

# Impact assessment of mass gatherings using labelling procedure in ED, Nouvelle-Aquitaine, 2016

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## Objective

To access the potential health impact on the population during mass gathering over time using labelling procedure in emergency department (ED).

## Introduction

The massive flow of people to mass gathering events, such as festivals or sports events like EURO 2016, may increase public health risks. In the particular context of several terrorist attacks that took place in France in 2015, the French national Public Health agency has decided to strengthen the population health surveillance systems using the mandatory notification disease system and the French national syndromic surveillance SurSaUD®.

The objectives in terms of health surveillance of mass gathering are: 1/ the timely detection of a health event (infectious cluster, environmental exposure, collective foodborne disease...) 2/ the health impact assessment of an unexpected event such as a terrorist attack.

In collaboration with the Regional Emergency Observatory (ORU), a procedure for the labeling of emergencies has been tested to identify the ED records that could be considered as linked to the event.

## Methods

During summer 2016, the procedure was tested on seven major festive events throughout the region. In addition to the main medical diagnosis, a specific ICD-10 code "Y3388" was chosen to be used in associated diagnosis for records that were supposed to be linked to the event.

Information on the labeling procedure was insured by the ORU to the emergency departments.

All records with medical diagnoses or medical pattern beginning by Y33 have been analyzed.

## Results

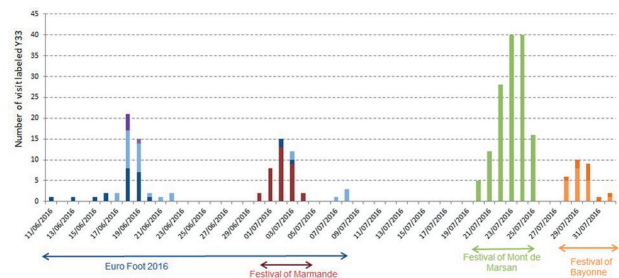
No significant increase in the global indicator was observed in the ED impacted by mass gathering. The ED labelling procedure identified 260 records: two thirds corresponded to young men and 17% came from abroad. Among the 250 records labeled in associated diagnosis, 39% were associated to traumatism and 31% corresponded to alcohol intake.

## Conclusions

This study shows that a labelling procedure allows the identification, quantification and characterization of the population ED records associated with mass gathering. Additionally, a labelling procedure to assess a potential impact of an event as mass gathering can be implemented fairly rapidly.

Table 1 - Main diagnoses identified among the labelled passages Y33 (88) in associated diagnosis (n=250)

Main diagnosis	Number of records labeled Y33	Proportion among the records labeled in associated diagnoses
Traumatism	98	39.2%
Alcohol	78	31.2%
Malaise	5	2.0%
Other	69	27.6%



## Keywords

impact assessment; mass gathering; emergency data; labelling procedure; labelling procedure

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