Appendix

Sponsorship

The consensus conference was organized by the International Society for Rapid Response Systems (iSRRS) as part of the 14th international congress in Manchester. The iSRRS funded the meeting venue. The iSRRS delegated the organization of the conference to a steering group with five members: an overall chair, a chair for each of three work-streams and the president of the society. There was no industry sponsorship and participants filed conflict of interest forms.

Selection of committee members

Members of the consensus meeting were selected by the steering group, based on previous publication record and expertise. Researchers with an interest in Rapid Response Systems were complemented by subject matter experts that included Health Service Researchers, Health Economists, Patient Representatives. A list of participants and affiliations are in **Appendix 1**.

Structure of process

The consensus statement was developed in three distinct phases:
Questions were developed through conference calls in the six months preceding the consensus conference. Workstreams were based on the IHI framework of the quadruple aim of improvement in: 1. Clinical Outcomes, 2. Patient experience, 3. Health economic outcomes, and 4. Staff Experience. Patient and Staff experience were reviewed in a joint workstream.
A two-day conference on the 7th and 8th of July, 2018 brought together the faculty in Manchester for face-to-face workshops. After introductory plenary presentations to orient the participants to the goals, process, and work to date, the participants were divided into the three predefined workstream groups. Each workstream developed and refined "candidate" metrics pertinent to their area of focus, which were then presented to the full panel of participants for discussion and recommendations.

On the second day, the workstreams further refined and finalized their metrics. Each workgroup then presented their metrics to the full panel of participants for final wording. Subsequently, each metric was voted on. Metrics were either approved by consensus, by majority, or not approved. The metrics that were not approved are presented in brief as part of the discussion to help future workers in this field of endeavor to understand some of the issues that were unresolved. The resulting draft metrics were then presented at the subsequent international meeting on Rapid Response Systems and Medical Emergency Teams on the 9th and 10th of July in Manchester. Additional comments were solicited in a session with over 200 practitioners.

The writing group authored the final manuscript, and the manuscript was approved by each of the participants. Each was invited to write a "minority report" for points that they deemed important and outside the majority opinion.

Search strategy for topics

In preparation for the conference, relevant literature was reviewed for suitable metrics using keywords and mesh headings. Searches with keywords of Medical Emergency Team, Rapid Response Team, Critical Care Outreach Team and Rapid Response System yielded only a small number of studies. The search strategy was thus supplemented to include broader aspects of patient safety, cardio-pulmonary arrests and sepsis.

Process of development

The discussion was informed by the International Consortium for Health Outcomes Measurement (ICHOM) principles of developing standardized patient outcomes for measurement and reporting. The preparatory phase included the collection of a large number of possible ways to capture quality through an online portal (survey monkey). During the conference, workstreams prioritized metrics according to relevance and impact and then reviewed feasibility, validity and reliability of metrics.

Voting process

Inclusion of the measures into the consensus report was undertaken in three rounds: Members of each workstream selected and ranked suitable metrics from their field. The

top ranked metrics were then presented to a plenary session and the level of recommendation was achieved by consensus.

Grading of evidence

The strength of the recommendations was assessed by all members of the consensus group into different levels of essential, recommended, optional and experimental. The strength of the recommendations was guided by their perceived ability to lead to improvement, their feasibility in the real world setting and measurement characteristics.

Conflict of interest disclosure

Participants provided written disclosure of stocks in pharmaceutical or medical device companies, relationships with commercial interest from the 1/1/2017 to the present and other ventures or commercial interests that may be related to the consensus statement.