

Pilots and demonstrations: how STAMINA will improve pandemic predictions and crisis management systems



Crisis management units form the basis of population protection in the event of emergencies. In today's age of globalisation with free movement of people across continents, highly dangerous diseases (HDD) are a major threat. Each component of an effective crisis management system forms a barrier between diseases and their spread, so they must be properly equipped, exercised and trained ready for all potential risks and situations.

STAMINA will offer a valuable toolkit for smart pandemic prediction and management. Before getting to the market all tools go through pilot testing and demonstration. The reasons for these procedures are twofold. Firstly, it is a quality assurance measure to ensure high standards of the developed technological solutions. Secondly feedback from a real-world deployment exercise cannot be substituted by theoretical assumptions and lab-based exercises.

The outbreak of the SARS-CoV-2 pandemic reminded society of the imminent danger posed by HDD and challenged crisis management systems in an unprecedented way. HDD are transmitted in various ways, such as by air, direct contact or via vectors. Typical features of these diseases may include a severe disease course and high mortality of those infected. The unavailability of effective prophylaxis or treatment for many HDD may lead to an emergency situation. In most cases, it can be difficult to manage such incidents, which usually require considerable financial and human resources to bring them under control.



Working in an environment where HDD can easily occur places high demands on the protection of intervening crisis management units in the BSL-4 mode (the highest level of biosafety precautions). Therefore, it is necessary to use adequate protective, insulating or decontamination means. Biohazard teams are specialized outreach groups within regional emergency services created to intervene against nuclear biological chemical (NBC) risks. The scope of their work is to secure and transport a potentially infected patient to a designated medical facility, whilst adhering to all procedures to prevent further spread of the disease. Unlike regular crews, biohazard teams have special equipment designed for these situations.

These units often work under extremely difficult conditions and require the best possible equipment and training. During the development stage any tools or procedures need to be properly tested through pilots and demonstrations. This allows a proper evaluation of all functionalities and conditions of deployment. There is nothing that can substitute a practitioner's view based on a hands-on exercise.

STAMINA will offer a rich variety of tools contributing to one effective echo-system involving crisis management, predictive modelling, and scenario generation. Therefore, on the stakeholder side, the STAMINA consortium combines the experience of national planners and first responders. Given the nature of a pandemic threat, it is clear that regionally and nationally-based demonstrations will have to be complemented by cross-border exercises. After all, current experience with the COVID-19 pandemic strongly suggests that mutual cooperation and solidarity is the condition of success.

The impact of COVID-19 means there is now a greater awareness across the globe about the importance of pandemic planning and response and the STAMINA pilots and demonstrations will underpin the value of this. The pandemic reminds us that states need to invest in prediction and crisis management improvements that are properly tested in real-world demonstrations and pilots. This the main STAMINA strategy and goal.