

# Indicators to Measure Prehospital Care Quality: A Scoping Review Protocol

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## Background

Quality Improvement (QI) has become an integral part of healthcare organizations, including ambulance services. Measurement not only produces data to ensure the maintenance of quality, it also provides information to direct QI efforts. This scoping review forms the initial part of a larger research project aiming to develop and test prehospital care quality indicators for the Australian setting. Compared to *performance* indicators, *quality* indicators can be used to assess quality of healthcare based on evidence or consensus. Currently, the number of nationally utilized prehospital care quality indicators is limited to only a few. A more comprehensive set of Australian prehospital care quality indicators will contribute to safe and high-quality, information-driven prehospital care services.

## Review Objectives

This scoping review seeks to locate, examine and describe international literature related to indicators which are used to measure prehospital care quality. Specifically, the review will:

- Map attributes of definitions or descriptions of 'quality' in the context of prehospital care.
- Chart indicators that have been developed to measure prehospital care quality, and detail their development processes as well as how the indicators fit into their respective measurement frameworks/matrixes.

## Search Strategy

The search strategy aims to find both published and unpublished studies. In line with the Joanna Briggs Institute (JBI) methodology for scoping reviews<sup>1</sup>, a three-step search strategy will be utilized in this review. The following databases will be searched: Medline, CINAHL, Embase, Scopus, Cochrane Library, Web of Sciences, Science Direct.

To supplement the structured search, website searches of benchmarking organizations and ambulance service governance bodies will be performed. Furthermore, experts in the field of study will be consulted.

## Inclusion and Exclusion Criteria

### Population:

This scoping review will consider definitions and descriptions of prehospital care quality and performance/quality indicators developed for any ambulance service providing prehospital care. The service may be in the form of a paramedic system (Anglo-American model) or an emergency physician system (Franco-German model). Only countries that are similar to Australia in terms of economy (high-income based on World bank data) and health care system (western) will be considered.

### Concept:

The concepts of interest are quality and indicators. This review will consider indicators that are intended to measure performance and/or quality only, i.e. indicators utilized to measure activity will be excluded.

### Context:

The context is prehospital care provided by ambulance services. This scoping review will consider definitions and descriptions of prehospital care quality. It will consider performance/quality indicators developed specifically for ambulance services, i.e. indicators developed for other emergency or medical organizations will be excluded.

### Type of Studies and Sources

This review will consider primary and secondary research in any paradigm and utilizing any methods as well as text and opinion. The review will also consider documents developed by quality in health care- and benchmarking organizations/committees/groups and ambulance service governance bodies. Documents written by ambulance services for service-specific purposes will be excluded.

## Assessment of Methodological Quality

As this is a scoping review, assessment of methodological quality will not be performed.

## Data Extraction

Two charting tables (Table 1. and 2.) were developed to extract information relevant to the two review objectives. These charting tables will be piloted before data extraction and may be further refined during the review.

Review Objective 1 Draft Charting Table	
Author(s)/organisation	
Year of publication	
Origin/country	
EMS system	
Aim/purpose	
Methodology/methods	
Definition/description of prehospital care quality (if provided)	
Attributes of the definition/description of prehospital care quality (E = explicitly stated; I = implied)	

Table 1. Charting Table for Review Objective 1

Review Objective 2 Draft Charting Table	
Author(s)/organisation	
Year of development	
Origin/country	
EMS system	<input type="checkbox"/> Paramedic; <input type="checkbox"/> Physician; <input type="checkbox"/> Other (specify):
Aim/purpose	
Methodology/methods	
Framework/matrix details	
Indicator 1	Framework component(s)
	Title or description
	Type
Indicator 2, 3, 4, ...	<input type="checkbox"/> Structure; <input type="checkbox"/> Process; <input type="checkbox"/> Outcome; <input type="checkbox"/> Balancing

Table 2. Charting Table for Review Objective 2

## Data Synthesis

For review objective 1, results will be presented as a map of attributes of prehospital care quality. For review objective 2, the presentations will be in tabular form. The table will list indicators, show what type of indicator each is and categorize them in accordance with components of their respective frameworks. Furthermore, the table will indicate when and where the indicator was developed, what EMS system it is intended for, its purpose and method of development. A second table, with combined framework components and indicators (and their type and frequency of occurrence in the literature), will then be synthesized. Duplicate indicators will be eliminated. Elimination will be done by consensus between the reviewers. Each section (review objective 1 and 2) will be accompanied by a narrative summary.

