DENTAL IMPLANTS IN EDENTULISM

AMS-MOH Clinical Practice Guidelines

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WHAT ARE CLINICAL GUIDELINES?

- Defined in the dictionary as '*an indication of a course to be followed*'
- Statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances
- US Institute of Medicine: "Systematically developed statements to assist practitioners and patient decisions about appropriate healthcare for specific clinical circumstances

WHAT THEY ARE NOT…

- Clinical protocols
  - Precise and detailed guidance on the management of a specific clinical condition or the undertaking of a specific clinical intervention
- Care pathways
  - Plans that specify the process of care from end to end for a particular condition, including expectations of sequencing of care and elapsed time for the components of care

STATEMENT OF INTENT

- The ultimate judgment regarding a particular clinical procedure or treatment plan must be made by the appropriate healthcare professional(s) in the light of the clinical data presented by the ***patient*** and the diagnostic and treatment options available

METHODS OF GUIDELINE DEVELOPMENT I

- Expert opinion
  - guideline reflects the views of opinion leaders / specialist societies
  - inexpensive
  - high potential for bias
  - potential for hidden conflicts of interest

METHODS OF GUIDELINE DEVELOPMENT II

- Formal consensus
  - A number of methods exist, including Delphi, nominal group technique and consensus conferences
  - Results may be affected by way in which questions are posed, selection of participants and methods used
  - Some potential for bias

METHODS OF GUIDELINE DEVELOPMENT III

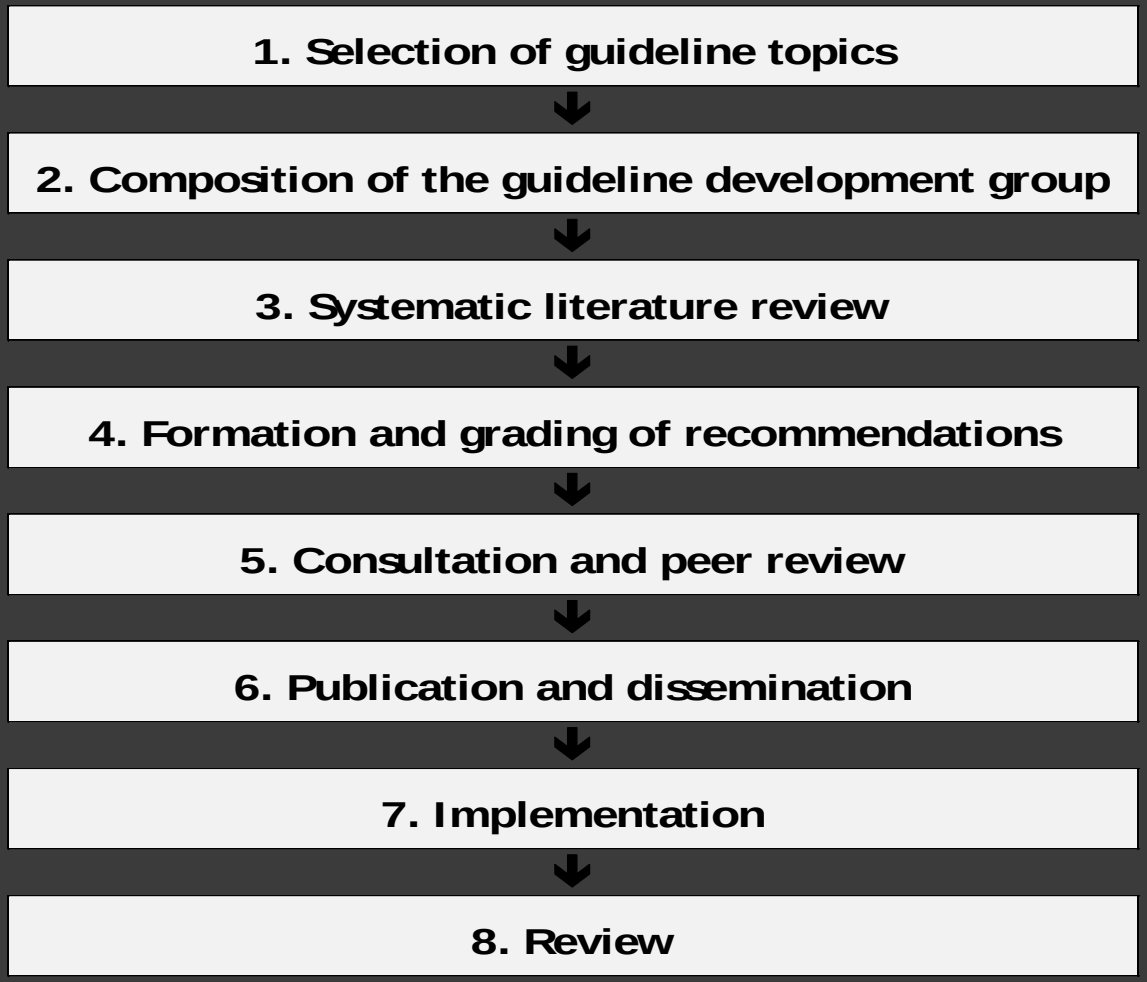
- Evidence based clinical guidelines
  - systematically developed statements to help professionals assimilate and evaluate the ever-increasing amount of information on best practice in the management of conditions
  - less susceptible to bias in their conclusions and recommendations than those based on consensus or a non-systematic review of the evidence

WHY MAY EVIDENCE BASED GUIDELINES BE USEFUL IN PRACTICE?

- Guidelines provide an easily accessible **summary of current evidence** and recommended practice based upon that evidence
- They allow clinicians from **different specialties** easy access to best practice in other areas
- They provide a good **source of information** for others (including patients, carers, politicians etc)

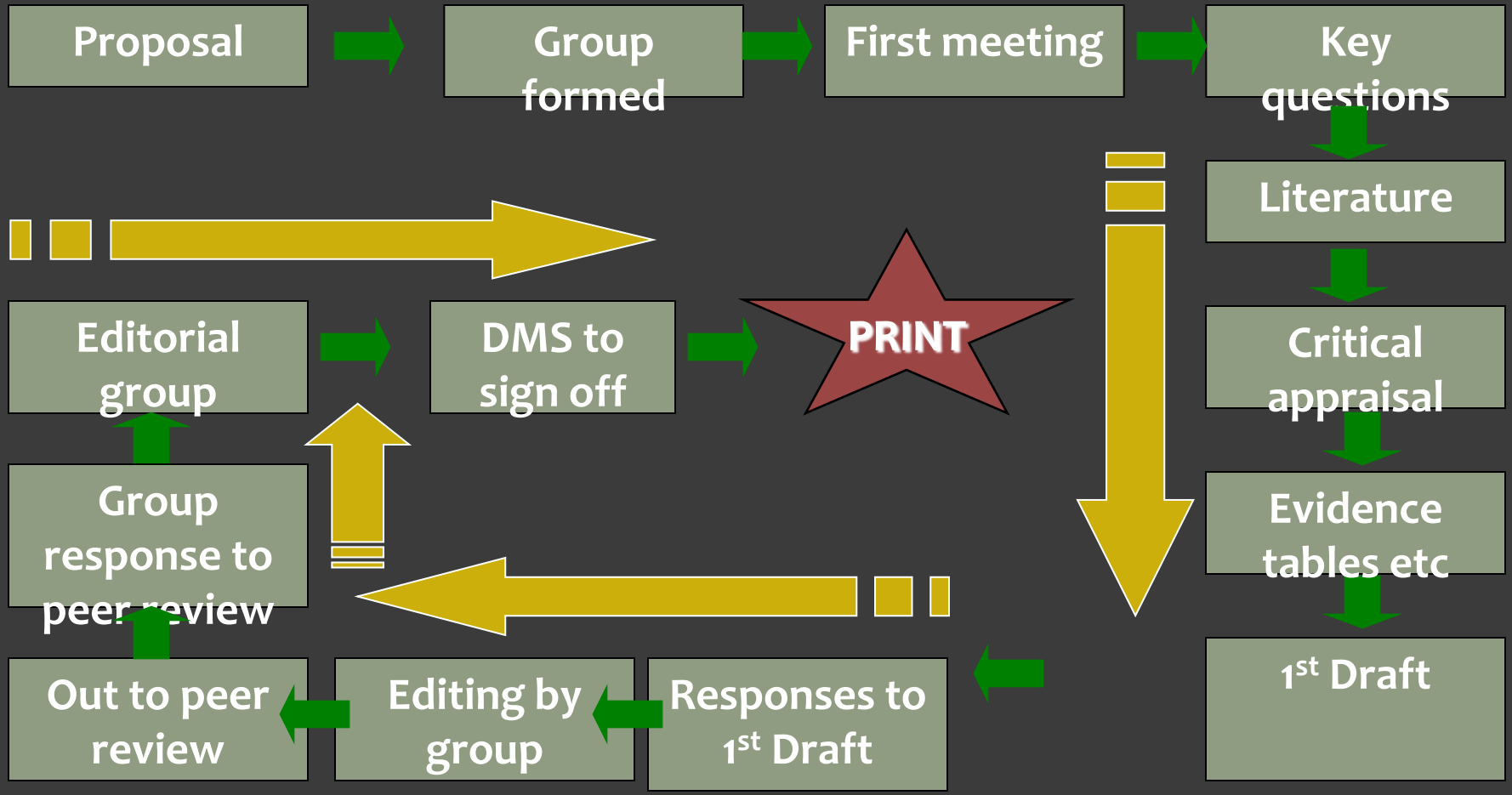
LIMITATIONS OF EVIDENCE BASED GUIDELINES

- Guidelines are only useful if they are:
  - relevant to clinicians
  - up to date
  - realistic
- Guidelines therefore need to be produced or adapted by the people who are going to use them


1. Selection of guideline topics
2. Composition of the guideline development group
3. Systematic literature review
4. Formation and grading of recommendations
5. Consultation and peer review
6. Publication and dissemination
7. Implementation
8. Review

Selection of topics

- Burden of disease
- Existence of variation in practice
- Evidence of effective practice
- Evidence of support from stake holders
- Implementation of the guidelines


Proposal
Group formed
First meeting
Key questions
Literature
Critical appraisal
Evidence tables etc
1st Draft
Responses to 1st Draft
Editing by group
Out to peer review
Group response to peer review
Editorial group
DMS to sign off
PRINT

TOPIC SELECTION

- Specialty subgroups (cancer, mental health and learning disability, child health, primary care, cardiovascular diseases) help to generate topics from external consultation
- Vetting to remove inappropriate topics
- Prioritisation carried out by MOH

FACTORS INFLUENCING VALIDITY OF GUIDELINES

- Composition of guideline development group
- Identifying and synthesising evidence
- Methods of developing guideline

Grimshaw and Russell (1993)

VALIDITY OF CLINICAL GUIDELINES

Research shows that the validity of a guideline is improved if :

- the guideline development group is multidisciplinary ✓ and geographically representative
- it is evidence based ✓ systematic review of literature
- recommendations are explicitly linked to evidence ✓ recommendations linked and graded

Grimshaw and Russell (1993)

MULTIDISCIPLINARY DEVELOPMENT GROUP

Multidisciplinary participation is essential to ensure:

- Proper evaluation and interpretation of specialty-specific evidence
- Relevance to the realities of everyday practice
- Ownership and co-operation of all stakeholder groups

WORKGROUP MEMBERS

1. Chan Siew Luen (Chairman)
2. Ansgar Cheng
3. Chong Kai Chuan
4. Myra Elliott
5. Victor Fan
6. Charlene Goh
7. Geraldine Lee
8. Dominic Leung
9. Benjamin Long
10. Clarisse Ng
11. Marianne Ong
12. Andrew Ow
13. Shahul Hameed
14. Christopher Sim
15. Ken Tan
16. Winston Tan
17. Benjamin Tan
18. Tan Wah Ching
19. Alphonsus Tay
20. Wong Keng Mun
21. Alvin Yeo
22. Yong Loong Tee

6 OMS
5 Prosth
5 Perio
4 GDP
1 Ortho
1 Endo

TOPICS ADDRESSED

1. Dental implants in irradiated bone
2. Dental implants in patients receiving oral bisphosphonates
3. Dental implants in patients with controlled periodontal disease
4. Dental implants in smokers
5. Narrow diameter implants
6. Implant vs Endodontics
7. Implant vs bridge
8. Dental implants in sinus bone graft
9. Dental implants in augmented ridges
10. Connection of implants to natural teeth
11. Placement protocol
12. Loading protocol

Supporting clinical effectiveness

Guidelines provide:

- A critical appraisal and synthesis of the current scientific evidence
- Recommendations on best practice formed by multidisciplinary group following widespread consultation
- A challenge to the health service to implement proven best practice

LEVEL OF EVIDENCE

- Study design classification
  - RCT/systematic review 1
  - Non-randomized/observational studies 2
  - Case series / survery 3
  - Published expert opinion e.g. expert reviews 4
- Quality of Evidence : ++, +, -
  - Use appraisal checklist, applies only to designs 1 & 2
- When combined:
  - 1+ would indicate an RCT with a low risk of bias

Grades of recommendation

A At least one meta analysis, systematic review, or RCT rated as 1++, and directly applicable to the target population;

or

A systematic review of RCTs or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results

Grades of recommendation

B A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results;

or

Extrapolated evidence from studies rated as 1++ or 1+

Grades of recommendation

C A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results;

or

Extrapolated evidence from studies rated as 2++

Grades of recommendation

D Evidence level 3 or 4;

or

Extrapolated evidence from studies rated as 2+

Grades of recommendation

GPP Expert opinion;

Widely accepted expert opinion

1. clinical common sense
2. Not simply group expert opinion
3. Unlikely to be evaluated in future trials

EDITORS

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- Secretariat, Academy of Medicine, Singapore, especially Ms Syairah Bte Samsudin (Era)

TOPICS ADDRESSED

1. **Dental implants in irradiated bone**
2. Dental implants in patients receiving oral bisphosphonates
3. Dental implants in patients with controlled periodontal disease
4. **Dental implants in smokers**
5. **Narrow diameter implants**
6. Implant vs Endodontics
7. Implant vs bridge
8. Dental implants in sinus bone graft
9. Dental implants in augmented ridges
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