Prioritising outcomes measures for ambulance service care: a three stage consensus methods study

SSM 2013
57th Annual Scientific Meeting

J Coster, J Turner, N Sirwardena, R Wilson, V-H Phung, A O’Cathain, F Togher, J Nicholl
Summary

- Background to the project
- Current ambulance service quality and performance measures
- What do ambulance service stakeholders and PPI representatives think we should measure?
- What is important to patients?
- Delphi study
Background

- 4.4 million callers in 2000-01, 9.09 million in 2012-13
- Types of patients and needs changing
- Historically response times measured as a marker of quality
- Difficult to measure ‘outcomes’ – why?
5 year NIHR programme grant
- Develop better ways of measuring the performance, quality and impact of ambulance service care
- Systematic reviews of actual and aspirational outcome measures
- Prioritisation of identified outcomes using consensus event, online survey and Delphi
- Create linked ambulance service/other services data set
- Use outcomes to develop predictive models
- Provide better information about effectiveness and quality of care
Current ambulance service quality and performance measures

• Systematic review of current measures
• 405 measures/151 papers
  – Patient outcomes 13%
  – Survival and time 60%
• Why measure time and survival?
  – Easy to measure
  – Easy to record
• Issues
  – Only applicable to a small patient group
  – No information about quality of care or patient views
What about clinical need, patient experience or effectiveness?
Review of policy documents

• Current measures
  – Response time the predominant measure
  – Focus on a few critical conditions
  – Patient outcomes: Survival/mortality measures and satisfaction

• Aspirational
  – More patient outcome based measures
  – Balanced score card approach
    • a suite of measures rather than single measures

• Why is it difficult?
  – Lack of "joined up" information is a key limiting factor in developing more outcome based measures
  – Little effort on developing generic measures that are applicable on a service population rather than condition basis.
Prioritising outcome measures using consensus methods

- Large number of time measures – prioritised using an online form
- Consensus event – small group discussion and live vote of key measures and concepts from literature
- Delphi survey
The issue of time

- Most commonly collected and reported measure
- 23 different time interval measures
- Most common is call to scene
- Recognised as having little relevance or value
- Online survey: which time measures are most useful?
Time measures online survey

- 28 responses (48%RR)
- Most important and least important measures

![Highest ranking chart]

- Highest ranking measures taken forward into a Delphi study
Consensus Event

Aim – to prioritise potential measures for measuring ambulance service quality and performance

• 1 day event, small group discussions, live votes
  – Ambulance service
  – Patient and public
  – Commissioners
  – Policy makers
  – Academic research
## Consensus event results

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service/Operational</th>
<th>Essential (n%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Completeness and accuracy of patient records</td>
<td>35 (83)</td>
</tr>
<tr>
<td>2</td>
<td>Over triage and under triage rates</td>
<td>31 (73)</td>
</tr>
<tr>
<td>3</td>
<td>Proportion of calls treated by most appropriate service</td>
<td>30 (71)</td>
</tr>
</tbody>
</table>

### Patient management

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service/Operational</th>
<th>Essential (n%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accuracy of dispatch decisions</td>
<td>36 (86)</td>
</tr>
<tr>
<td>2</td>
<td>Accuracy of call taker identification of different conditions/needs</td>
<td>34 (81)</td>
</tr>
<tr>
<td>3</td>
<td>Compliance with end of life care plans</td>
<td>31 (74)</td>
</tr>
</tbody>
</table>

### Patient outcomes

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service/Operational</th>
<th>Essential (n%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pain management and symptom relief</td>
<td>32 (76)</td>
</tr>
<tr>
<td>2</td>
<td>Patient experience</td>
<td>21 (50)</td>
</tr>
<tr>
<td>3</td>
<td>Return of Spontaneous Circulation (ROSC)</td>
<td>18 (43)</td>
</tr>
</tbody>
</table>
Consensus Event conclusions

• Accuracy of different types of decision making and compliance with management protocols predominated as essential
• Pain management the most important patient measure
• Management of end of life care was identified by participants
• The electronic voting system which provided instant real time feedback was well received by participants
Patient perspective

• Qualitative interviews for patient experience measures
  – 16 interviews with ambulance service users

• Key findings
  – Users feel reassured
  – Waiting time is acceptable
  – Staff who listen and offer clear explanations to users
  – Staff who are caring and respectful
  – Staff who are thorough
Delphi study development

• Delphi survey to further refine and prioritise the measures
• Highest ranking measures from the consensus event and time measures online survey
• Also incorporates the findings from patient interviews
• Some high priority concepts difficult to measure or have multiple measures e.g. patient safety, accuracy of dispatch decisions
• Link back to systematic review data to identify measurement methods
Conclusions

• Information from multiple sources about potential measures and their importance
• Key themes: accuracy of processes, compliance
• Patient outcomes: patient experience, pain and patient safety
• Further refined in Delphi study – September 2013