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ISDS 2015 Conference Abstracts

ISDS INTERNATIONAL SOCIETY FOR DISEASE SURVEILLANCE

Impact Assessment of a Terrorist Attack Using Syndromic Surveillance, France, 2015

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Objective

To timely assess the potential health impact on the population living or working in a terrorist attack area using syndromic surveillance

Introduction

Since the terrorist attacks against the satirical newspaper Charlie Hebdo in January 2015, France has activated the highest level of its national anti-terrorist security plan. A new terrorist attack occurred the 26th of June at 9:50 AM in a gas production plant located in the industrial area of Saint Quentin Fallavier nearby Lyon (East -South-of France). The plant produces several different chemical products like gas and plastics and employed 40 people. The attack resulted in an explosion followed by fire. The French Institute for Public Health Surveillance (InVS) was alerted at 11 AM and decided to implement with its Rhône-Alpes regional office a protocol to timely assess the potential health impact on the population living or working around the attack area on emergency health care facilities (EHCF).

Methods

The French SurSaUD® system is national syndromic surveillance system led by InVS and based on the daily collection of data from emergency departments (ED) network OSCOUR® and General practitioner's emergency associations SOS Medecins. Individual data including medical diagnoses are analyzed by InVS through syndromic groups of interest for public health surveillance, including groups related with potential CBRNE exposure. In the 26th of June attack, the analysis focused on CBRNE groups related with potential respiratory and cutaneous exposure or psychological effects in selected structures in the perimeter of the attack.

At the same time, a labelling protocol already tested in a situation of natural disaster was implemented. For each visit identified as related to the attack, it was requested to emergency physicians to use a specific labelling code as associated diagnosis in addition to the main medical diagnosis. The code was different for ED (ICD10 code W40 "explosion") and for SOS Médecins association (specific code dedicated to exceptional events E99). The analysis began the 27th of June (Dday+1) and was performed up to a week afterwards.

Results

Main health threats (industrial chemical or toxic release, air pollution) were rapidly excluded and the health impact assessment focused on psychological impact. Nine ED involved in the OSCOUR® network and located in the area of interest were contacted directly or by InVS regional partners to implement the labelling protocol. The Lyon SOS Médecins association and the national SOS Médecins Federation were contacted for the same task. The labelling procedure was completely implemented at 4 PM.

No significant increase in the global indicators (numbers of all-causes ED attendances and SOS Médecins visits) nor in the specific indicators (numbers of attendances/visits for conjunctivitis, burns, malaise, dyspnea, anxious troubles, stress) was observed in the selected structures. A few SOS Médecins visits (n=11) with the specific labelling code were recorded from the 26th of June to the 2nd of July. However since early 2015 we found out that this code was already used by SOS Médecins in other circumstances. It was not possible, retrospectively, to distinguish visits associated to the event.

Conclusions

The surveillance implemented during the 26th of June terrorist attack in France is in favor of no significant impact on the EHCF. This study shows that a labelling procedure to assess a potential impact of an intentional event like a terrorist attack can be implemented fairly rapidly. However, the attack was limited in terms of modus operandi, geographical area and population concerned. One limitation was the non-specificity of the labelling code chosen for SOS Médecins, which has been used in other circumstances. The use of this specific code has to be evaluated with the partners. Some other aspects should be assessed, particularly the acceptability of ED and SOS Médecins physicians to implement the labelling protocol and its feasibility in a most severe situation.

Keywords

impact assessment; intentionnal event; emergency data; terrorist attack

Acknowledgments

To the emergency departments, the RESUVAL regional network, the Emergency Medical Service of Grenoble (SAMU 38) and the Lyon SOS Médecins association for providing data and for their contribution to the surveillance.