

**999 EMS Research Forum**  
**Promoting research and development in prehospital care:**  
**Developing research strategy and building capacity**

**A consultation to prioritise areas for research in prehospital care**

**Delphi Protocol**

**Introduction**

In response to the Department of Health's invitation to undertake work to promote research in prehospital care, the 999 EMS Research Forum will carry out, as part of a wider exercise to identify research priorities in prehospital care, a Delphi consultation (Delphi). This paper outlines the protocol for using the Delphi approach to consultation to reach consensus on research priority areas in prehospital care.

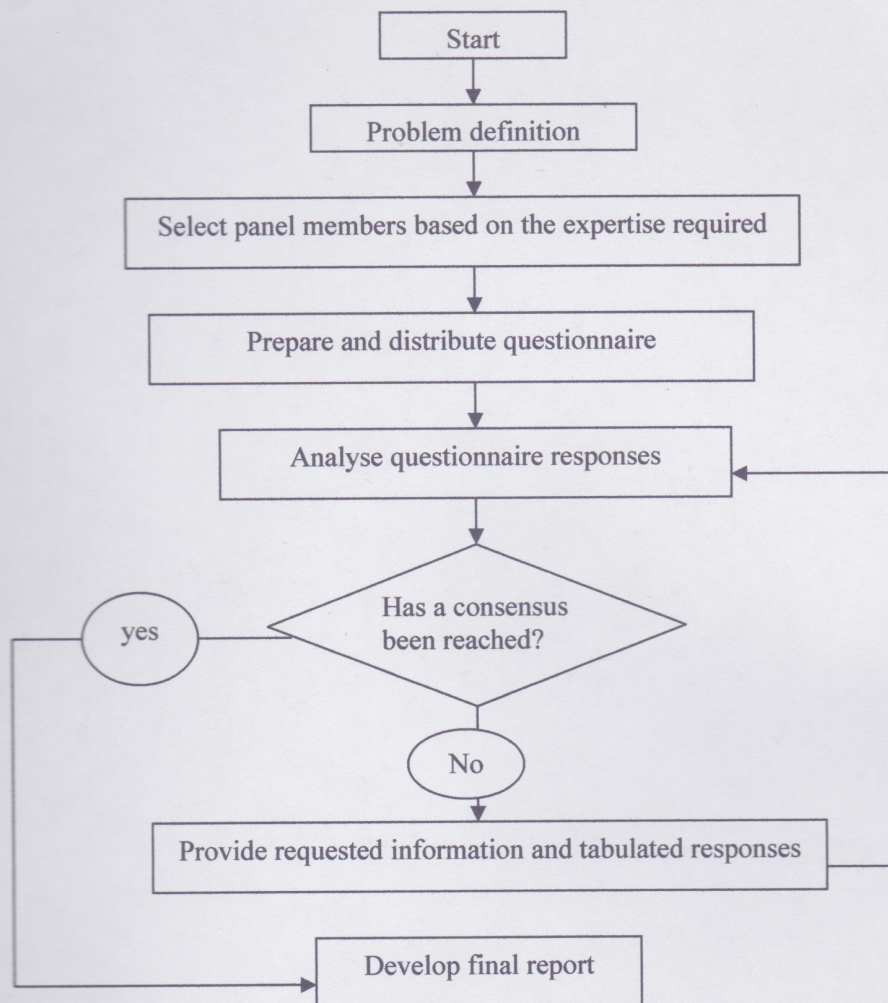
**Overall aim of project:** to support the development of prehospital care research in order to build the evidence base to inform policy and practice in emergency and unscheduled prehospital care.

The Delphi is a group facilitation exercise that seeks to obtain consensus on the opinions of 'experts' through a series of structured questionnaires (also referred to as rounds).<sup>1</sup> Initial questionnaires are distributed to participants, completed anonymously and sent back to the research team. Results are summarised and fed back to participants who are then given subsequent opportunities to revise their initial answers in light of the group opinion. The rounds are completed up until an agreed number or until a consensus is reached.

**Methods**

The Delphi technique is increasingly being used in health services research and to identify priority areas.<sup>2</sup> Its strength in transforming individual opinions into group consensus is the anonymous feedback of all comments which avoids the need for defending earlier positions and allows participants to consider ideas they may have previously overlooked or considered unimportant. Information from [www.ryerson.ca](http://www.ryerson.ca)<sup>3</sup> suggests the following flowchart for the Delphi:





### Problem Definition

For this Delphi, gaps in the evidence base and possible research topics will be identified from three sources: a literature overview conducted in Phase 1 of the 999 EMS Research Forum project for the Department of Health (reported elsewhere); the matching of evidence to current policy documents; and the prioritisation exercise from the 999 EMS Research Forum at Ambex 2006. All identified research topics to be put forth in the Delphi will be grouped by the study researchers and presented to the 999 EMS RF for feedback and further development before being finalised. Summarised results will be distributed in tabular form.

### Identification and selection of sample

As agreed in the original proposal to the Department of Health, a wide range of participants will be invited to participate, with the sample of respondents including:

- the 999 EMS Research Forum Board and other expert advisors in this field who have kindly participated in peer reviewing and other supportive activities over recent years (Dr E Glucksman, Dr C Weston, Prof M Cooke, Mr K Porter)
- Thematic Research network for emergency and UnScheduled Treatment (TRUST), recently funded for 3 years by the Welsh Assembly Government



- Faculty of Prehospital Care Research Committee
- British Paramedic Association Research Committee
- JRCALC Committee
- Ambulance service medical/clinical directors (DOCCs)
- Ambulance service R&D leads
- International representatives from Europe (potential collaborators include Bjorn-Ove Suserud, Associate Professor of Prehospital Care Boras, Sweden and/or Michel Baer, Co-ordinator, EU funded HESCUAEP project) and America (Walt Stoy, Professor and Director of Emergency Medicine, University of Pittsburgh and/or Baxter Larmon, Director, Prehospital Care Research Forum, UCLA)
- One ambulance service trust chief executive (e.g. Paul Phillips, East Midlands Ambulance Service)
- One operations director of an ambulance service trust (e.g. Mike Cassidy, Welsh Ambulance Service)
- INVOLVE and/or the Patients' Forum
- College of Emergency Medicine
- BASICS the British Association for Immediate Care
- Royal College of GPs

Although many participants will have different areas of expertise and levels of experience, for the sake of the exercise all responses will be treated equally.

#### **Informing the sample and gaining commitment**

Although many of the proposed participants are known to the 999 EMS Research Forum, some will be unfamiliar with current Forum activities including the exercise to be undertaken and Delphi methods in general. As a result participants will be informed of the study through an email inviting them to participate. Detailed explanations of the above will be included in the initial invitation, with a contact number provided in case further clarification is needed.

Although it is possible to contact potential participants 'cold' it is believed by inviting them personally and providing them with full information including the time involved in participating, commitment to the process will be increased. This is important when employing the Delphi as continued engagement from participants is required. Indeed, a key feature of the exercise is that those who have agreed to participate remain involved until the exercise is complete.<sup>1</sup> However, if participants don't wish to participate they will be given the option to opt out at this initial stage by replying to the email. If no response is received, it will be assumed that the participant is happy to remain involved and they will be included in the Delphi.

#### **Data collection**

To facilitate speed of responses, the majority of this exercise will take place electronically. Although it is possible to have a large number of rounds until consensus is reached, due to time and resource constraints, only 2 rounds will be undertaken in this exercise. This has shown to be an acceptable and often preferred, number of rounds in recent literature.<sup>4-6</sup> A pilot exercise will first be undertaken with 5 participants to ensure any problems are ironed out before full data collection.



### *Administration*

A database will be created with each participant's contact details, including email and phone number, job title and organisation. Each participant will then be assigned a unique study number which will be used to identify them for the rest of the study. In each round, as replies are received, an administrator will track responses in the database and shortly before the response deadline a reminder phone call will be made to non-respondents. If no telephone number is available, follow-up will be via email. All responses will be entered by respondent study number into an SPSS database for analysis.

### **Initial consultation**

Prior to the Delphi prioritisation exercise, participants will be emailed the summary of gaps in research evidence identified in Phase 1 of the study. The summary will be in a tabled format, with topics grouped into categories. The participants will be invited to contribute any missing topics to the list to ensure that it is comprehensive. The list will be revised on the basis of feedback received.

### **First round**

Participants will be emailed the revised summary of the gaps in research evidence and asked to rate the suggested topic areas in terms of research priority on a scale of 1 (not important) to 9 (very important) and space will be provided for comments beside each topic. Participants will also be invited to rate the importance of each of the categories on the table. Respondents will be provided with a free text box in which they can enter further suggestions for research areas in which the evidence is currently lacking. Respondents will also be invited to provide justifications for undertaking pieces of research, to suggest appropriate study designs and to propose timescales.

Results from the first round of the Delphi consultation will be presented during the 999 EMS Research Forum session at the JRCALC Conference, November 2007. Views on the first round findings will be sought, and participation in the second round will be invited from attendees at the conference. Information packs will be provided to attendees to enable them to contact us after the event in order to register their details for inclusion in the consultation. We will also provide the opportunity for people to leave their details for us to contact them.

### **Second round**

In this stage, participants will be presented with the results from Round 1 and invited to adjust their rankings and suggested methods after considering the views of others. A second email questionnaire will be sent out with results presented in three formats for each proposed topic: a frequency distribution of scores (on the scale 1-9), a median score for each topic and a summary of the qualitative comments and suggested study design for that topic. Comments from Round 1 will be selected to indicate the variety and range of responses providing information and context for future ratings while ensuring all views are represented. Any additional research topics suggested in Round 1 will be included. Although in some instances of using the Delphi, participants are fed back their initial ratings along with the tabulated ratings, again due to time and resource constraints, participants will not be fed back their initial responses. As in Round one, non respondents will be telephoned as a reminder, or emailed if no telephone number is available.



Results from this stage will be collated and combined rankings and summary of suggested methods and timescales produced. This document will be circulated to participants, with an opportunity for comments.

#### **Data analysis and consensus**

While a universally agreed definition of consensus does not exist for the Delphi, the literature suggests between 51% and 80%.<sup>1</sup> However, in two studies recently published in the BMJ, disagreement was defined as 30% or more ratings in both the bottom (1-3) and top (6-9) tertile, which will be the cut off used here. As in these studies, topics with an overall median rating of 7-9, without disagreement will be considered as 'highly important'. Those with an overall median rating of 4-6 without disagreement will be considered 'important' and those with a rating of 1-3 'not important'.<sup>7-8</sup> Topics which exhibit disagreement will not be considered important.

#### **Reporting findings**

Results from the first round of the Delphi consultation will be presented during the 999 EMS Research Forum session at the JRCALC Conference, November 2007. Final results will be written up for the project report to the Department of Health at the end of December 2007.

#### **References**

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