wave; (ii) the period showcases how lessons learned from earlier waves in the pandemic led to more mature and institutionalised preparedness and response systems, and how these were able to deal with new uncertainties by translating emerging evidence into the advice-making process; and (iii)

the interpretation of evidence played a key role in a very compressed time-period of a few months, particularly at the start of the COVID-19 Omicron wave, which introduced an urgency in the advice-making process.

Figure 1 presents the selected study periods with the number of COVID-19 cases. For both countries, the selected period coincides with a substantial surge in COVID-19 cases. The period of analysis for Georgia was longer than for Norway. This is because the Omicron wave hit Norway several weeks before Georgia (but it is still relevant to highlight how Georgia interpreted the data from Europe). And secondly, Georgia lifted the LTCF regulations at a slower pace than their Norwegian colleagues.

Figure 1. Period examined in LTCFs in Norway and Georgia, in combination with seven-day moving average of newly-detected COVID-19 cases, January 2021–April 2022 [13]



Norway data and study period are indicated by the orange line and area and Georgia is shown by the blue line and area.

Data collection

Public health staff from Norway and Georgia participating in the ECDC project met regularly since January 2022 until their respective country visits to plan the AARs and complete the fact-checking phase. In both countries, the AAR consisted of a two-day consultative process with key stakeholders together with complementary semi-structured interviews the day before and the day after. The agendas for the two consultative workshops are attached in Annex 1 (Norway) and Annex 2 (Georgia).

For Norway, relevant stakeholders included employees from the two health agencies, NIPH and the Norwegian Directorate of Health (NDH), the Ministry of Health and Care Services, and Oslo's municipal authorities as well as LTCF leaders and doctors in Oslo. Primary documents (risk assessments, LTCF guidance notes and so forth) and secondary literature (international reports, peer-reviewed evidence etc) were used to feed into the consultative discussion as well as to triangulate the qualitative findings obtained in-country. The consultative workshop took place 8-9 June 2022, with participation from key NIPH staff (three participants) and key NDH staff (two participants). The workshop was facilitated by two consultants from the Amsterdam Institute for Global Health and Development (AIGHD) and attended by two ECDC staff members. A third consultant from the AIGHD took notes. On 7 June 2022, the delegation visited the LTCF authority in Oslo municipality to conduct a two-hour group discussion with key personnel involved in the decision-making process of guidelines during the Omicron phase. Present at the interview were: (i) the Chief Medical Officer for LTCFs; (ii) two officers from the LTCF authorities; and (iii) two directors of LTCFs in Oslo. On 10 June the research team visited a LTCF in Oslo municipality and conducted interviews with the on-site Medical Doctor and the Director of the LTCF. Furthermore, the research team conducted an interview with a representative from the Ministry of Health and Care Services involved in the decision-making process of the LTCF guidelines. Finally, on June 17, the team conducted an online interview with the Assistant Communications Director at NIPH. A debriefing session was organised on 10 June attended by the visiting team and several experts from the NIPH and municipal stakeholder, where preliminary conclusions were discussed.

For Georgia, the workshop took place between 7–8 September 2022, with participation from key Georgian public health staff from the National Centre for Disease Control and Public Health (NCDC) (two participants), and five MoHLSA representatives from the Health Care Policy Department, Labour Inspection Agency, Social Protection Unit, State Agency for Care and Assistance of Victims of Trafficking. One Director of a LTCF (Kojori House of Disabled Children) participated directly, while another Director of the Tbilisi LTCF participated in a separate interview. Finally, one additional interview was conducted with a communications expert from NCDC. The workshop was facilitated by the same two consultants from AIGHD as in Norway and attended by four ECDC staff members and a visiting/exchange expert who participated in the Norway AAR (Annita Wang Børseth). A debriefing session with the Deputy Minister of the MoHLSA was organised on 9 September attended by the visiting team and several experts from NCDC.

Analytical approach

The discussion of evidence was guided by a simplified version of the Evidence-Based Public Health (EBPH) framework [12] illustrated in Figure 2. The advice-making process is assumed to be shaped by (i) the availability of best available scientific evidence (what type of evidence is used and how is it interpreted?); (ii) the organisational resources at both the advice-making level but also the level of implementation; and (iii) the state of crisis communication both internally in the emergency management system but also externally towards the general public. The framework was useful in encouraging participants to think of the advice-giving process as dependent not only on evidence but also on other important external factors. In short, the framework embeds the advice-making process in a larger socio-political environment. The framework is used for structuring the findings in this aggregate report along the three key dimensions of evidence, resources, and communication.

Figure 2. Evidence-Based Public Health (EBPH) framework (inspired by Satterfield et al. [14])



Source: AIGHD

Results

Country health emergency management structures

Norway

The Norwegian Ministry of Health and Care Services was the central crisis management ministry during the COVID-19 pandemic. Norway, like most of the other Nordic countries, followed the responsibility principle where the same agencies that are responsible in peacetime retain their authority during times of crisis. Concretely, this meant that the two expert agencies, the Norwegian Directorate of Health (NDH) (Helsedirektoratet) and the Norwegian Institute of Public Health (NIPH) (Folkehelseinstituttet), were highly involved in the decision-making processes. The NIPH served mainly as a scientific epidemiological advisory body while the NDH was a policy-making health authority. The NDH had been delegated responsibility for coordinating the COVID-19 response in the beginning of 2020 with the authority to impose regulatory measures during the pandemic. NIPH was responsible for monitoring the epidemic situation and supervising and advising state and local authorities on infection control. However, several studies point to substantial overlapping roles of authority between the two agencies in practice [15,16].

Norway's healthcare system is to a large extent decentralised to more than 350 municipalities. Norway's Infection Control Act explicitly places the control of infectious diseases at the municipality level, alongside the operation of LTCF services. Municipalities, therefore, have the authority to respond to a health crisis by implementing a range of local non-pharmaceutical measures (NPIs). Municipal doctors (kommuneoverlege) are responsible for the local outbreak preparedness systems in terms of monitoring, documenting, and reporting rates and cases. As such, municipalities have a substantial degree of freedom to implement measures, although by and large they are bound by national guidance. In some cases though, they implemented stricter measures than those recommended by NIPH and NDH.

Georgia

The Ministry of Labour, Health, and Social Affairs (MoLHSA,) is formally accountable for the health of the population, oversight of the health system, the quality of health services and equity of access throughout the country. The National Centre of Disease Control and Public Health (NCDC,) is a legal entity accountable to the MoLHSA. The NCDC provides national leadership in preventing and controlling communicable and non-communicable diseases through developing national standards and guidelines implementing health promotion, disease surveillance and immunisation programmes, laboratory work, research, providing expert advice, and responding to public health emergencies. At the municipal level, the NCDC has public health centres supporting the implementation of national vertical programmes such as immunisation. NCDC also has nine regional branches, with an epidemiologist in each region. Most of the NCDC workforce is located in the capital [17]. The NCDC collaborates closely with all ministries and agencies, as well as with international and national partners.

There is political commitment in all sectors for emergency preparedness planning and response. The chain of command is considered simple and known by all key stakeholders: regional and local health authorities rely on central authorities for any action in public health emergencies. The private health sector is vast but does not fully participate in the national surveillance system. Private actors at the subnational level are rarely under the purview of the MoLHSA, which limits the Ministry's opportunities to implement policies [18]. Healthcare in Georgia is provided by a universal health care system under which the state funds medical treatment in a mainly privatised system of medical facilities [19,20], with an increasing shortage of nurses and epidemiologists, but a relatively large numbers of doctors per capita [21].

What happened?

The SARS-CoV-2 variant B.1.1.529 emerged globally at the end of November 2021. It was first reported in South Africa and was designated as a variant of concern by the WHO's Technical Advisory Group on 26 November 2021 and named 'Omicron'. Initially, there was very limited information about the variant, although data from South Africa suggested that it was much more transmissible than the previously circulating Delta variant. On 30 November 2021, the Norwegian NIPH was notified by a local laboratory in Oslo of the first possible Omicron variant cases in Norway. These cases followed a 'super-spreader' event in the form of a company Christmas party with 117 attendees in a closed space on November 26 (some attendees had just returned from South Africa). Although almost all attendees were fully vaccinated, three-quarters got infected with most developing only mild symptoms. This was indicative of a high degree of transmissibility despite vaccinations. [22]

Georgia was hit by the Omicron variant with a substantial delay. The Omicron variant was first recorded in Georgia on 20 December 2022, which is more than three weeks after the first Norwegian case was identified. Starting in January 2022, the Omicron variant dominated the circulation in Georgia leading to a peak in cases in February. The later introduction of the variant in Georgia meant that Georgian experts did not appear to go

through the same phase of widespread scientific uncertainty with respect to the public health risk regarding the Omicron variant.

In Norway, the NIPH initially put out risk assessments that characterised the Omicron variant as 'serious' (Risk Assessment, December 7 [23]) and 'increasingly serious' (Risk Assessment, December 13 [24]). While it was recognised that the Omicron variant was unlikely to cause more serious disease (especially in vaccinated people), the initial concern was the much more rapid spread of infection in the population, with a potential for catastrophic increase of cases. This would increase the chances of the virus reaching the elderly and especially the unvaccinated elderly (Risk Assessment, December 7 [23]). However, by the beginning of January 2022, the Norwegian NIPH was able to conclude with much greater certainty that the Omicron variant offered significantly less risk than the Delta variant for serious illness among LTCF residents. The NIPH had tracked the impact of the Omicron wave in LTCFs with quite robust epidemiological data that showed high transmissibility in the LTCFs (primarily introduced by asymptomatic caregivers rather than from visitors or among the residents themselves) yet very moderate severity symptoms among the residents. According to participants, residents even exhibited less severe symptoms than the general population [23,24].

This evidence (from Norway and elsewhere in Europe) was known by Georgian NCDC by the time of the onset of the Omicron wave, which reduced the uncertainty faced by the advice-making agencies. Using the international data and evidence, no new regulations were issued during the Omicron outbreak in Georgia. Georgian workshop participants noted that 'when Omicron started hitting, we were already making statements that it is not that severe.' In both countries, the Omicron wave was experienced as less challenging than the initial COVID-19 phase because by that time systems and practices had been put in place to cope with the challenges. The LTCFs had received many resources and detailed guidelines by the time of the Omicron phase, so they knew how to manage cases based on established Standard Operating Procedures for Infection Prevention and Control (IPC) and disinfection, and enhanced knowledge of the staff. There was, thus, a high degree of institutional resilience in both the advice-making agencies and the implementing government units.

Annexes 3 and 4 provide timelines of the most important events during the two periods of analysis for Norway and Georgia, respectively. These timelines were discussed and agreed upon during the workshops.

Use of evidence in the advice-making process

This section focuses on similarities and differences with regards the evidence used when advising on the continued operation of LTCF interventions across the two countries. Both countries relied on the following type of evidence although to varying degrees:

- Epidemiological data;
- International experience and support;
- Peer-reviewed evidence;
- Behavioural evidence;
- Expert opinion.

Table 1 provides a comparison of evidence used in the advice-making process in both countries.

National epidemiological data

The existence of a central national preparedness database combining data from various registries was essential in gathering context-specific information about how the Omicron wave impacted the Norwegian LTCFs. It was uniformly agreed that access to this data was the most important type of evidence in the advice-making process. When Omicron hit, the NIPH had access to daily updated data on resident and employee infections and fatalities, close contacts, vaccination coverage, and the type and time of vaccination. Norwegian participants did note that obtaining data from smaller, rural municipalities was more challenging and needed strengthening (e.g. in the form of a reference group). In Georgia, epidemiological data were important as well albeit not as structurally developed as in Norway. Next to basic epidemiological data generated by NCDC, of importance was data from the MoHLSA Statistics and Analytics Department (SAD), which monitored hospital flows but more on an ad hoc basis. From this department NCDC obtained data on hospitalisations, deaths, and severity to which the NCDC did not have direct access.

International experience and support

For Norway, the most important international evidence came from Denmark's experience with the Omicron wave, complemented by information from other countries. The variant reached Denmark before Norway, and the two countries share many socio-economic traits. Evidence and advice from international organisations, ECDC and WHO, were consulted by the NIPH as an important input, but it was not given high priority. ECDC and WHO produce general evidence and advice that needs to apply across multiple countries. Depending on the country, tailoring of this advice might be required. For example, the situation in Norway which had high levels of testing capacity and capacity to provide medical treatment in LTCFs, might not conform to the situation in other countries. In Georgia, on the contrary, advice and guidelines from international organisations were assigned much higher importance. The Georgian NCDC often based their recommendations on guidance from WHO, ECDC and United States Centers for Disease Control and Prevention (US CDC) (e.g. advice to decrease number of mandatory isolation days). It was noted that if a guidance was issued by WHO or the US CDC it would provide good justification for national adaptation of it. Information and published documentation from other European countries were also of specific importance for the NCDC, allowing accumulation of needed evidence on the spread of variants before the onset of the variants in Georgia. For example, NCDC was using information from the UK, Austria, and Germany. NCDC staff also asked embassies to provide situational reports with their assessments and regulations (e.g. Denmark).

Peer-reviewed evidence

One of the main challenges for both countries during the emergence of Omicron was keeping up with the surge in publications as well as assessing their relevance and quality to the advice-making process. This was within the context of a significantly increased workload where key staff were preoccupied with providing recommendations to municipalities, addressing government assignments, handling information requests from the public and producing and interpreting daily data from LTCFs. To resolve this, the Norwegian NIPH established a small internal working group tasked with identifying and categorising the different international studies on a daily basis. This resulted in an updated and detailed database of the relevant literature. This allowed NIPH staff quick access to the relevant studies for their fields of expertise together with a brief overview of the findings. There was general agreement that this database was instrumental in providing useful evidence to NIPH staff, and several international studies were explicitly cited in the risk assessment and guidelines. At the same time, this database has been kept internally, and was not shared with other institutions, such as the NHD, who had to undertake their own literature search. In Georgia, a special incident team was set up to look for relevant information in the literature and to share evidence with those involved in the response through the incidence management system. The team consisted of two to three people who did this work as an additional assignment to their normal workload. Whenever the Director of NCDC found important evidence through this channel, he would share it directly with the (Deputy) Minister of Health. In addition to efforts at NCDC, the MoHLSA also commissioned the International Research Institute, an outside non-governmental agency, to conduct several studies and publish reports about COVID-19 (as well as trainings) from the beginning of the pandemic (initiative funded by the MoHLSA, the World Bank, and WHO).

Social and behavioural sciences

In both countries, social and behavioural science evidence was available, but it was not included systematically in the advice-making process. In Norway, both agencies involved in the response (NIPH and NDP) had in-house experts in economics, communication, and legal matters. NIPH conducted several focus-group interviews with broad-based participation from different strata of society. In addition, the agencies specifically considered the specific socio-economic profile of immigrants and other vulnerable groups that were frequently overrepresented in the number of infected, fatalities and unvaccinated. However, evidence from social and behavioural sciences appear to have been used sparingly. There are obvious resource limitations both with respect to time (advice had to be produced in a matter of hours in the initial phase of Omicron) as well as in-house capacity to produce such evidence. Still, both agencies experienced an increase in interdisciplinary cooperation within their organisations, but better integration of social and behavioural science upstream in the generation of evidence, when feasible, would have been beneficial. In addition, Norwegian participants missed working with a formal reference group of LTCFs.

In Georgia, social and behavioural science data were also identified as lacking evidence in the advice-making process. Inputs obtained were mostly ad hoc, such as some pilot studies conducted by the NCDC communication department or inputs obtained through the Coordination Council Committee. The latter was set up under the MoHLSA as a body that represented service providers and the public, e.g. parents. It remained unclear during the AAR to what extent this committee was regularly consulted and how far its influence stretched. Overall, most information about behaviour and social issues in the advice-making process was anecdotal collected through direct contact with LTCF Directors and regionally based staff.

Expert opinions

Table 1 below provides a comparison of sources of evidence in the advice-making process. In both countries, an important source of evidence appears to have been the ongoing dialogue with LTCF Directors and professionals, municipalities, and local health authorities. Based on the daily communication with LTCFs, for example, it quickly became clear from conversations with LTCF Directors that the residents experienced very mild symptoms with infection by the Omicron variant. In Norway especially, this type of evidence was very useful both in understanding major shifts in the epidemiology of the pandemic but also in modifying advice on a smaller scale to better align with the practical experiences of the LTCFs and municipal authorities. In Georgia, because of the much lower number of LTCFs but their high visibility regarding the risks, the experience of LTCF Directors was shared with and considered directly by the Deputy Minister of Health, Labour, and Social Affairs.

In Norway, both NIPH and NDH staff emphasised how the COVID-19 pandemic spurred the creation of multisectoral and multidisciplinary working groups providing expert opinion. At the NDH, guidelines and government assignments were reviewed by various task forces with a multidisciplinary angle where they would often simultaneously work on the same advice from multiple perspectives. NDH is responsible for the legal perspective of the guidelines, and close cooperation with the legal department was important. Participants generally felt that it was beneficial to work in this multidisciplinary way and expressed an aspiration for these forms of cooperation to be sustained and institutionalised. At NIPH, public health and laboratory staff would work with infectious disease modelling experts and mental health specialists to produce advice. Lawyers and communication specialists at both agencies would work together with epidemiological experts on how to frame advice and regulations.

In Georgia, expert working groups were also set up, but the extent to which these were multisectoral and interdisciplinary was less pronounced. The Coordination Council Committee including service providers and community members was providing direct input regarding LTCFs. To manage the response, the Georgian government had also started a Clinical Management Group, or committee, under the MoHLSA, that oversaw clinical matters relating to COVID-19. Next to the Clinical Committee there was also a Laboratory Committee providing expert opinion, but this committee appeared to have been less functional because of overlap with the Clinical Committee (e.g. testing issues). For example, the Clinical Committee members would discuss hospitalisation rates, severity, case-fatality rates, testing strategies, and presented evidence on fatality rates from other countries. These committees provided expert opinions both to MoHLSA and NCDC.

Table 1. Comparison of sources of evidence in the advice-making process

	Norway	Georgia
National epidemiological data	<ul style="list-style-type: none"> Well-developed infrastructure integrating multiple public health levels with strong influence on advice-making. More balanced inclusion of municipalities desired. 	<ul style="list-style-type: none"> Infrastructure shared by NCDC and MoHLSA statistics department. Strong influence on advice-making.
International experience and support	<ul style="list-style-type: none"> Evidence from neighbouring countries perceived as more important than European or global evidence 	<ul style="list-style-type: none"> Evidence from European and global sources seen as crucial for advice making, more than evidence from neighbouring countries which is seen as less reliable
Peer-reviewed evidence	<ul style="list-style-type: none"> Crucial, but overwhelming quantities to keep up with. Separate systems developed within NIPH to track evidence 	<ul style="list-style-type: none"> Crucial, but overwhelming quantities to keep up with. Separate systems developed within NCDC to track evidence. Additional literature reviews commissioned by MoHLSA.
Social science and behavioural evidence	<ul style="list-style-type: none"> Some interdisciplinary working groups sharing expert opinion at NDH and some focus on vulnerable populations at NIPH, but no systematic collection nor strong influence on advice-making, including LTCF reference groups 	<ul style="list-style-type: none"> Only <i>ad hoc</i> information and some expert opinion available, but no systematic collection nor strong influence on advice-making
Expert opinions	<ul style="list-style-type: none"> Interdisciplinary working groups and committees organised to provide expert advice, particularly at NDH Voices of people in LTCFs were seen as missing 	<ul style="list-style-type: none"> Disciplinary working groups and committees setup providing evidence and expert opinion to government

Crisis communication

A comparison of findings regarding crisis communication (both internal and external) is provided in Table 2. In the advice-making process, one important dimension was noted in the two countries – the ability to effectively communicate advice to relevant stakeholders and to have effective internal communication channels. One of the clear advantages in terms of communicating advice to LTCFs is that the primary recipients of that information were also from the health sector. This meant that there was an immediate appreciation and understanding of the kind of advice and recommendations forwarded by the health agencies. While advice might also have been subject to more scrutiny and critique, this critique was mostly rooted in professional disagreements rather than scepticism towards the scientific method itself.

In Georgia, there was an overall feeling that there had been active communication between departments, between MoHLSA and all its agencies, and with the public health emergency operational centre. Whenever the director of the NCDC found important evidence, he would share it with the MoHLSA. A WhatsApp group was used as an active channel for epidemiologists and managers to share evidence for rapid communication. The digitisation of direct communication channels also had a strong impact on internal communication. Before the COVID-19 pandemic, the Agency of State Care, responsible for overseeing LTCFs, had to visit the institutions to talk with staff face-to-face and supervise their day-to-day work, which happened once per month or less. Several LTCF managers did not use email. As a result of the crisis, and with the aid of private partners, the Agency provided LTCFs with IT equipment to facilitate their participation in remote meetings and trainings. Furthermore, WhatsApp groups came to be used for taking care of the problems in LTCFs, sharing information across LTCFs and with participants of the Agency of State Care, NCDC and the Deputy Minister herself.

In Norway, the NIPH had strong communication teams in place before the crisis, that were involved in much of the advice from the beginning of the pandemic. Communication was seen as an integral part of the advice-making process. It should be noted that the communication teams contained a broad expertise and encompassed behavioural science insights, social psychology, and social media management. The desire to communicate advice in a digestible and simple manner would at times clash with the epidemiological experts' demands to keep all the nuances, caveats and uncertainties of the science in their advice. It was considered an advantage to have a communications specialist as part of the technical teams that compiled advice, so that these trade-offs and other considerations could be addressed earlier.

Communication to the public regarding the decrees, general advice and recommendations was noted as a very challenging area in Georgia. National TV was used to promote vaccination, with the Minister of Health, the President, and Heads of Agencies all active in the media. However, media was seen as very polarised, lacking neutral investigative journalism. The NCDC provided daily updates about the epidemiological situation and organised Facebook live-feeds to answer media questions. Yet, expertise in health communication was seen as lacking by workshop participants. Georgia does not have a well-established communication training infrastructure, which meant that communication was done either by an epidemiologist not trained in this area, or it was outsourced. Recruitment of additional communication experts was further challenged by relatively lower salaries in the government sector and lack of budget. This issue existed at both MoHLSA and NCDC. The WHO provided support for risk communication to Georgia. Overall, it was perceived that public communication did not start early enough and was implemented on too small of a scale, missing a broader public outreach strategy. Misinformation was particularly prevalent in more remote regions.

In Norway, the NIPH generally had a good relationship with the media. In the initial phase of the pandemic, it was noted that the different NIPH public health experts were interviewed regularly by the media with limited organisational coordination. For some, this took valuable time away from more pressing tasks and many experts experienced the public attention in media as stressful, particularly when it concerned publicly contested advice. By the time of the Omicron wave, however, NIPH had put more established procedures in place. Often it would be the directors or other dedicated spokespersons who would explain and defend new advice in the media. They effectively functioned as lightning rods for media critique and public debate, allowing the health experts to focus on their key tasks such as producing and interpreting evidence.

In both countries, participants expressed the opinion that staff directly involved in the response and being most knowledgeable regarding ongoing processes had little or no time to be involved in public communication. As a result, scientists outside the response were able to present their views and gain popularity by being critical, while those who were actually involved in the response did not have sufficient opportunity to be present in the media and provide a rebuttal. It was noted that the media had enormous influence on public opinion but that it had less influence on advice-making. An additional issue noted in both countries was the burden from information requests coming from both the media and the public under the open access to information legal frameworks. Some staff from Norway noted they would receive as many as 10-15 media requests per day, which meant that significant resources to respond to these requests were diverted away from advice-making and evidence production.

Table 2. Comparison of crisis communication findings

	Norway	Georgia
Internally	<ul style="list-style-type: none"> • Strong communication across different layers of the public health system • Impact of digitalisation on communication capacities 	<ul style="list-style-type: none"> • Active communication between involved institutes and stakeholders • Significant impact of digitalisation on communication capacities
Externally	<ul style="list-style-type: none"> • Good relationships with the media • High burden from freedom of information requests • Experts not involved in the government response gained popularity by filling in media niches, without sufficient opportunities for NIPH staff to provide rebuttals 	<ul style="list-style-type: none"> • Challenging, politically polarised media landscape • High burden from freedom of information requests • Experts not involved in the government response gained popularity by filling in media niches, often criticising the PH decisions

Capacity and implementation

A comparison of findings regarding capacities and implementation of measures is provided in Table 3. Going into the pandemic, the LTCFs in Norway had much higher capacity (human resources, finances, etc.) relative to Georgia, although the social structure and attitudes towards LTCFs differ considerably in the two countries. Having a medical doctor affiliated with each LTCF, as was the case in Norway, is of critical importance, especially during a health emergency. The staff/resident ratios were generally relatively high in the Norwegian LTCFs even for European averages, and many of the staff were full-time employees with a clinical background. [25] LTCFs were able to purchase iPads, telephones, TVs, and other means needed for alternative recreational activities. The LTCFs could afford spending at the time because all COVID-19 related initiatives were supported by an emergency budget provided by the state. In Georgia LTCFs, were facilitated in their need to improve digital communication technologies to some extent, but overall, the budgets were substantially lower.

In both countries LTCFs were said to have shown high institutional resilience by the time the Omicron variant appeared. Because LTCFs had already been through the initial wave of COVID-19 outbreak, they knew what they had to do, e.g. procedures and routines had already been established. In Norway, at the time of Omicron onset, the digital reporting and monitoring system of epidemiological data had been already integrated into the surveillance system. In both countries the staff involved in LTCFs felt ready to deal with the Omicron outbreak, after two years into the pandemic. Several COVID-19 procedures had already been adopted by the time of Omicron wave onset. In Norwegian urban areas, many LTCFs felt that they were ahead of the curve when it came to the Omicron wave due to their vast experience with previous outbreaks. In Georgia, vaccine booster doses were received in December 2021 to support strengthening the immunity of risk groups.

On the other hand, while resilience was considered good, while entering the Omicron wave, institutional fatigue by those involved in the advice-making was a serious issue in both countries. In Norway, dealing with the prolonged needs of the COVID-19 pandemic for two years in a row, put significant strain on the staff at the advice-making agencies. The staff at both health agencies worked for very long hours in stressful environments, and with high levels of responsibilities. New employees were thrust into both the agencies in challenging times and had to find their own footing. Staff described how they were reaching the points where they were constantly afraid of forgetting something or overlooking evidence. At times they felt they were drowning, not so much in their core assignments of producing and interpreting evidence but in coordination meetings and telephone/zoom calls. In addition to the general exhaustion, the speed at which advice and assessments were needed during the Omicron wave made staff uncomfortable due to the high level of uncertainty. It left them with little time and opportunity to check and scrutinise evidence.

At LTCFs in Georgia, staff fatigue was more severe than expected. Staff were getting tired and burned out, while they still had to enforce regulations. At NCDC headquarters in Tbilisi, staff spoke of exhaustion, without the possibility of teleworking. There was a high workload which meant there was a high pressure on staff. There was a fear of mistakes, for example when running PCR tests or conducting 100 contact tracing calls per day. It was noted that a lot of the fatigue set in when things calmed down during the Omicron wave, but mental health and having sufficient psychosocial support for staff was not prioritised. NCDC staff had to prepare evidence ahead of committee meetings at very short notice. Workload was further affected by numerous letters from members of parliament, for which staff had 10 days to respond. Many of the requests for information came from parliamentarians who were newly elected and did not fully understand how the question-response flow was organised, leading to a sense among participants that work at times was inefficient and frustrating.

As already noted, media requests also had to be answered within 10 days if public information was requested. Additional pressure was also felt by pushback and defiance from society regarding the regulations that were implemented. In some regions, particularly those with minority ethnic populations, there was strong negativity towards NCDC response teams when they came to test village residents.

Table 3. Comparison of capacity and implementation findings

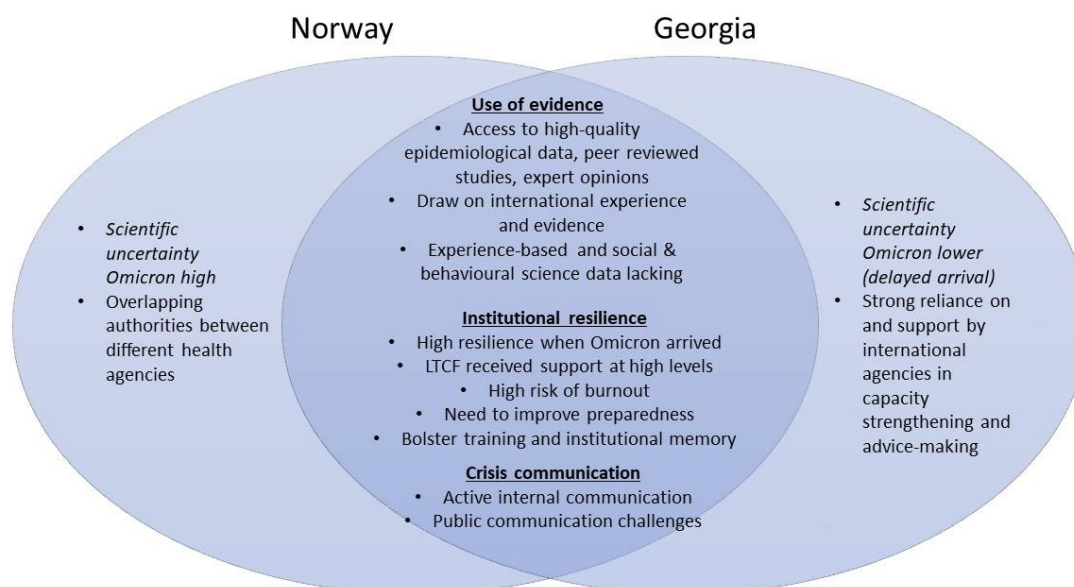
	Norway	Georgia
LTCF resilience	<ul style="list-style-type: none"> • High capacity and resilience even before pandemic, and well resourced during pandemic • Experience gained by the time the Omicron wave appeared was crucial in managing the new uncertainty 	<ul style="list-style-type: none"> • Low capacity before pandemic, but sufficiently resourced during pandemic due to high visibility of LTCF population as particularly vulnerable. • Experience gained by the time the Omicron wave appeared was crucial in managing the new uncertainty
Higher-level advice-making bodies resilience	<ul style="list-style-type: none"> • Experience gained by the time the Omicron wave appeared was crucial in managing the new uncertainty • High level of pressure and serious risks of burnout • Fear of 'forgetting something or overlooking evidence' • High speed of advice-making with little scientific certainty caused discomfort. 	<ul style="list-style-type: none"> • Experience gained by the time the Omicron wave appeared was crucial in managing the new uncertainty • High level of pressure and serious risks of burnout • Fear of mistakes • Mental health among staff through psychosocial support not prioritised • Visible pushback and defiance from society caused further stress to PH staff

Discussion

Overall lessons learned

An overview of the individual and common lessons identified in the AARs conducted in Norway and Georgia on evidence-based decision making for LTCFs during the emergence of Omicron VoC is presented in Figure 3.

Figure 3. Lessons learned from Norway and Georgia



Use of evidence

With respect to high-quality epidemiological data, the Norwegian experience with LTCFs shows the importance of gathering and interpreting epidemiological data in real time. Although international evidence and studies were used in the advice-making process, the national data was the main foundation for advice. This, of course, necessitates an established surveillance system and testing strategy, as well as sequencing capacity. But it also crucially depends on the advice-making agencies gaining easy access to this data and connecting it with relevant information from central registers. By the time the Omicron wave arrived, the NIPH had access to high-quality data and there is little doubt that access to this data allowed the NIPH to change advice as quickly as it did, and for the implementing agencies to accept this advice with confidence. In Georgia, high-quality epidemiological data was of similar importance, although due to the delay in Omicron's arrival, international evidence and experience also guided advice-making. In Georgia, participants expressed a need for higher level capacities in the analysis and interpretation of epidemiological data.

In both countries participants agreed that access to peer-reviewed studies was crucial in ensuring a high degree of evidence informed decision-making. Due to the high volume of publications, this appeared to be a formidable task that needed coordination. Dedicated staff, often not directly involved in the response, was assigned with collecting, categorising and quality assuring the surge of scientific studies. Although there were clear capacity challenges, dedicating this task to specialised units appears to have been an effective organisation intervention. In Georgia, outside institutes were commissioned to fill some gaps. In Norway it became clear that sharing of such collected data across multiple institutions could have been done more effectively. Some concerns with overlapping roles of key involved institutions (NIPH and NDH) may have contributed to this.

As already noted, international experience and evidence played an important role in the pandemic. Advice-making regarding the Omicron wave in Norway relied more substantially on neighbouring country experiences, and less on other European or global analyses, which were seen as less immediately relevant to Norway's structure and health system. In Georgia, on the other hand, with Omicron arriving later, general European analyses (ECDC and WHO/Europe) became more important in advice-making. However, the quality of neighbouring country data was mentioned as a challenge for Georgia. Furthermore, there was strong support by international agencies in capacity strengthening and advice-making in Georgia. For example, international

organisations (UNDP, World Bank, WHO, US CDC) were part of the vaccination committee providing expertise and knowledge.

Missing sources of evidence were mostly in social and community domains. Across both countries, there was a sense among participants in the workshops that advice-making would be improved by strengthening broader, country-wide engagement and facilitating a more robust and representative gathering of experience-based evidence. Moreover, and linked to experience-based qualitative insights, social and behavioural science data was noted as ad-hoc and a more systematic inclusion of this type of evidence in the advice-making processes was identified as good practice in both countries. Moreover, experts in risk communication seemed to have positioned themselves using a broader mandate in Norway than in Georgia. In particular, a communication specialist provided input in the advice-making process using social and behavioural science evidence in Norway, while in Georgia, communication was mostly utilised as a top-down, health promotion instrument.

Institutional resilience

With respect to institutional resilience, both countries extended the support to LTCFs, and these facilities showed high resilience by the time the Omicron wave arrived. LTCFs received support at high levels– and were seen as institutions of special concern. In Georgia high solidarity from other ministries (e.g. Finance, Tourism) who dedicated their workforce to support the MoHLSA, together with international support, resulted in the ability of the NDCDC to upscale data collection and dissemination efforts (testing, sequencing, and hotlines) in peak periods. In Norway, high level capacity which had been developed before the pandemic at all levels – from LTCFs to NIPH – provided a strong baseline for highly-resilient systems and structures by the time the Omicron wave arrived.

Despite this, the institutional resilience seems to have come at the expense of individual staff, who despite their commitment and resolve to do the job right, expressed enormous fatigue placing them at high risk of burnout. Burnout risk due to constant engagement was heightened by psychological pressure to not make mistakes combined with scientific uncertainty around the advice provided, the latter of which was particularly the case in Norway. At LTCFs in Georgia, available training for caregivers on how to deal with burnout existed, as well as workplace support in terms of food and transportation, but overall psychosocial support was missing. A key issue noted was that, with respect to LTCFs, the involvement of high-level leadership in direct information sharing with LTCFs helped overcome many practical challenges during the pandemic, yet also made the system particularly dependent on a few uniquely placed individuals, with no backup. With a prolonged crisis such as the COVID-19 pandemic, clearer organisational routines and practices would help to achieve some kind of 'normalcy' in the daily work of core personnel.

Participants felt many procedures and practices had been developed through trial and error. Improving organisational preparedness as such came out as a most pertinent option to avoid burnout risk and ensure institutional resilience. In Norway, it was noted that while most staff had always been very aware of the risk of a pandemic, they felt that National Action Plans had not always been updated, and that the organisational crisis procedures and systems could have been integrated more strongly into ongoing routines and practices (e.g. regular evaluations of LTCF infection control practices). Clear organisational systems and procedures should have been in place and staff should be made familiar with them through training exercises and simulations. This is particularly important in a decentralised health system such as the Norwegian one where municipalities play a key role in both advice-making and implementation.

Bolstering training and institutional memory was also noted in both countries as an ongoing need, particularly after the peak of the pandemic. Lessons need to be systematically identified and shared. An overall lack of evaluations and AARs was noted. In Georgia, audits were more common as an evaluation practice, while in Norway more broad-based societal evaluations have been conducted. In both countries, AARs had not been institutionalised as common practices. Participants were positive regarding the merits of this reflexive approach. Disseminating the experiences through archiving, training and simulation exercises is essential. Such lessons learned need to be integrated in routine refresher trainings, webinars, and introduction sessions.

In Georgia, training regarding supervision and burnout and provision of supplies for the immediate response were very important, and supported by several international institutions (UNFPA, UNDP, WHO, World Bank). In Norway, key staff from different LTCFs across the country would receive insights and training through webinars run by NIPH every two weeks. There was consensus among LTCF staff and the NIPH that the webinars had a substantial influence in building institutional resilience and trust between the different levels of advice-making. The webinars reached rural areas and provided LTCF staff with both the opportunity for continued training and for information sharing and networking among LTCFs themselves. It was an important initiative during the pandemic that should continue in peacetime as an institutionalised practice.

Finally, a lack of clear work division (who is doing/is responsible for what) between different health agencies was an issue that complicated the response. In Georgia, two institutes provided statistical data to the government: one was a department within the MoHLSA, and the other was the NCDC. While they had a slightly different focus, some coordination was needed to avoid duplicating efforts. This was solved mainly due to the short and effective lines of communication between the two institutes. The situation in Norway, was more complicated because the two key advice-making institutes (NIPH and NDH) had overlapping roles and responsibilities that remained unresolved throughout the pandemic. The NDH should in principle take the epidemiological advice produced by NIPH while also considering a broader set of factors (economic, social and legal) to strengthen the advice. However, the NDH would often want to reinterpret the epidemiological evidence when producing advice and communicate it to the policy makers in the Ministry of Health. At times this meant starting from scratch rather than from the advice and evidence provided by the NIPH. Disagreements on advice constituted a particular challenge when there was little opportunity to exchange information, viewpoints and to come to a common agreement. This was the situation in the initial Omicron phase where both agencies were forced to work on risk assessments independently due to extreme time-constraints. A good practice is that clear lines of responsibility and leadership need to be defined in peacetime as it demands quite substantial formal organisational changes as well as cultural and behavioural changes within the agencies.

Collaboration and communication

Participants noted active communication in both countries between agencies and departments dealing with the emergency. Notably of use were new communication technologies, particularly webinars, on-line meeting applications and WhatsApp groups allowing efficient communication across wide territories. In Georgia, participants observed that the national Public Health Emergency Operations Centre was very efficient in supporting communication across the response because it operated on a tactical, operational level, leaving out politics.

Communication with the public was experienced as challenging in both countries. In Georgia, the main issue was a perceived lack of capacity nation-wide and need for leadership strengthening. While NCDC had developed advice on how to communicate with the media, implementation was lacking, and challenged by a polarised media landscape with less constructive feedback from investigative journalism. International support by WHO proved helpful, as well as the support of fact-checkers from outside the institute. In Norway, the increased uncertainty caused by the Omicron wave led to a higher need for fast and widespread information, which sometimes compromised coordination of optimal wording. Moreover, the shift in messaging of the impact of the Omicron variant – from a serious health risk to a workforce problem – was challenging to communicate. Both countries showed a strong preference for information dissemination at fixed times, preferably mid-week, to implement new practices and procedures, but this was not always feasible in challenging situations such as in the initial phase of the Omicron wave. In the absence hereof, health practitioners complained that they had to consult different websites at different days and timeslots. Both countries also had several dashboards where updates and data were published. While this did not lead to serious issues, there was a shared sentiment that reduction of overlap could benefit the response.

Conclusions

This aggregate report is based on two AARs of evidence-informed advice making at the start of the Omicron wave, in Norway and Georgia. The Omicron wave hit these countries at different times across substantially different country contexts.

Overall, in both countries, there was a sentiment that the advice-making process was supported by the best available evidence, following institutionalised procedures. The key to advice-making is gathering and interpreting epidemiological data in real time as well as drawing on relevant international evidence and experience when dealing with an immediate crisis with high scientific uncertainty. Social and behavioural sciences together with the lived-experience of people within LTCFs were less systematically and insufficiently integrated in the advice-making process. It is clearly important to provide adequate resources to collect and categorise new evidence in an easily digestible format in all these areas to avoid overburdening staff.

Staff burn-out was a risk at all institutional levels, including the fear and uncertainty and psychological pressure to not make mistakes. Person-based leadership and direct information overcame many practical challenges during the pandemic, but also risked dependency on individuals already overburdened. Staff support to help with, for example, Freedom of Information Requests during peak periods is key. To increase capacity, surge capacity from other ministries and international agencies was important, particularly in lower resourced Georgia.

LTCFs often had a direct influence in the advice-making process and there was continuous communication between the implementing agencies at the local level and the national health agencies. There was regular coordination and communication across departments and agencies as well as LTCFs. New digital tools such as webinars and WhatsApp groups made a substantial contribution to this communicative capacity, and motivated building institutional resilience and trust between the different levels of advice-making.

Communication with the public remained challenging. Different outlets for the same advice risked different framing, wording, and public interpretations. Moreover, changing advice at slightly different times at different locations created confusion among healthcare practitioners and the public. Building a rigorous health communication capacity is an effective way to integrate social and behavioural science expertise in advice-making and moving the field beyond simply pushing messages.

A clear distinction of institutional roles and active and constant collaboration is also a key factor for a smooth response. When data are collected at multiple places, coordination and access needs to be organised early on. Moreover, agencies involved need to have clearly defined areas of responsibility to avoid unnecessary loss of time when an outbreak occurs.

Finally, learning from the crisis is essential. Decentralised documentation of response activities has been conducted within the facilities (transcripts of own meetings, etc.), but not yet systematically integrated in lessons learned, trainings and capacity building. A shared concern included the need to archive communications conducted through new digital tools to be able to obtain lessons learned for future preparedness (e.g. WhatsApp chats). Systematic learning reflections (AARs) of what worked and what didn't work within and across agencies are needed without resorting to assigning blame or auditing responsible parties. While many participants have always been very aware of the risk of a pandemic, lessons learned regarding organisational procedures and systems should have been integrated more strongly into ongoing routines and practices.

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Annex 1. AAR workshop programme, Norway

Date	Activities
Tuesday, June 7, 2022	
12:00 – 12:45	<ul style="list-style-type: none"> Meet-up ECDC, consultants, Norwegian team. Location: near nursing home authority (TBD)
13:00 – 15:00	<ul style="list-style-type: none"> Visit with Nursing Home Authorities. Location: Nedre Slottsgate 3, 0157 Oslo
Wednesday June 8	
9:00 – 10:00	<p>Session 1: Introduction of project The goal of the AAR is to foster opportunities for discussion and dialogue on the role of evidence in decision-making regarding technical advice for long-term care facilities during the omicron outbreak. Participants are invited to reflect on the advice-giving decision-making process and help identify best practice suggestions for improvement.</p> <ul style="list-style-type: none"> Word of welcome (5 min.) – Hanne-M. Eriksen-Volle, Seksjonsleder Resistens- og infeksjonsforebygging. Folkehelseinstituttet Introduction of project (10 min.) - Agoritsa Baka, ECDC Principal Expert Emergency Preparedness and Response Brief round of introduction (15 min.) Review of AAR activities (30 min.) – Olivier Rubin, Professor Department of Social Sciences and Business, Roskilde University & Danny de Vries, Associate Professor, Department of Anthropology, University of Amsterdam
10:00 – 10:30	Break
10:30 – 12:30	<p>Session 2: What happened and who was involved In this session we plan to discuss a preliminary timeline of key decision/advice giving events and trace the processes (formal and informal) related to technical decisions regarding formal advice(s) relevant to omicron in long-term care facilities. This also entails mapping out the various stakeholders that participants had contact with during the response, including agency roles.</p>
12:30 – 14:00	Lunch
14:00 – 17:00	<p>Session 3: Why did the advice develop the way it did? How was evidence used? Here we will discuss how evidence influenced the advice-giving decision-making process as well as what evidence was available and how it was used (or not used). The purpose of the session is not to uncover 'mistakes' or 'good decisions' (with the benefit of hindsight), but to understand why the decision-making dynamics unfolded as they did and what role evidence played in these dynamics. Participants will be asked to identify how and when evidence was brought into the advice's decision-making process, and how it was responded to.</p>
Thursday, June 9, 2022	
09:00 – 10:30	<p>Session 4: How did advice-makers make sense of the situation? In this session, participants' opinions will be collected to get a variety of perspectives on why the decision-making process of the formal advice unfolded as it did. Participants should also reflect on how various professional backgrounds and experiences; institutional practices and procedures, and the type and availability of evidence shaped and defined sensemaking.</p>
10:30-11:00	Break
11:00 – 12:00	<p>Session 5: What can be learned? What should change? How can change be implemented and monitored? Identify and discuss major lessons learned about the use of evidence during key decision-making processes regarding advice related to long-term care facilities. What can be done to improve gaps or challenges and to sustain best practice?</p>
12:00 – 13:00	Lunch
13:00 – 14:00	Session 5 (continued)
14:00 – 15:00	<p>Session 6: Wrap up, closing and evaluation Opportunity to reflect on the consultation process itself, but also on the outcomes. Agreement on the next steps, including the writing process for the final report. The session will be closed with a brief evaluation.</p>
Friday, June 10, 2022	
	<ul style="list-style-type: none"> Possible follow-up interviews (e.g. involved communications officer) Possible visit to long-term care facility
13:00 – 14:00 (or TBD)	<p>Session 7: Hot Debrief Consultants will review preliminary findings to all interested parties, verify and validate the findings, and review agreements for next steps.</p>

Annex 2. AAR workshop programme, Georgia

Date	Activities
Tuesday, 6 September 2022	
	Morning: Last-minute team meeting at 11:00 lobby Marriott Hotel (Freedom Square). Afternoon: Meeting with elderly LTCF (near City)
Wednesday, 7 September 2022	
	<p>Morning: 09:30 – 10:00 – Coffee/Tea 10:00 – 11:00 Session 1: Introduction (1 hour) The goal of the AAR is to foster opportunities for discussion and dialogue on the role of evidence in decision-making regarding technical advice for long-term care facilities during the omicron outbreak. You are invited to reflect on the advice-giving decision-making process and help identify best practice suggestions for improvement. 11:00 -11.30 – Coffee/Tea break 11:30 – 13:30 Session 2: What happened and who was involved (2 hours) In this session we plan to discuss the timeline of key events and trace the processes (formal and informal) related to technical decisions regarding formal advice(s) relevant to omicron in long-term care facilities. This also entails mapping out the various stakeholders that participants had contact with during the response. 13:30 – 14:30 - Lunch</p> <p>Afternoon: 14:30-17:00 Session 3: Why did it happen? How was evidence used? Why did the decision develop the way it did? (2.5 hours) Here we will discuss how evidence influenced the advice-giving decision-making process as well as what evidence was available and how it was used (or not used). The purpose of the session is not to uncover 'mistakes' or 'good decisions' (with the benefit of hindsight), but to understand why the decision-making dynamics unfolded as they did and what role evidence played in these dynamics. Participants will be asked to identify how and when evidence was brought into the advice's decision-making process, and how it was responded to. Evening: 19:30 Dinner @ Sakhli N11, 11 Tabidze st 0105 Tbilisi</p>
Thursday, 8 September 2022	
	<p>Morning: 09:30-10:00 Coffee/Tea 10:00 – 12:30 Session 4: How did decision makers make sense of the situation? (2 hours) – coffee break 15:30 -16:00 In this session, participants' opinions will be collected to get a variety of perspectives on why the decision-making process of the formal advice unfolded as it did. Participants should also reflect on how various professional backgrounds and experiences; institutional practices and procedures, and the type and availability of evidence shaped and defined sense-making. 12:30-13:30 Lunch</p> <p>Afternoon: 13:30 – 16:00 Session 5: What can be learned? What should change? How can change be implemented and monitored? (2 hours) (14:30-15:00 coffee/tea break) Together we will identify and discuss major lessons learned about the use of evidence during key decision-making processes regarding advice related to long-term care facilities. What can be done to improve gaps or challenges and to sustain best practice? 16:00-17:00 Session 6: Closing and evaluation (1 hour) To provide participants with the opportunity to reflect on the consultation process itself, but also on the outcomes</p>
Friday, 9 September 2022	
	<p>Morning: Reflection, possible additional meetings by ECDC team Afternoon: 13:00-13:30 Coffee/tea 13:30-14:30 Hot Debrief (1 hour) 14:30-15:00 – final remarks and conclusions</p>

Annex 3. Timeline of events in Norway, as discussed during the AAR

Time	Key event
2021-11-26	NIPH risk assessment: Omicron will eventually spread to Norway and become the dominant variant. However, the variant is unlikely to cause more serious illness
2021-11-30	first possible Omicron variant cases in Norway following a large Christmas party. Indications that vaccination did not appear to provide great protection against infection.
2021-12-01	Municipal guidelines to the LTCFs were updated. Omicron was explicitly mentioned as a concern and the guidelines included some more restrictive measures such as self-testing among employees and a demand of visitors to wear mask in all common area.
2021-12 (7, 13 and 22)	NIPH puts out three risk assessments expressing concern about the variant. While it was recognised that Omicron was unlikely to cause more serious disease (especially in vaccinated people), the NIPH worked with different scenarios where the worst-case would simply overwhelm the health sector in January/February.
2021-12-08	Government implemented restrictive measures to avoid a breakdown in the health sector. For LTCF guidelines, this meant reintroducing distance of at least one meter and recommending the use of face masks for both employees and visitors when in contact with residents. All staff and residents regardless of vaccination status had to be tested immediately.
2022-01-12	NIPH risk assessment: greater certainty that the Omicron variant offered significantly less risk than the Delta variant for the serious illness
2022-01-14	Government explicitly stated that stopping the Omicron wave was not possible, nor was it desirable. Started easing some measures while keeping others. For the LTCF this concretely meant that NIPH guidelines no longer called for quarantines.
2022-01-26	NIPH risk assessment cautioned that the Omicron variant had only reached the elderly population to a lesser extent, so the full severity of the disease was still uncertain.
2022-02-12	The comprehensive testing regiment was further reduced. The guidelines for LTCF dictated that testing should now only be conducted for those exhibiting symptoms.
2022-03-15	LTCF guidelines recommended established plans for return to a normal operation in accordance with local infection control programs.

Annex 4. Timeline of events in Georgia, as discussed during the AAR

Time	Key event
Spring 2020	Decree for mandatory testing. LTCFs identified as priority group in clinical management group.
2020-01	Emergency Operational Centre activated at NCDC, part of national security council.
2020-03	State of emergency declared, as well as national security line 508, function 6 for medical emergencies, to give government the opportunity to implement certain activities with less restrictions. Informal start of Coordination Council committee as a temporary working group advocating for the right of disabled people, including health service professionals and community members (e.g. parents).
2020-07	Formalisation Coordination Council committee, with first formal meeting in August 2020.
2020-09	First wave of COVID-19, challenged by insufficient available PPE. Infection prevention and control specialists became mandatory in hospitals. WHO-based first general COVID-19 Decree was issued.
2020-10	Elections, with increasing pressure to ease as well as opposition protests (spreading COVID19). Time of uncertainty of Delta strain. Decree on distance working issued, including disinfection practice, thermo-screening, social distancing, mask usage, etc. Based on this decree, LTCF personnel were organised to work in seven or 12-day shifts.
2020-11	Financial incentive for vaccination. Very high circulation of SARS-CoV-2 Alpha variant during the summer months.
2021-02	MoHLSA changes and lifting of COVID-19 regulations, including a lighter approach towards the pandemic and reduction of additional staff in the government.
2021-05	Decree #277 with annexes for LTCFs. This was the most concrete and specific decree for LTCFs. The Labor Agency produced one annex with 41 main points, one of them directly connected with the LTCFs. The annex to the Decree 227 was developed in coordination with NCDC and the agencies who were conducting those activities to create the regulations.
2021-09	Ordinance about specialised health centres for elderly people and people with mental disabilities, regarding IPC, testing, and vaccination. New Prime Minister elected resulting in some easing of restrictions.
2021-12	Third booster for LTCF residents.
2022-01	Omicron VoC circulating almost exclusively after the end of January 2022.. When Omicron was sequenced, NCDC implemented a strict isolation approach for contacts, because the spread was faster than Delta. NCDC's vaccine effectiveness study showed that for people with full vaccination scheme, the risk to get COVID-19 was minimal with vaccine protection of 44% against hospitalization, 60% protection against ICU admission, and 85% for death
2022-02	Isolation criteria reduced for contacts which affected the LTCFs because it was seen to cause more problems than it solved. Isolation process in the LTCFs stopped as well as routine testing. The general opinion was to have less strict regulations, but this was not yet reflected in the formal mandate to lift the regulations. The lifting of regulations came after the elections (Feb 25, 2022).
2022-03	Many changes in decree #227 lifting restrictions, including isolation times. High vaccination rates among elderly in LTCF deemed less at risk. However, due to much lower vaccination rate in general public, risks continued but this was difficult to communicate in light of general public pandemic fatigue.

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