Building consensus on minimal evidence: Delphi and other methods approaches

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Consensus is not

• A Disney story

• Static

• Silence

• The leader’s views…………
Consensus levels?

BREXIT VOTER BREAKDOWN BY REGION

48% Remain
52% Leave
With whom?
The reality
Consensus on what?

Diseases classification

• Terminology
• Definitions
• Diagnostic system
• Grading
• Clinical data reporting
• Pathological data reporting
• Prognosis
• Treatment options
• Quality indicators

Single pathological finding
Common consensus methods

- Consensus development panels
- Nominal group Technique (NGT)
- RAND/UCLA Appropriateness Method (RAM/ RAND/ RUAM)
- Delphi Technique
Consensus development panels

- 1990s - French Health Authority guidelines on use
- Promotor funded
- Organisation committee
- Panel of experts (n=12-15) chosen by committee
- Review of evidence developed – questions posed to panel prior to conference
- Conference – panel review evidence, respond to questions, listen to other stakeholders and then meet to write up the final document
Examples in Pathology….??

• Sethi et al (2016) classification, diagnosis and reporting of GN
  • Meeting organised by SS & FCF of the Mayo Clinic
  • Endorsed by Renal Pathology Society
  • Independently funded

• Pickering et al (2013) definition of C3 glomerulopathy, appropriate complement investigations and application of how complement therapeutics should be explored in the condition
  • Multidisciplinary group
  • Meeting organised by Matthew Pickering and Terry Cook
  • Hosted by Welcome Trust Conference
  • Educational grant from Alexion Pharmaceuticals
• Structured approach combining scientific evidence with expert opinion

• Core panel – develop a systematic review of evidence and a list of all clinical scenarios (indications)

• Multidisciplinary expert panel (n=7-15) review data and asked to rate the appropriateness of the intervention
  - Round 1: Expert panel sent clinical scenarios and rate appropriateness (1-9 scale - 1–3 inappropriate 4-6 uncertain; 7–9 is appropriate)
  - Round 2: Face-to-face meeting over 1–2 days panel experts are given results of R1of other expert’s individual ratings and discuss results. Re-rate the clinical scenario

• Results are summarized as appropriate, uncertain, or inappropriate and used to make a set of classification criteria or practice guidelines.
RAMS: pros and cons

- Multi-disciplinary panel
- Confidential and group discussion
- Consensus underpinned by evidence and clinical scenarios
- High reproducibility of RAM ranges
- Evidence suggests produces reliable, internally consistent and clinically valid results

- Reliance on core panel to
- Resource intensive
- Multiple case scenarios = lots of voting
- Cumbersome 9-point Likert scale
- Dominating personalities need careful managing

(Source: Nair et al 2011)
Nominal Group Technique

• Derived from social-psychological/management science studies of decision conferences.
• Structured face to face meeting of experts, led by moderator
• Expert panel tables
  • P1: Silent and independent generation of ideas with independent ranking of the ideas.
  • P2: Round robin fashion, participants list ideas for group.
  • P3: Clarification of the ideas or statements in group led by moderator
  • P4: Privately re-rank–high scores kept and remaining solutions discarded.
• Variations of process exist.
NGT: pros and cons

- Participants meet face-to-face
- Equal opportunity to voice opinions
- Group voting can occur if desired in later rounds
- Resource intensive
- Highly experienced moderator required
- Dominant personality
- Needs to be focused

(Source: Nair et al 2011)
Examples in Pathology

• Jennette et al 2013 – Revisited and revised names for the most common forms of vasculitis and specific definition for each
  • Modified NGT (n=28 experts)
  • 3 months prior to 2011 meeting ideas were deliberated in group emails sent to all experts – clarified and modified based on email input
  • At conference 80% consensus level applied measured by show of hands
  • Remaining definitions deliberated online and subject to online voting
  • Votes sent to moderator and copied to all participants
  • Proposed changes that received 80% were accepted
Delphi technique

• 1950s – developed by RAND to forecast the impact of technology on warfare

• A systematic, interactive method which relies on a panel of experts

• Seeks to achieve a consensus through a series of questionnaires, which are answered anonymously by each expert

• Questionnaire answers (individual and group) are summarised and sent back along with the next questionnaire

• The process is repeated until a group consensus is reached.

• Usually 2-3 iterations but can take up to 6 rounds
## Delphi types

<table>
<thead>
<tr>
<th>Types</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical</td>
<td>Open first round</td>
</tr>
<tr>
<td>Modified</td>
<td>Norm to replace first round with focus groups/ interviews/ SR</td>
</tr>
<tr>
<td>Mini Delphi / Estimate-to estimate Delphi</td>
<td>Adapted for use in face to face meetings</td>
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<tr>
<td>Real-time/technological/hyper/e-Delphi</td>
<td>Use of technology to administer questionnaire (i.e. mobile phone) allowing immediate response and analysis</td>
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<tr>
<td>Argument</td>
<td>Focused on production of factual arguments (non consensus)</td>
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<tr>
<td>Disaggregative Delphi</td>
<td>Conducts various scenarios of the future for discussion</td>
</tr>
<tr>
<td>Policy</td>
<td>Consensus on policy on a given topic</td>
</tr>
</tbody>
</table>
Delphi: pros and cons

- Anonymity
- Reduced social pressure
- Open to large number and widely dispersed experts
- Time to reflect and reconsider pinions
- Greater acceptance of Delphi results than other consensus methods

- Complex data analysis
- Maintaining enthusiasm
- Vulnerable to the bandwagon effect of a majority opinion
- Quasi anonymity
- Time to conduct several rounds
- Potential low response rates
Examples in Pathology

- Chin-Lenn et al (2013) Quality indicators of DCIS treatment
- Kojima et al (2013) Pathological diagnostic criterion of blood and lymphatic vessel invasion in colorectal cancer
- Rosenfeld et al (2016) Clinical consensus statements
- Carr et al (2016) Classification and pathologic reporting of pseudomyxoma peritonei and associated appendiceal neoplasia
Summary

- Trust me …I’m an expert!
- It’s not what you know, but who you know
- Consensus is a moving target
- Error to be expected
- Careful of the bandwagon effect
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