

# Minimal Data Set-Hospitals (MiND-H):

## Establishing a Data Inventory for Emergency Departments (EDs) in Switzerland – Results of the Pilot Testing

Authors: Eis D<sup>1,2</sup>, Genewein EM (Project Lead)<sup>2,3</sup>, Christ M<sup>2,4</sup>, Reisman M<sup>5</sup>, Fadini D<sup>2,6</sup>, Carron PN<sup>2,7</sup>, Hugli O<sup>2,7</sup>, Sieber R<sup>2,8</sup>, Frasnelli A<sup>2,9</sup>, Zuercher M<sup>2,5,10</sup>

Affiliations: <sup>1</sup> Emergency Department, University Hospital (USZ), Zurich  
<sup>2</sup> Swiss Society for Rescue and Emergency Medicine (SSERM)  
<sup>3</sup> Emergency Department, Hospital Langnau i.E  
<sup>4</sup> Emergency Department, LUKS, Lucerne  
<sup>5</sup> Swiss Center for Rescue, Emergency and Disaster Medicine (SCRED)  
<sup>6</sup> Emergency Department, Hospital Mendrisio  
<sup>7</sup> Emergency Department, Lausanne University Hospital (CHUV), Lausanne  
<sup>8</sup> Emergency Department, Kantonsspital Sankt Gallen  
<sup>9</sup> Emergency Department, Spital Wallis  
<sup>10</sup> Department for Anaesthesia, Prehospital Emergency Medicine and Pain Therapy, University Hospital, Basel, Switzerland



Schweizerische Gesellschaft für Notfall- und Rettungsmedizin  
 Société Suisse de Médecine d'Urgence et de Sauvetage  
 Società Svizzera di Medicina d'Urgenza e di Salvataggio  
 Swiss Society of Emergency and Rescue Medicine



Swiss Center for Rescue, Emergency and Disaster Medicine (SCRED)  
 Schweizerisches Zentrum für Rettungs-, Notfall- und Katastrophenmedizin (SZRNK)

### Background:

Emergency Departments (EDs) are an essential component of the Swiss health care system with more than 1.5 million ED visits per year. Previous studies have demonstrated challenges related to the heterogeneity of ED capabilities, e.g. strategies to cope with overcrowding. Increasing demand on ED services calls for precise data to inform patients, decision makers and healthcare planning.

In order to

- obtain up-to-date information on structural characteristics of Swiss EDs
- establish an ED network which may serve as a reliable dynamic database providing insights into various topics (e.g., chief complaints, diagnoses, processes) in the future

we designed a questionnaire to be answered by all Swiss EDs. The questionnaire was based on earlier surveys performed in 2007 and 2013 (*Sanchez et al. International Journal of Emergency Medicine 2013, 6:23*) and was available in German, French and Italian, representing main language regions (fig. 1).



Figure 1: Map of languages in Switzerland (<http://ontheworldmap.com/switzerland/map-of-languages-in-switzerland.html>)

### Methods:

We designed a web-based interactive interface for data entry to be completed periodically, once validated.

We conducted a pilot survey in summer 2019 among 17 Swiss EDs of various size within the three major language areas in Switzerland (German-, French-, Italian-speaking region), aiming at a representative sample of Swiss EDs.

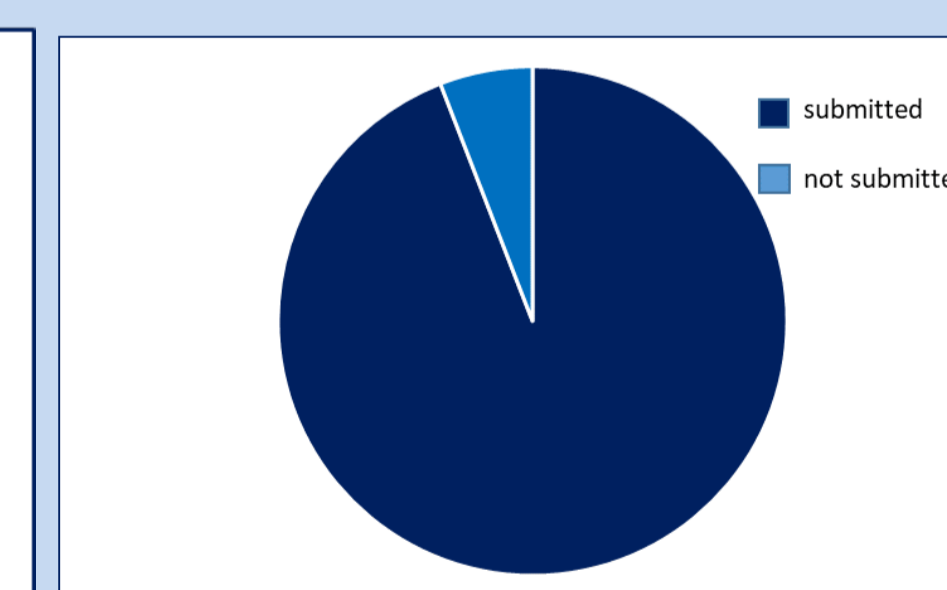
Heads of these 17 EDs were invited to participate in the survey, to provide information as well as feedback regarding the content and form of the questionnaire or process of data collection.

Data entry was feasible via interruptible online sessions by more than one person per ED.

Survey data items contained a qualifier for numbers: estimated/actual.

In total, 85 items were collected.

| Response      |    |        |
|---------------|----|--------|
|               | n  | %      |
| submitted     | 16 | 94.1   |
| not submitted | 1  | 5.9    |
|               | 17 | 100.00 |



| Data quality |               |    |        |
|--------------|---------------|----|--------|
|              |               | n  | %      |
| Valid        | accurate      | 12 | 75.0   |
|              | non-accurate  | 3  | 18.8   |
|              | not specified | 1  | 6.3    |
|              |               | 16 | 100.00 |

Table 1: Example from pilot testing (response and data accuracy (n = 17))

### Results & Discussion:

The deadline for data entry (three months from the invitation to participate) was met by 7/17 EDs (41 %), and 16/17 (94 %) eventually completed the survey following several reminders.

The ED taking longest replied after five months. Data quality was accurate in 12/16 (75 %), with a substantial number of missing data from 4/16 EDs (table 1). The results of the pilot testing suggest that it is a true challenge to approach heads of EDs to submit data by the due date. Similar difficulties had been observed during previous surveys in 2007 and 2013.

In a stakeholders' meeting in January 2020, we evaluated feedback and discussed potential improvements, i.e., on how to access ED representatives, alleviate data entry or enhance intelligibility, allowing for a mode of data entry best possible, to (re)-invigorate a network amongst Swiss EDs and to gain insight into the complex landscape of Swiss EDs in terms of structure and modes of operation.

### Conclusion & Perspectives:

We believe that a robust database and sequential surveys will strengthen Swiss EDs by highlighting achievements as well as to inform on areas to improve. It will contribute to create a sense of community, serve as a tool for healthcare research, all of which will support the development of Emergency Medicine in Switzerland.

Impeded by the COVID-19-pandemic, we aim at conducting the survey among all Swiss EDs in autumn/winter 2020.

**Therefore, we count on your support!**

### Acknowledgement:

We very much thank all heads of EDs taking part in the pilot study!