Retos operacionales en un estado de incertidumbre, incluyendo el apoyo sanitario a las misiones y operaciones de la UE, adecuación y lecciones aprendidas

Operational challenges in a state of uncertainty, including the military medical support to EU missions and operations, adjustment and lessons learned.


Conferencias / Conferences:
1. CIMIC – Innovation in Crisis.
Teniente coronel Med. Frantisek Gubas. Eslovaquia. VTC.
Coronel Med. Marian Ivan. Eslovaquia. VTC.
4. Put to the test: development of a COVID-19 testing capacity to ensure Belgian operability.
5. Lessons learned from the investigation of a COVID-19 cluster in Creil, France: effectiveness of targeting symptomatic cases and conducting contact tracing around them.
6. The chemical-intoxicated trauma patient challenges and approaches.
The Medical Intelligence & Information (MI2) Unit of the Bundeswehr Medical Service gained experiences in the current COVID-19 pandemic on different levels of the crisis response. MI2 shared expertise and findings in temporarily overloaded civil Public Health agencies. The MI2 unit is constantly developing new crisis communication products, knowledge sharing techniques in new databases, dashboards for leadership and training for laypersons in contact tracing – trying to innovate in crisis since the first wave of the COVID-19 pandemic. During the second wave, the unit was requested to evaluate the outbreak management of different civil Public Health agencies in southern Germany based on a standardized framework, and to support the development of dashboards in a comprehensive Public Health approach as a necessary start in digitalization. During the third wave, the unit accomplished agenda-setting and implementation of a corona early warning system based on wastewater monitoring in a heavily affected Alpine County. This wastewater monitoring system in Berchtesgadener County was the first countywide covering and digitalized early warning system in Germany.

Furthermore, MI2 optimized the Bundeswehr Medical Service Headquarter’s management dashboards and started pilot studies for an early warning system based on wastewater monitoring in domestic military bases as well as abroad in the MALI deployment.

The civil military cooperation (CIMIC) lead to a win-win situation for all participating entities as we were learning from each other – as long as we are open to co-operate and innovate in crisis.
The paper deals with roles of Slovak Military Medical Service during 1st and 2nd waves of COVID-19 pandemic. Emphasis is stressed on the use of equipment and personnel of the Slovak mobile field hospitals, which are Medical Treatment Facility Role 2E and Medical Treatment Facility Role 2B.

The main tasks executed were reinforcement of existing civilian and military hospital capabilities, providing of COVID-19 testing of Slovak civilian population including nationwide COVID-19 testing, providing of medical care to marginalized communities, operation of state quarantine facilities and reinforcement of civilian vaccination centres.

The aim of the paper is to describe executed tasks in the fight against COVID-19 during pandemics, find out and highlight cases of good practise and present gained lessons learned knowledge.

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Pruebas masivas para SARS-CoV-2 en Eslovaquia.
Coronel Med. Marian Ivan. Eslovaquia. VTC
Mass testing for SARS-CoV-2 in Slovakia
Ivan M.¹

The Slovak Armed Forces led the operation «Shared Responsibility» which was focused on several rounds of mass testing program across all regions in Slovakia in Oct and Nov 2020. Our military medical team was responsible for planning and execution of the mass testing for SARS-CoV-2 in the entire Slovakia.

The medical team of the Office of the Surgeon General was closely cooperating not only with all relevant organisations within the structure of the Ministry of Defence, but also with Ministry of Health and Ministry of Interior throughout all 4 phases of this operation. As the mass testing program for COVID-19 of such a scale was never carried out in Europe, our planning team encountered a number of unexpected situations that had to be solved under severe time pressure.

The aim of the paper is to address challenges to maximize effectiveness and pathways to create effective collaborative environment during planning and execution of the mass testing. The SD Biosensor Standard Q antigen test was used, the first rapid point-of-care COVID-19 test approved for emergency use by the World Health Organization.

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The outbreak of the COVID-19 pandemic raised the need to develop a new testing capacity in Belgium to monitor the pandemic and to keep the spread of the virus to a minimum. To that end, the Belgian government chose to support the development of PCR-based techniques for detection of current infection with SARS-CoV-2, as advised by the World Health Organisation.

To help the country in reducing both COVID-19 transmission and its impact on society, Belgian Defence joined the national effort by developing its own testing capacity in the Queen Astrid Military Hospital. This allowed the Military Hospital to screen every admitted patient as well as all military personnel prior to their deployment on a mission. This initiative avoided the clogging of the civilian testing capacity, which was dedicated to the testing of symptomatic patients in the initial stages of the pandemic. Furthermore, it was essential for the military to ensure the lowest possible rate of contamination of deployed military personnel. For this reason, all personnel had to undergo a strict 14-day quarantine and a PCR test prior to their deployment abroad. This was necessary to prevent possible degradation of COVID-19 patients while on mission, as well as the need for urgent medical evacuation.

Two different PCR-based methods were implemented by the Belgian Defence because these two complimentary techniques offered distinct advantages. One provided a high sample throughput, while the other, small and fully automated, was easily deployable in the field. Therefore, alongside the available testing capabilities in the Military Hospital, the Belgian Defence has increased its testing capacity by deploying GeneXpert devices on ships and on operation theatres. Testing capacity has increased from a monthly average of 750 tests in 2020 to 1250 tests in 2021. This overall strategy together with vaccination enabled Belgian Defence to resume some of its activities normally.

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Lessons learned from the investigation of a COVID-19 cluster in Creil, France: effectiveness of targeting symptomatic cases and conducting contact tracing around them

de Franck Laval

BACKGROUND

This study presents the methods and results of the investigation into a SARS-CoV-2 outbreak in a professional community. Due to the limited testing capacity available in France at the time, we elaborated a testing strategy according to pre-test probability.

Methods

The investigation design combined active case finding and contact tracing around each confirmed case, with testing of at-risk contact persons who had any evocative symptoms (n = 88). One month later, we performed serology testing to test and screen symptomatic and asymptomatic cases again (n = 79).

RESULTS

Twenty-four patients were confirmed (14 with RT-PCR and 10 with serology). The attack rate was 29 % (24/83). Median age was 40 (24 to 59), and the sex ratio was 15/12. Only three cases were asymptomatic (= no symptoms at all, 13 %, 95 % CI, 3-32). Nineteen symptomatic cases (79 %, 95 % CI, 63-95) presented a respiratory infection, two of which were severe. All the RT-PCR confirmed cases acquired protective antibodies.

The median incubation was 3 days (from 1 to 11 days), and the median generation interval was 3 days (0 to 12). We identified pre-symptomatic transmission in 40 % of this cluster, but no transmission from asymptomatic to symptomatic cases.

CONCLUSION

We report the effective use of targeted testing according to pre-test probability, specifically prioritizing symptomatic COVID-19 diagnosis and contact tracing. The asymptomatic rate raises questions about the real role of asymptomatic infected people in transmission. Conversely, pre-symptomatic contamination occurred frequently in this cluster, highlighting the need to identify, test, and quarantine asymptomatic at-risk contact persons (= contact tracing). The local lockdown imposed helped reduce transmission during the investigation period.

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Chemical warfare agents still represent a significant threat in military conflicts and terroristic scenarios. Exposure to chemical warfare agents or related compounds is life-threatening and requires direct medical countermeasures. However, contaminated patients pose a relevant threat to the medical personnel. In order to prevent exposure of first responders and contamination of medical care equipment and hospitals, a complete decontamination of the patient has been considered as mandatory before any medical measures could be performed without any risk. This holds true in the case of a solely exposed, but not traumatically injured patient. The latter requires immediate trauma therapy (e.g., stopping arterial bleeding) even before decontamination; otherwise, survival is unlikely. Therefore, the patient has to be «exposed to treat» but with reasonable precautions to minimize any further or additional exposure. A highly mobile, but specialized infrastructure that can be brought into theatre at short notice is necessary. Here, we present the FLED2 (Forward Light Element for Decontamination of Patients and Personnel) as a new concept to handle chemical-intoxicated trauma patients in addition to personnel and to some extent personal equipment. Medical and CBRN protection forces, 7 persons in total, work hand in hand as a single team and support each other in their specific tasks. Tailored to mission, the FLED2 is managed either by the CBRN specialist or by the senior EMT-paramedic with one common aim: saving the life of the chemical-intoxicated trauma patient.

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