MINAP, RESCA AND e-MUST REGISTRIES : CAN WE COMPARE THEM ?

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Text

Background
Hesculaep examines different methods of pre-hospital management of key diseases, such as Acute Myocardial Infarction (AMI), in Europe. Among partner countries of the Hesculaep Consortium, three evaluation tools have been identified: e-MUST registry (France), RESCA registry (Spain) and MINAP (UK). What are their aims, methods and results? What are their differences and similarities? Can we compare their results?

Aims
To design a tool for the evaluation of the management of pre-hospital emergencies in Europe.

Methods
First, interviews and workshops with the managers of the above-mentioned registries were conducted, in order to ascertain their objectives, methods and results. Secondly, a comparative table was constructed. Thirdly, an analysis of the similarities and differences between them was performed.

Results
- All 3 are prospective, “sector registries”, and their aims are similar.
- The organization of pre-hospital emergency services is different. Unlike MINAP, RESCA and e-MUST have physicians in the pre-hospital phase, affecting the management strategy. In the latter, doctors diagnose AMI clinically and from the ECG, and choose between on-site thrombolysis or in-hospital primary angioplasty. In MINAP, paramedics transport the patients as quickly as possible to the hospital, and warn the receiving hospital of the need for thrombolysis, if AMI has been diagnosed from the ECG. When transport is long, pre-hospital thrombolysis is performed more and more often.
- Inclusion criteria are different. MINAP includes in-hospital patients with acute coronary syndrome (ACS), with or without ST elevation on the ECG, in order to have a global view of this pathology. RESCA includes patients identified in the alarm centre, presenting with ACS with ST elevation. e-MUST includes pre-hospital patients with typical chest pain and ST elevation. It seems possible, however, to identify a common sub-group of inclusion criteria.
- The methods of data collection and entry are different. The hospital MINAP data manager chooses patients to be included, and enters pre-hospital information recorded by the paramedics, as well as in-hospital data, thanks to high performance data transfer tools. In RESCA, the pre-hospital doctors fill in their usual medical file, with no

special form for RESCA. Certain doctors in the alarm centre, responsible for RESCA, select patients for inclusion on a monthly basis, and enter the information from the pre-hospital files on paper into the database, completed by in-hospital data. e-MUST closely involves all pre-hospital doctors in the region. First they are asked to fill in a special form for e-MUST with every patient inclusion. Secondly, they are regularly asked to complete and correct this form, from the onset of care until hospital discharge, before entering the data themselves into the database.

- The methods of quality control are different. In MINAP, data quality is maintained by inbuilt range and consistency checks in the computer programme. Data completeness is controlled on eleven key fields. A compulsory annual data validation takes place, through an online check of entered data with information from patient notes, for random dataset items and case samples. To improve the completeness of inclusion of cases of all ACS, MINAP encourages hospitals to put systems in place to identify these patients from different sources, such as troponin lists, CCU and Emergency department registers and clinical coding. In RESCA, audit ensures completeness in the inclusion of patients, reliability of the recorded data, selection of key variables to simplify the evaluation process, and analysis of discrepancies. In e-MUST, data quality and the inclusion of all cases of AMI, are controlled in hospitals, bi-annually, in random samples. Pre-hospital doctors are involved in the comparison between the pre-hospital paper data collection form, and the information in electronic form entered into the registry.
- Certain items, such as delays and therapeutic strategies can be compared, but others, such as mortality, cannot, because e-MUST studies in-hospital mortality, whereas RESCA records mortality within thirty days.

Discussion

These registries have similar main aims: to observe and evaluate clinical practice in order to improve the quality of care. There are differences in inclusion criteria, which may be overcome. However, profound differences in methodology make comparison difficult. In order to design a new, appropriate tool for evaluation of pre-hospital emergency management in Europe, it seems necessary to identify a single aim, and to standardize inclusion criteria, methodology, and definitions of datasets. In order to take into account the fundamental differences in the organization of pre-hospital care in different countries, a common “public health registry” must first be created, then to focus on pre-hospital care in a “sector registry”.

Key words

“Public health registry”
“Sector registry”
Acute coronary syndrome
Acute myocardial infarction
Evaluation of clinical pracitce