



SHARP

Strengthened International HeAlth
Regulations & Preparedness in the EU

SHARP JA Abstract submitted by WP6 RIVM (Netherlands) to

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Reference

W202100109 (10/07/2021)

Abstract

Workshop

Topic

Infectious diseases, preparedness and vaccines

Topic 2

COVID-19 pandemic: the aftermath

Workshop type

Regular workshop

Preferred duration

60 minutes

Presentation type

Regular

Title

How to upscale in capacity in different aspects of preparedness and response

Organiser

[RIVM \(Netherlands\)](#)

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Workshop abstract

The magnitude of the COVID-19 pandemic has revealed that the international community was not ready for a public health emergency of this scale. Countries around the world with varying demographic and economic situations struggle to deal with the number of SARS-CoV-2 infections and hospitalisations. There has been a scramble for all types of resources, ranging from personal protective equipment, to testing capacity, to vaccines. During this workshop, we will present scientific research which focuses on how European countries have attempted to deal with these capacity shortages in the period of the first SARS-CoV-2 pandemic wave in European countries as well as the subsequent period. Each presentation will focus on a specific capacity or domain of the COVID-19 pandemic. Yet, they will also all provide information on what went well and what did not go well in the attempt to increase capacity.

The objective of the workshop is twofold. Firstly, it is to provide the audience with scientific research which aims to have a better understanding of both the capacity issues which have been identified in the beginning of the COVID-19 pandemic, as well as the (potential) solutions to increase capacity during inter-pandemic times and future pandemics.

Secondly, it is to provide the opportunity for audience to discuss about the findings and interact with the authors.

The structure of the workshop will be as follows:

The session starts with two thought-provoking statements related to the first two presentations. The audience will be given the opportunity to react to these thoughts using a voting tool and via the chat. This will prime the audience for the upcoming presentations and invite them to participate interactively during the workshop.

In the next 15 minutes, the first two presentations will take place. The presenters will end once again with the aforementioned statements. The audience will be given the opportunity to react by asking clarifying questions, respond to, or challenge the statements.

After this discussion ends, the same process will take place for the next two presentations.

Message 1

During preparedness, more attention should be paid to the estimated capacity needs during response.

Message 2

The mobilization of existing resource capacity, and of mechanisms to upscale capacity when shortages are likely to occur, require more structured approaches.

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No. of abstracts : 4

Presentation 1

Title

A systematic literature review on the use of health care resources during pandemic response

Presenter

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Abstract

Background

The COVID-19 pandemic demonstrated the need for better pandemic preparedness and response, and more international collaboration. The H2020 EU-funded PANDEM-2 project aims to prepare Europe for future pandemics. As part of the project, an European dashboard consisting of epidemiological data and insights on available pandemic health care capacity is developed. To model and map the availability of pandemic resources, data on the use of these resources and interdependencies between resources are needed to parametrize the resource model of the PANDEM-2 dashboard.

Methods

We conduct a systematic literature review. The database [Embase.com](https://www.embase.com) was searched on articles that include a model, scenario, or simulation of pandemic resources and/or describe resource parameters, for example PPE usage, length of stay on the ICU, or vaccine efficacy. Our search included data from all continents and focuses on infectious diseases that have been declared a pandemic by the WHO in the last twenty years, which are the H1N1 influenza (2009-2010) and COVID-19 (ongoing).

Preliminary results

The search query and additional sources resulted in 1215 articles, of which 187 are included for the full text eligibility assessment. We identified several pandemic resources in the field of vaccination (vaccine efficacy), contact tracing (apps), general practitioners, the hospital (staff, PPE, ventilators), and national and regional public health institutes. Furthermore, interdependencies between resources and possible resource gaps were found, for example in hospital staff and PPE.

Conclusion

To be better prepared and to be able to respond fast to a pandemic outbreak, it is important to have insight in the availability of pandemic resources on a national and regional level, their use and mutual dependencies. This makes it possible to anticipate on fast changes and possible shortages by reallocating resources within and between regions. < br>

Presentation 2

Title

Closing the preparedness-response gap in time: Operational readiness at points of entry in Europe

Presenter

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Abstract

Background

As points of entry (POE) – ports, airports and ground-crossings - are important structures for international travel and trade, their timely activated capacity to respond to infectious disease threats is of utmost importance. How can POE timely adjust their capacity from generic preparedness to specific response?

Methods

We developed a conceptual framework for public health response at POE, based on a military used model, leading to a step-wise approach from preparedness to response. Subsequently, our framework has been used to analyze interview data of professionals working at European ports (n=12), airports (n=15) and ground-crossings (n=4) in 11 European countries in June - August 2020 covering the activation of the response to COVID-19.

Results

By integrating the military model, we learned that in preparedness frameworks the pre-defined time expected to activate required capacity is missing. While combining time with ! capacity creates the possibility of defining a readiness range for different capacity requirements. E.g. information provision to passengers is arranged within hours, while entry-screening may take up to days to be operational. We hypothesized that this readiness range provides the opportunity to split strategic thinking from operational readiness, and may support proactive thinking. The interviews confirmed a very implicit and non-formalized reference to the time needed to activate the response. POE differed highly as regards proactive or reactive response strategies. A much stated problem was fast and often changing strategies on measures, leading to extreme required flexibility and workload in operations.

Conclusion

Explicitly acknowledging the time needed to activate appropriate capacity during the transition from preparedness to response can contribute to a better definition of the operational consequences of readiness. These findings may also be of added value in ! other public health area than POE.

Presentation 3

Title

Understanding the factors that contribute to the similarities and differences in SARS-CoV-2 testing strategies across Europe

Presenter

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Abstract

Background

Since the beginning of the COVID-19 outbreak, the importance of testing suspected cases has been stressed by various governments and international organizations. Early in the pandemic, the WHO's Secretary General emphasized the need to 'test, test, test'. Nonetheless, there were some evident differences between European Member States' testing strategies. In order to get an understanding of why and how these differences developed we conducted a mixed methods study in several EU member states.

Methods

We conducted semi-structured interviews with 11 professionals with expertise in public health, laboratory diagnostics and policymaking in 8 European countries, namely Croatia, Italy, Latvia, Malta, the Netherlands, Spain, Latvia, Italy, Slovenia. Based on interview results, a questionnaire is developed to quantify to which degree a larger audience of public health, laboratory and policy-making professionals believe identified factors played a role in the national SARS-CoV-2 testing strategy.

Preliminary results

3 factors seem to play an important role in the diagnostic capacity and testing strategy. Firstly, differences in the countries' available stockpile and their ability to efficiently procure diagnostic equipment influenced testing strategies. Secondly, the variation in institutions that took ownership of the issues of developing, executing and developing the policies led to differences in the testing strategies. Lastly, all countries aimed to follow international advice and guidelines, which led to the convergence of testing strategies over time.

Conclusion

In order to be prepared for a pandemic of COVID-19's scale and make necessary adjustments in capacity building, it is important that Member States understand the factors that play an important role in both their own and other European countries' diagnostic preparedness strategies.

Presentation 4

Title

Online respondent-driven detection for enhanced contact tracing of COVID-19

Presenter

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Abstract

Background

Contact tracing (CT) is a core intervention in the global COVID-19 response, but it is a laborious task for the public health professionals (PHPs) who execute CT. In many countries, the workload associated with CT of COVID-19 exceeded available resources for CT. Online respondent-driven detection (RDD) is an innovative method for case finding that can enhance CT efficiency, through active involvement of index cases and contacts in the execution of CT. This can accelerate CT and decrease PHPs' workload. However, it is unclear if and why (not) PHPs want to apply RDD for CT of COVID-19 and what they need to this purpose.

Methods

This mixed methods study is undertaken in the Netherlands and Germany. We developed an interview guide based on the 'reasoned action approach' to elicit factors that influence PHPs' intention to apply RDD for CT of COVID-19 and their needs. We conducted 17 semi-structured interviews with Dutch PHPs - and will conduct 6-10 interviews with German PHPs involved in CT of COVID-19. Based on the interviews, an online questionnaire is developed to validate the qualitative findings in a larger population of PHPs.

Preliminary results

Dutch PHPs believe that RDD facilitates autonomous participation of index cases and contacts and, conversely, less control of PHPs in CT. PHPs anticipated that this could impact the quality and efficiency of CT, and the delivery of – and compliance with – control measures. Several factors, e.g. the available CT-capacity and the anticipated skills and willingness of index cases and contacts to participate in RDD, influenced PHPs' intention to apply RDD for CT of COVID-19. PHPs expressed a need to retain opportunities to support and guide index cases and contacts in CT and to maintain oversight over the CT-process.

Conclusion

RDD can support PHPs and enhance CT during the ongoing COVID-19 pandemic and future large scale outbreaks of infectious diseases. In order to be properly applied, PHPs' needs should be addressed.