

EMS Process Performance Indicator Index

Open Source EMS Initiative

The Open Source EMS Initiative (OSEMSI; <http://www.mhf.net/opensource>) has developed a draft of the EMS Process Performance Indicator Index. This is intended to be used as the starting point for a more complete hierarchical framework of process and sub-process labels for development of a comprehensive collection of EMS performance indicators. Consistent with the OSEMSI Performance Indicator definition format, a process performance indicator should answer:

- What is the process or sub-process being measured?
- Who is internal or external process customer?
- What is the customer's need?
- What measurement is to be used as an indicator for how well (quality) or how efficiently (cost) the need is being met?
- What data elements are needed to calculate that indicator?
- What are the sources for those data elements?
- What equations are to be used for calculation of the indicator?
- How should the indicator results be displayed (e.g., an 'X bar R' statistical process control chart)?

The names of the top level processes in the PPII were hybridized from the categories of the EMS Agenda for the Future ([link](#)), Malcolm Baldrige Criteria for Healthcare Excellence ([link](#)), and the criteria used by the Commission on the Accreditation of Ambulance Services ([link](#)). Acknowledgement is also given to the seminal work of Stout (1997) in this area.

This draft of the PPII includes only the top level process labels. Each of these top level process labels may have any number of levels of associated sub-process labels. For example, the top level 'Clinical' process category might have sub-process labels for Cardiac, Trauma, Respiratory, etc. The Cardiac sub-process label could have an additional level of sub-processes that include Acute Coronary Syndromes, Resuscitation, and Congestive Heart Failure. The sub-process of Acute Coronary Syndromes may then have multiple performance indicators including aspirin, nitroglycerin, and oxygen administration compliance rates; 12 Lead and Rhythm Strip ECG acquisition rates; 9-1-1 Activation to Hospital Arrival Time Interval; and the Patient Contact to Oxygen Administration Time Interval.

PROCESS PERFORMANCE INDICATOR INDEX (PPII)

- Administration / Leadership
- Field Operations
- Clinical Care
- Medical Direction
- Human Resources
- Fleet Management
- Supply Management

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Online Access: <http://www.emsmj.com/v1n2/indicator/default.htm>

- Dispatch & Communications
- Information Services
- Support Services
- Prevention, Community Education & Access
- Special Events & Services
- Financial Services
- Safety & Risk Management
- Research
- System Measures

PROCESS PATH NOTATION

In communication of performance indicator information, OSEMSI has also drafted a notation to convey the process, applicable sub-processes, customer, need, and the corresponding indicator. The top level process and sub-process labels are separated by a colon(:). Other parts of the notation are separated by the 'greater than' symbol (>). This referred to as process path notation (PPN).

EXAMPLES

Cardiac Arrest Survival Rate:

Clinical : Cardiac : Resuscitation > Patient > Survival > Survival Rate

Ambulance Fleet Critical Failure Rate:

Fleet : Ambulances > Patient > Reliability > Critical Failure Rate

COMMENTS AND CONTINUING DEVELOPMENT

Individuals and organizations interested in proving comments on this or subsequent drafts of the EMS Process Performance Indicator Index are encouraged to learn more and find links to specific performance indicator development groups at the in the OSEMSI Performance Indicator web site (<http://www.mhf.net/opensource>).

CITATIONS

Stout JL: Capture the Competitive Edge: How Benchmarking Can Improve Your Ambulance Service. 2004 Jan-Mar;
EMS Mgmt J 1(1):64-73 [link to full text]
