Co-funded by the
Health Programme of
the European Union

SHARP

Strengthened International HeAlth
Regulations & Preparedness in the EU

Assessing public health preparedness and response in the EU

Country level use of After Action Reviews

Addendum to the report: A review of EU-level Simulation Exercises and After Action Reviews

Submitted as part of JA SHARP WP5: Monitoring and evaluation of IHR (2005) core capacities and implementation of Decision 1082/2013/EU at the European level.

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September 2023

This document is part of the Joint Action 848096 / SHARP JA which has received funding from the European Union's Health Programme (2014-2020).

Content

Executive summary

EU level simulation exercises (SimEx) and after action reviews (AAR) are valuable tools for evaluating and strengthening preparedness and response to cross border health threats in the EU. This addendum to the review of EU-level SimEx and AAR investigates the use of AAR at country level since the start of the COVID-19 pandemic, the barriers for conducting these reviews, and how identified recommendations are followed up. Key informant interviews with participants from seven countries have been conducted to build a foundation for a surface analysis exploring these topics. Several available sources have been used to assess the general use of AAR in EURO region and in EU/EEA.

- 37% (n=20) of countries in the WHO EURO region and 32% (n=10) of countries in EU/EEA were found to have conducted any AARs between 2019 and 2023.
- Barriers for conducting AAR stated in interviews were concerning the following topics: Limited resources, time, and prioritization (n=7), AAR methodology and process (n=5), and motivational and sensitivity issues (n=5).
- None of the participating countries had any specific system for follow-up of recommendations from AARs.
- Barriers for implementation of recommendation highlighted were concerning the following topics: Feasibility (n=5), usefulness and relevance (n=3), ownership (n=2) and structure (n=2).

Countries should consider whether a large scale comprehensive or lighter internal AAR is appropriate, depending on the type and complexity of the event, actors involved and resources available. Further, external expert support could be considered when conducting AARs, but ownership and details of recommendations should remain the responsibility of the country. And lastly, systematic follow-up of recommendations following AAR could support accountability and implementation among responsible authorities.

Acknowledgement

We would like to thank Jussi Sane from WHO EURO, Svetla Tsolova from ECDC, and Karin Nygård from the Norwegian Ministry of Health and Care services for useful advice and support during the planning and writing.

1. Introduction

1.1. Background

The Joint Action SHARP aims to strengthen preparedness in the EU against serious cross-border threats to health and support the implementation of International Health Regulations (IHR) (2005). Work package 5 focuses specifically on IHR core capacity strengthening and assessment, with the aim to improve core capacities in EU Member States as required by IHR (2005) and Decision 1082/2013/EU as well as in EEA countries. The feasibility of using information from simulation exercise (SimEx) and after-action reviews (AAR)[1] in assessing the state of public health preparedness in the EU was examined as a part of this work. An analysis of EU level exercises and a comparison of their recommendations with lessons learned from COVID-19 was summarised in the report "A review of EU-level Simulation Exercises and After Action Reviews" (Utheim et al., 2022). This review concluded that SimEx and AAR are valuable tools for evaluation of preparedness as there are no other existing tools in use at regional level in the EU. It was also found that there is currently no system in place to follow-up the resulting recommendations. Additionally, when comparing the recommendations from SimExs and AARs conducted before 2019 with lessons learned from COVID-19, similarities confirmed the usefulness of these tools in identifying important gaps in preparedness.

In parallel with the SimEx and AAR review on the EU level, the WHO Regional Office for Europe and the National Coordination Centre for Communicable Disease Control (RIVM/LCI) did a mapping of AARs and SimExs in the European Region from 2016-2019 (WHO EURO, 2022). These both resulted in important findings, but how countries have utilised these tools in recent years to improve preparedness during and after the response to COVID-19 is still largely unknown. In March 2023 we aimed to collect reports from country level COVID-19 intra-action reviews (IAR)[2] through our SHARP partner network. Only three countries provided reports confirming the use of IAR during the pandemic which simultaneously raised further questions about which barriers exist for conducting AAR, and if other similar review processes were used. After discussions with WHO, the European Centre for Disease Prevention and Control (ECDC) and RIVM, key informant interviews were proposed as a basis for a surface analysis to explore these knowledge gaps and implementation barriers.

1.2. Aim and objectives

The overall aim of this addendum to the report "A review of EU-level Simulation Exercises and After Action Reviews" (Utheim et al., 2022) was to explore the use of AARs in European countries since the start of the COVID-19 pandemic. Specific

[1] AAR is here defined as a structured review of the public health response to a health event, where the methodology according to guidelines of WHO or ECDC is used partially or fully.
[2] IAR is a subtype of AARs, sharing the methodology and principles of AAR but focusing on protracted emergencies.

objectives were to explore the following questions at the country level in a selection of European countries:

- What has been the use of AARs, including COVID-19 IAR or similar review processes since the start of the COVID-19 pandemic until present time (September 2023)?
- What were the potential barriers for conducting AAR?
- To what extent have the recommendations been implemented, and what are potential implementation barriers?

2. Methods

An initial plan for this investigation was to implement the same methodology as the EU level report and create a database of recommendations from country level reports from COVID-19 IAR and analyse the content. The attempts to collect reports or summary of recommendations resulted in material from 3 countries after reaching out to multiple contacts in the 21 SHARP partner countries. As data material collected was scarce, key informant interviews were planned to form a basis for a surface analysis.

The period under investigation was from the start of the COVID-19 pandemic until present time (September 2023), and the focus was both AAR for COVID-19 and general use of AARs exploring other topics than the pandemic.

2.1. Information sources

Since reporting of conducted AARs to the WHO is not compulsory, a complete overview of the use at country level did not exist. In order to develop an overview of AARs conducted at country level, we used the following available information sources:

- Information from countries responding to the request for COVID-19 IAR reports in March 2023
- Information from WHO global analysis of COVID-19 IARs (WHO, 2022a)
- Information from the WHO Strategic Partnership for Health Security and Emergency Preparedness (SPH) Portal (WHO, 2022b)
- Published literature
- Responses from the key informant interview

2.2. Key informant interviews

Representatives from public health agencies at the national level in the SHARP partner network from a total of 18 European countries were invited to bilateral interviews. Online Teams meeting of 30 minutes were set up with key informants from 7 countries that agreed to participate, and the questions were shared in advance with participants (Annex 1). Focus was placed mainly on three topics:

- The use of AAR at national level since the start of the COVID-19 pandemic, including but not limited to COVID-19 IAR.
    - Other reviews conducted during or after public health events that are not defined as AAR or IAR.
- Potential barriers for conducting AAR in the country.
- The extent of implementation of recommendations from AAR or similar processes, system for follow-up, and potential implementation barriers.

All participants, regardless of having done AAR in the period under question, were asked about having a system or structure for follow-up of recommendations AAR or from other similar processes. They were also asked about their thoughts on barriers for implementation of these types of recommendations.

Participants were encouraged to give information and provide insight into relevant issues in addition to the direct questions. Two pilot interviews were done in the first country. All other interviews were conducted with one key informant, except for one country where two participants took part in the meeting. Some participants had also consulted colleagues for updated information before the interview. Notes were taken during the meeting and responses were categorised and summarised according to topic.

As the interviews were not tape-recorded for information security reasons, transcripts were not available. Notes to document the main points from the interviews were taken. These notes were then analysed by the interviewer by clustering into main topics that emerged from the interviews. The resulting clusters from the interview data were reviewed by an additional person to discuss the interpretation of information by the interviewer in the resulting categories.

3. Results

3.1. Use of AAR on country level based on available information sources

Using data from all available sources, we found that 20 of 54 (37%) of countries in the WHO EURO region and (including Kosovo[3]), and 10 of 31 (32%) of countries in EU/EEA had documented that they had conducted any AARs between 2019 and 2023. We can only confirm that two countries had done more than one AAR in this period.

The ECDC technical report presenting an analysis of some issues during the first phase of the COVID-19 pandemic based on the experience of five EU countries, was mentioned during one of the interviews (ECDC, 2022). However, as this does not provide country level recommendations it was not included as an AAR. The AAR of West Nile virus in Europe

[3] All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

(Riccardo et al., 2020) was also talked about in the interviews, but was not included as it was done before the period under question.

3.2. Results from interviews

Of the 18 countries invited for key informant interview, 7 participated (1 high-middle income country and 6 high income countries).

Two of the participating countries had done one or more AARs during the relevant period, of which one did not use any guidelines in the process. An ECDC technical report on measuring preparedness building on experiences from five countries in the first phase of the COVID-19 pandemic (ECDC, 2022) was mentioned in one interview, but was not included as an AAR as it does not include country-level recommendations. The ECDC-supported West Nile AAR in four countries (Riccardo et al., 2020) was also not included as it was performed before the period under question.

3.2.1. Other review processes

In response to the question about review processes that participants did not define as AAR, some described using lessons learned from COVID-19 and other AARs to develop and strengthen preparedness. General debriefs with multiple sectors after major events but without producing concrete recommendations, and some lighter review processes within a department of an organisation were also mentioned. One country that did not conduct a structured AAR after COVID-19 explained that they had a series of discussions and meetings leading to lessons learned, exploring different components in public health. Regular external evaluations of public health components not linked to specific events were also mentioned.

3.2.2. Barriers for conducting AAR

Identified barriers for conducting AARs have been clustered in three areas: Limited resources, time and prioritisation: AAR methodology and process and motivational and finally sensitivity issues. All countries that had either not done or performed only one AAR (n=6) indicated that more AARs would be important for improving preparedness. Different barriers for conducting these reviews were highlighted by five or more countries concerning the following topics: Limited resources, time, and prioritization (n=7), AAR methodology and process (n=5), and motivational and sensitivity issues (n=5).

Limited resources, time, and prioritization

- Resources, time, and high workload were mentioned by all participants as barriers for conducting AARs.
- The need to prioritise management of real-life events was also frequently mentioned. Having to prioritise new outbreaks or other events was mentioned by many as a reason for not initiating an AAR for a previous event. One participant highlighted that the people that would be responsible for conducting AARs are the same that are responsible for the daily handling of pandemic or other outbreak response.
- The need for people with experience and knowledge to manage the process,

including people trained on the AAR methodology was also mentioned. One country highlighted that when one review had been conducted according to guidelines, the following ones would be easier to implement.

AAR methodology and process

- Several participants highlighted that an AAR is a resource-demanding process. It was referred to as being too comprehensive, too in-depth or "large" processes by both countries that had and had not conducted an AAR.
- It was also commented that the ambitions are often high, and it could sometimes be beneficial to do a "lighter" review instead. Aiming for "low-hanging fruits" topics and a simple, quick process could still give important and useful answers. A lighter version could be beneficial for smaller events that did not involve many sectors.
- One participant mentioned that the challenge is not to have the discussions or collect responses, but to do the documentation - write out the report and analyse recommendations.
- Being structured and following a defined methodology was raised as an important point to avoid focusing on blame.

Motivational and sensitivity issues

- The willingness by authorities to conduct AARs was stated as a barrier. Possible reasons mentioned were that the process would lead to increased workload as recommendations produced need to be followed up.
- In addition, lack of political interest could be because of fear of criticism in findings. Focus on WHAT went wrong could easily lead to focus on WHO did something wrong.
- One participant underlined that it would be important that the AAR process is initiated at a higher level for more sectors to be dedicated to participating. If several sectors need to be involved, they could have different priorities and it could be difficult to move ahead with conducting a review.
- Also mentioned as a barrier for conducting AAR was that some might not see the need for doing this as they believe the response was good.

3.2.3. Recommendations from AARs

The countries that had conducted AARs confirmed that recommendations had been included in the reports. The implementation of recommendations was described as partial, some had been implemented, others not. One participant stated that the overall preparedness was strengthened as a result of the AAR. It was also mentioned that the AAR process itself had given a better understanding of how the response worked, and that some of the recommendations were not measurable.

3.2.4. System for follow-up

None of the participants had any specific system for a follow-up of the recommendations. Nevertheless, comments were given regarding the follow-up:

- The principles of responsible authorities were underlined by one, meaning that each agency is responsible for implementing the recommendations that concern them.
- Another participant claimed that even if there was no system in place for follow-

up, the people and agencies concerned were aware of the recommendations.
- Also mentioned was that the authorities involved in the AAR would do the follow-up.
- One country had a process ongoing at public health institute level with regards to organisation of work on preparedness that could improve the follow-up.

3.2.5. Barriers for implementing recommendations

Different barriers for implementation of recommendations were highlighted by at least two countries concerning the following topics: feasibility (n=5), usefulness and relevance (n=3), ownership (n=2) and structure (n=2).

Feasibility

- It was commented that some issues concluded in recommendations are just difficult to solve. Further, it was brought up that some recommendations were too big and difficult to prioritise.
- Resources and priorities were brought up in the discussions, and economy and financial constraints were raised by some participants as a barrier for implementation.
- Political commitment and legal issues were also topics mentioned.
- One participant highlighted that differences in organisation, resources and expertise between a country's regions would create differences in capacity to implement recommendations at regional level.

Usefulness and relevance

- Other barriers for implementation were regarding the pertinence of the recommendations. Some recommendations were said to be either not possible to implement or just simply not expedient or appropriate.

- One participant mentioned that involvement of external consultants could sometimes lead to very general recommendations as they do not know the systems in question well or are not necessarily technical experts in the relevant field.
- It was mentioned that if the process is internal, discussion can be open regarding weaknesses and needs for improvement. If many sectors are involved, this could put more pressure on appearing to have performed well.

Ownership

- Successful implementation was also related to who had been involved in the process. Those in charge of the process were thought to feel more ownership for the follow-up. It was also raised that people need to be involved in the real-life event to understand and/or support the implementation of the recommendations.
- It was mentioned that the implementation of recommendations depends on if they are within the mandate of the institute conducting the AAR.

Structure

- Points believed to be of relevance for implementation was also the structure of the output from the AAR. It was highlighted that there need to be a good report with clear and measurable recommendations.

- The timeline and agenda for the implementation of recommendations was also seen as important, as well as a continued process of evaluating the relevance of the content.

4. Discussion

We have been able to identify the use of AARs in the recent years in 32% and 37% of EU/EEA and EURO region countries respectively. Of these, at least two countries had done more than one review. AARs conducted since 2019, including but not limited to COVID-19 IARs were included. This is similar to the findings of the mapping of AAR between 2016 and the end of 2019 done by WHO (WHO EURO, 2022) when it comes to the proportion in EURO region that were confirmed to have conducted any AAR. However, the WHO mapping found more countries that had done multiple AAR. Even if most of the countries that participated in the interviews had not done any AARs, they still confirmed a perception of the usefulness of the tool in identifying important gaps in preparedness.

The main barriers for conducting AARs seem to be linked to limited resources and prioritization of real-life events and seeing AAR as a large and resource demanding process. Also, motivational and sensitivity issues have been mentioned as playing a role in initiation the process and producing useful outcomes.

None of the participating countries had a system in place for follow-up, but this was not raised directly among the barriers for implementation. However, structural issues, such as clear and measurable recommendations and timeline for implementation, was highlighted. The most frequent topics raised as barriers were feasibility to follow-up what was recommended in addition to usefulness and relevance of the content of the recommendation. Successful implementation was also seen in relation to ownership and involvement of the review process and recommendations being within the mandate of the agency conducting the review. Implementation barriers mentioned in the WHO mapping of county level AARs were financial or technical resources and communication problems. Overall, however, there were few barriers reported and an addressed limitation in the methodology of the WHO mapping was that questions were not answered detailed enough in the questionnaire and there was no possibility for follow-up questions.

This report highlights some findings that can be useful in understanding and improving the way countries identify lessons learned and strengthen their preparedness after an event. The qualitative methodology used in this review complements other literature with more detailed insight into mechanisms and barriers at country level. A limitation is that only a few countries participated in the study and only two countries had conducted AARs in the period under question, which could leave out other important aspects. A full overview of the use of AAR has not been possible to obtain since AAR is not compulsory to report to WHO, and only a few countries responded to our requests.

5. Conclusion and recommendations

AARs are considered by countries to be useful tools for evaluation and improving preparedness and response to serious cross-border health threats. However, our findings indicate limited use of AAR in EU/EEA and EURO region during and after the start of COVID-19. Several barriers for conducting these reviews have been identified as well as barriers for implementation of the identified recommendations.

There could be several approaches to overcome some of these identified barriers. First, countries could be encouraged to consider different approaches to AARs depending on the type/complexity of the event, actors involved and resources available. A smaller-scale internal review 'compared to a multisectoral, comprehensive review may be more appropriate and feasible in some situations. With limited resources, and especially for smaller events, a rapid AAR could be more easily achieved, give a transparent process and lead to important findings. The current guidance highlights that the process is flexible, can be tailored into the context, and can be made very light. Increasing awareness on the guidance and what are the options could be important for countries to find a feasible approach. Second, external expert support could be considered to conduct AARs, but ownership and details of recommendations should remain the responsibility of the requesting country. Lastly, the planning of an AAR should also include how outcomes will be followed-up. Developing a system for systematic follow-up of recommendations following AAR could support accountability and implementation among responsible authorities.

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Annex 1. Questions for key informant interview

1. ***Has your country done any After Action Review (AAR), Intra-Action Review (IAR) or similar review of the public health response to COVID-19 other events?***

Consider the period from the start of the COVID-19 pandemic until the present time.

If YES:
- *What was the main subject(s)?*
- *Who was involved (sectors/levels)?*
- *How was the review(s) implemented? Describe the use guideline and methodology.*

2. ***Do you think more AAR should have been conducted to improve preparedness?***

If YES:
- *What do you think could be the reasons for not conducting AAR?*

3. ***If review has been carried out, were there any recommendations concluded?***

If YES:
- *To what extent have the recommendations been implemented?*
- *Do you have a system in place for follow-up of this process? Briefly describe.*
- *What, if any, do you think are the main barriers to implementing the recommendations from AAR?*

4. ***Are there anything else you want to share about your experience with AAR and their use for preparedness?***

Additional questions:
- *Can you give an example of a recommendation?*
- *Can you give an example of a recommendation that was implemented?*
- *Has any AARs been published? Do you have any thoughts on why or why not?*