Template for rapid national evaluations of the 2009-2010 pandemic response

**Objective of template**

The objective of this document is to describe and to provide a simple template for the rapid evaluation and review of national pandemic responses in European Union (EU) and EEA member states (MS).

**Background:**

Public health programmes should be routinely evaluated to “examine their worth, merit and significance” and to provide feedback for their future design, detail and performance. Useful models to evaluate programmes have been developed by the World Health Organization (WHO), the U.S. Centers for Disease Prevention and Control (CDC) and the Public Health Agency of Canada (PHAC).

An evolving methodology for evaluations is conducting a Hazard Analysis of Critical Control Points (HACCP) to analyse the structure and processes of public health decision making. This method was also recently used to analyse the generic national pandemic prevention and control systems (Krumkamp et al).
National responses to the 2009 pandemic in EU/EEA MS were based on national pandemic preparedness plans which the MS had self-assessed using a template developed by ECDC and WHO Regional Office for Europe during the period 2006-2008. The assessment criteria, preparedness indicators and tool had been developed with MS and latterly the indicators were reviewed, revised and approved by the EU Health Security Committee, resulting in a revised set of indicators that were adopted by ECDC and the WHO Regional Office for Europe in 2008. The assessment tool had been supported by ECDC Acid Tests intended for judging whether local ‘front line’ preparedness was fit for purpose.


During the winter/spring of 2010, ECDC was approached by MS to provide support to their undertaking national or supra-regional evaluations of responses to the 2009 pandemic. This document and the attached worksheet are based on the above work and documentation, Member States self-assessments, US CDC’s Framework for Program Evaluation in Public Health and the Public Health Agency of Canada’s (PHAC) Program evaluation toolkit. In addition to the well-established indicators it incorporates some of the specific features of the 2009 pandemic as summarised in ECDC’s Risk Assessment. It is not intended for gathering information at an EU/regional level, but should rather serve as a ‘check list’ or structure for reviews and evaluations undertaken by national or other authorities.
Suggested framework for rapid evaluations:

Design the evaluation process

In order to ensure optimal utilisation of the evaluation process, it is recommended that the evaluation team be aware of the necessary input to decision-making processes at the end of the evaluation. Thereafter, the whole process can be developed to produce that information. It is unnecessary to gather data or information which does not lead to follow-up action or decisions.

One example of an approach to an evaluation process is provided within the PHAC Program evaluation toolkit (Figure 2)

Engage the stakeholders and form evaluation team

It is essential for the success of any public health evaluation, and in particular for evaluating multi-disciplinary responses to the pandemic, to engage all relevant stakeholders at an early stage of the process. This secures that all perspectives are taken into account in the evaluation and that the outcomes of the evaluation can immediately be translated into relevant changes in the future implementation of pandemic preparedness plans. After identifying all possible stakeholders, the evaluation team should be composed ensuring adequate representation of all stakeholders.
Possible stakeholders in national pandemic response to consider include all relevant national authorities, counterparts at the WHO and European level, key industry representatives and representatives from key citizen groups. In this moderate pandemic, stakeholders outside the health care sector were less important than they would have been in a severe pandemic but they should not be neglected. Particular attention should be paid to the decision on whether to include vocal “pandemic activist” groups or politicians. A template for reviewing stakeholders can be found in table 1.

The composition of the evaluation team should be credible, authoritative and have broad representation of stakeholders to ensure the future implementation of recommendations. However, it is just as important that members are seen as objective and were not directly involved in the national pandemic response during the previous year. Possible members of an evaluation team could be acknowledged national influenza experts, decision makers, influenza programme managers, social scientists, vaccine programme experts, communication experts, advocates or opinion leaders.

**Describe the programme**

In order to identify the scope and specific components of the evaluation, CDC and PHAC propose using “logic models”. This approach to describing the national pandemic response allows for a programme overview with causal pathways.

A “logic model” would describe the following aspects of a pandemic response: **Components, Actions, Target groups, Short-term Outcomes and Long-term Outcomes** (with a simple mnemonic CAT-SOLO). A template, which may be adapted to each national situation, is provided in table 2.

Finally, describing the dynamics of the response in terms of “milestones” or timelines facilitates understanding the causal relationships between separate actions in the programme. A template for milestones is provided in table 3.

Familiar from food safety programs, applying the HACCP approach has recently been proposed for describing the structure and the process of public health programmes with key control points. This approach has been applied in evaluating generic national pandemic response structures and plans ([Krumkamp et al](#)).
There are many advantages to creating a logic model for your programme. A logic model will:

- summarize the key elements of your programme (hopefully on a single page);
- explain the rationale behind programme activities;
- clarify the difference between the activities and the intended outcomes of the programme;
- show the cause-and-effect relationships between the activities and the outcomes;
- help you identify the critical questions for programme evaluation; and
- provide the opportunity for programme stakeholders to discuss the programme and agree upon its description.

Source: Public health agency of Canada (PHAC)
Focus the evaluation

Once the stakeholders have been identified and the national pandemic response has been appropriately described, the purpose and scope of the evaluation should be defined.

Defining the purpose of the evaluation determines the final outcomes of the exercise and appropriate attention should be given to this step. For example, a MS might decide that the purpose of the evaluation is to provide input into reviewing the national preparedness plan. Another MS might decide that the purpose is to review the crisis management function at the national level.

The scope of the evaluation should determine whether the evaluation focuses on a process evaluation or an outcome evaluation or whether both components should be included. A process evaluation focuses on whether the components, actions and tasks of the pandemic response were carried out according to plan, effectively and efficiently. An outcome evaluation focuses on whether and to which degree the national response achieved the relevant outcomes. Typical outcome measures for pandemic response might be increased awareness of the pandemic and countermeasures, vaccine coverage and uptake, workload in the healthcare system, reduced morbidity and mortality. One should also not forget the possibility to measure “unexpected outcomes” such as the impact of school closures on the healthcare workforce. It is likely that in many MS, outcome measures will be difficult to quantify.

Once the general purpose and scope of the evaluation have been defined, the programme description should be reviewed in detail and an assessment should be made on which specific aspects of the pandemic response should be included or excluded.

Design and implement data collection; analyse data

The design of a data collection is dependent on availability of data, availability of resources and time available for the evaluation process. Possible methods for data collections include surveys, interviews of individuals or focus groups, collection of data from external data sources and identifying published or unpublished documentation. Media sources can also be used to complement information available through other sources.

The evaluation questions should be determined based on the scope and purpose of the evaluation. The questions identified should be specific, measurable, attributable, realistic and obtainable in a timely fashion. Examples of questions to be answered for pandemic evaluations are provided in table 5.

The analysis of the data obtained should be performed in a timely and professional manner. The analysis methodology used will be determined by the choice of the design. An important aspect of the analysis is the measurestick used, i.e. will comparisons be made with the pre-existing pandemic plan, previous pandemics, peer
groups (other MS) or other crisis responses? Will the results be compared to costs involved in the response, i.e. will a benefit-cost analysis be done?

**Justify conclusions and provide recommendations for actions**

The conclusions should be based on the results obtained, taking into account the limitations of the data collected and of the analytic methodology.

Specific recommendations for actions to be implemented should naturally follow from the conclusions. To ensure the proper follow-up and implementation of recommendations, a stakeholders review should be done before finalising the recommendations. However, the evaluation team has to be sufficiently objective and independent to be able to make specific and useful recommendations in the final version.

**Disseminate results and ensure use of results**

According to research done on evaluation processes, only 10% of evaluations lead to appropriate actions by stakeholders. In order to ensure high impact, proper planning for dissemination of results and follow-up of implementation should be part of the evaluation process. The likelihood of the next pandemic not occurring for many years to come poses the risk of the implementation being down-prioritised by busy stakeholders. Therefore, ideally the follow-up is also tied integrally into national pandemic planning cycles. Publication of the results as was undertaken for the latter pandemic preparedness self-assessments coordinated by ECDC is strongly recommended.
**Organisation of the template:**

The template is divided into a series of Excel sheets:

**Table 1. Stakeholders**

**Table 2. Programme Description**, subdivided into
- Communications
- Personal measures
- Public health measures
- Primary care
- Secondary care
- Antivirals and key supplies (health sector)
- Laboratories
- Surveillance
- Monitoring
- Vaccines
- Science & Research
- Multi-sectoral approach

**Table 3. Milestones**

**Table 4. Data sources**

**Table 5. Key questions**, based on the format of [ECDC’s Acid Tests](ECDC 2007) used in the local assessments. They are deliberately tough ‘killer questions’ looking at outcomes and designed to test whether a service was really functioning.
References:

http://whqlibdoc.who.int/publications/9241800062.pdf

http://www.cdc.gov/eval/framework.htm
http://www.cdc.gov/mmwr/PDF/rr/rr4811.pdf

