MODIFIED DELPHI METHODOLOGY

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Overview

- Introduction to the Delphi process
- When it is used
- Why we chose this process
- Applications – our experience
What is The Delphi Process

- One of several methods developed to identify the collective opinion of experts.¹

- Originally developed in 1950s as a tool to forecast the impact of technology on warfare, it has since come to be used in a variety of health and medical settings.¹

- The Delphi technique has four main characteristics²:
  - Anonymity
  - Iteration with controlled feedback of group opinion
  - Statistical aggregation of group response
  - Expert input

When is it used?

- The Delphi method is recommended for use in the healthcare setting as a reliable means of determining consensus for a defined clinical problem.  
  1, 2, 3

- Useful for establishing guidelines on standard practice of care or Quality Indicators.  
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Our experience with the Modified Delphi Process:


- A globally agreed minimum data set for breast implant surgery. (Paper Under Review)

- Improving REporting of DAta from Registries (IREDAR) Guidelines. (Paper Under Review)

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Why did we choose the Modified Delphi process for the Quality Indicators

- Lack of recommended guidelines for breast device surgery.

- Surgeons belong to different craft groups – plastic, reconstructive, cosmetic.

- Studies are predominantly retrospective or post market surveillance studies.
Workflow

**Literature Review**
Scoping, systematic

**Creation of online questionnaires**
Compilation of answers and data analysis

**Teleconferences**
Discuss results and achieve consensus

Repeat process until consensus has been established on all data points
Areas to consider when designing a Delphi Study¹

- Expert panel selection
  - Panel size
  - Expertise of panel

- Initial items / statements
  - Scoping / Literature review
  - Open ended questions
  - Rating scale

Areas to consider when designing a Delphi Study¹

- **Statistical criteria**
  - Median score
  - Disagreement score according to the Interpercentile Range Adjusted for Symmetry (IPRAS), calculated with the formula provided in RAND users’ manual²
  - Total of 70% or more panellists voting either 5/6 or 1/2

- **Results Feedback**
  - Anonymity
  - Individual response compared to the group response
  - Adequate time to prepare for discussion

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Areas to consider when designing a Delphi Study\(^1\)

- **Teleconference**
  - *Mode* (Online invite to comment, face-to-face, Online video)
  - *Duration of the discussion*
  - *Discussion points*
  - *Moderator*

- **Terminating the Delphi process**
  - *Decide on optimal rounds at the start*
  - *Terminate when there is consensus or no further consensus can be achieved*

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Strengths

- Teleconference moderator
  - *Discussions during the teleconference*
  - *Moderator should ensure fairness, i.e. ensure no one person dictates the discussion / lead it in one direction*

- Well engaged panellists
  - *Survey response rate*
  - *Teleconference participation*
Strengths

■ Robust methodology / statistical rigour  
  – Involve statistician

■ Allows for a multidisciplinary panel of national and international panellists to be involved, including those across different clinical specialities, consumer representative, nurse, biostatistician etc

■ Promotes healthy discussion amongst experts to reach a unifying consensus

■ Key in working towards establishing guidelines and towards standard practice of care

■ Identifies gaps in knowledge in current literature and guides future research


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