# Guideline Development (CBO)

**Kitty Rosenbrand,**
**Joyce van Croonenborg,**
**Jolanda Wittenberg**

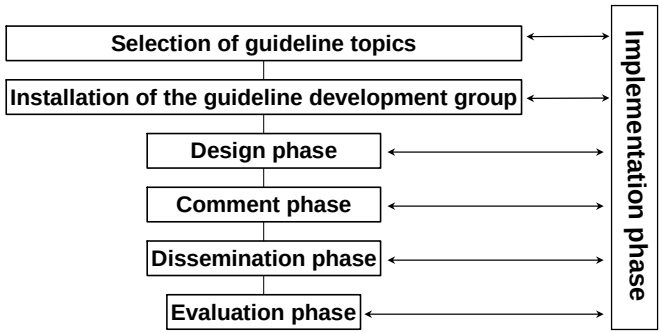
Protocure

## Guideline development programme

- Start guideline development (1982 bloodtransfusion)
- Consensus-based to **Evidence**-based
- **Multidisciplinary** guideline development teams

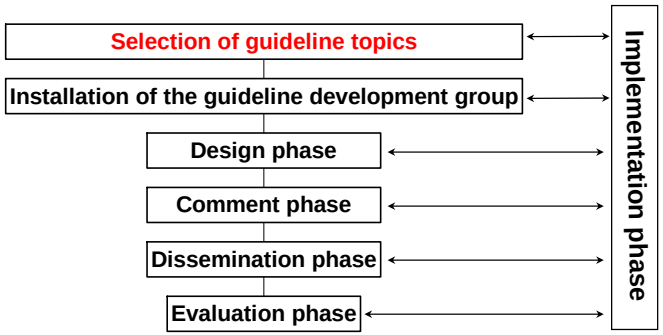


## Guideline development process






## Guideline development process

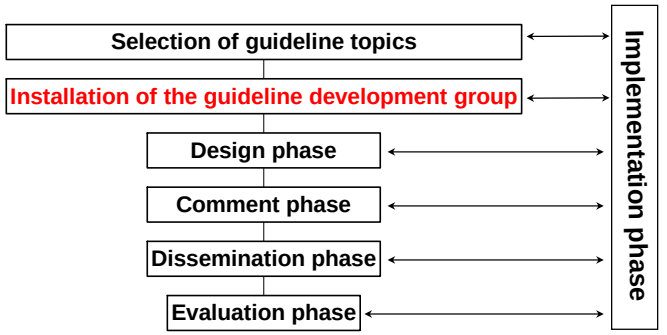


# Selection of guideline topics

- Major sources of morbidity and mortality
- Burden of disease
- High health care costs
- “Gap” between research and practice
- New development in medical research
- Dillemma’s in treatment or diagnosis



# Guideline development process

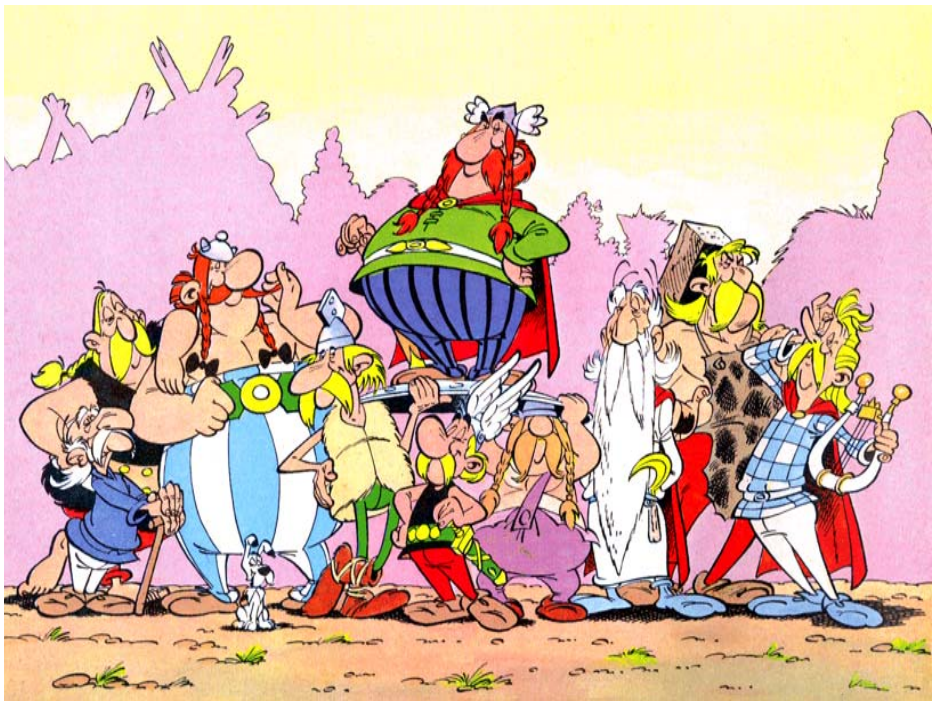





# Installation of the guideline development group

- The guideline group chairman
  - Authority in the field
  - Conflict solving capacities
  - Excellent independent team-leader
- The guideline group
  - Representatives of all key disciplines
  - Patient participation should be considered
  - Open minded

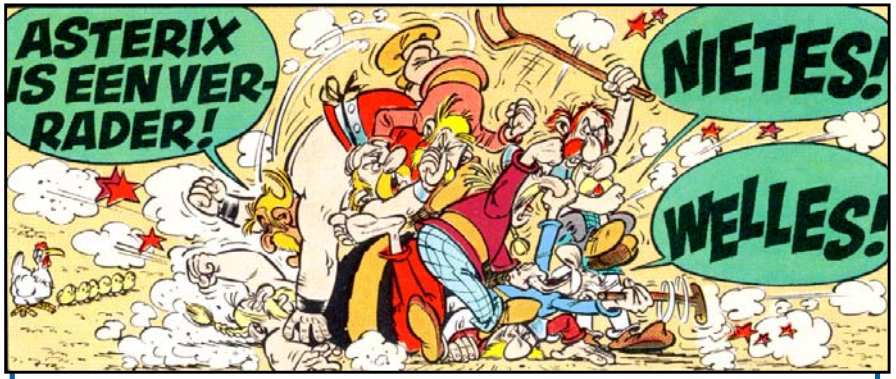




# Installation of the guideline development group

- The guideline group chairman
  - Authority in the field
  - Conflict solving capacities
  - Excellent independent team-leader
- The guideline group
  - Representatives of all key disciplines
  - Patient participation should be considered
  - Open minded





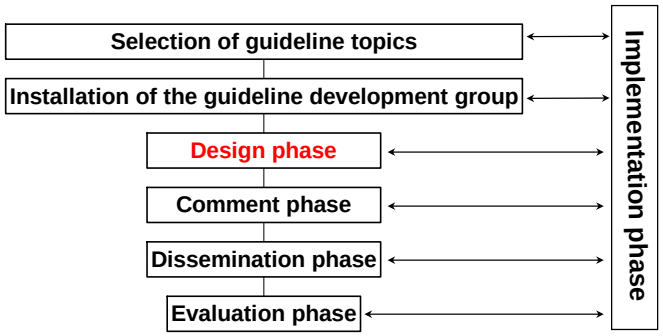



# Installation of the guideline development group

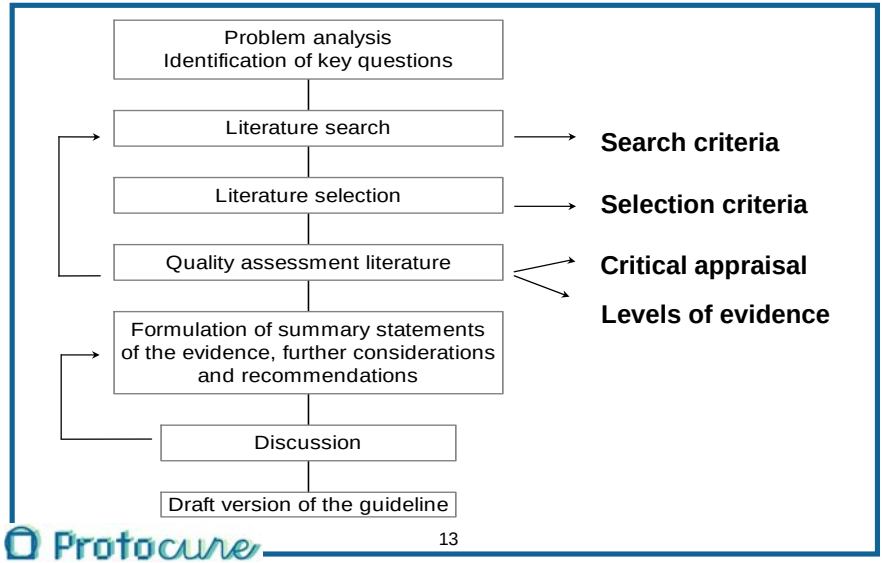
- The guideline group chairman
  - Authority in the field
  - Conflict solving capacities
  - Excellent independent team-leader
- The guideline group
  - Representatives of all key disciplines
  - Patient participation should be considered
  - Open minded



# Guideline development process

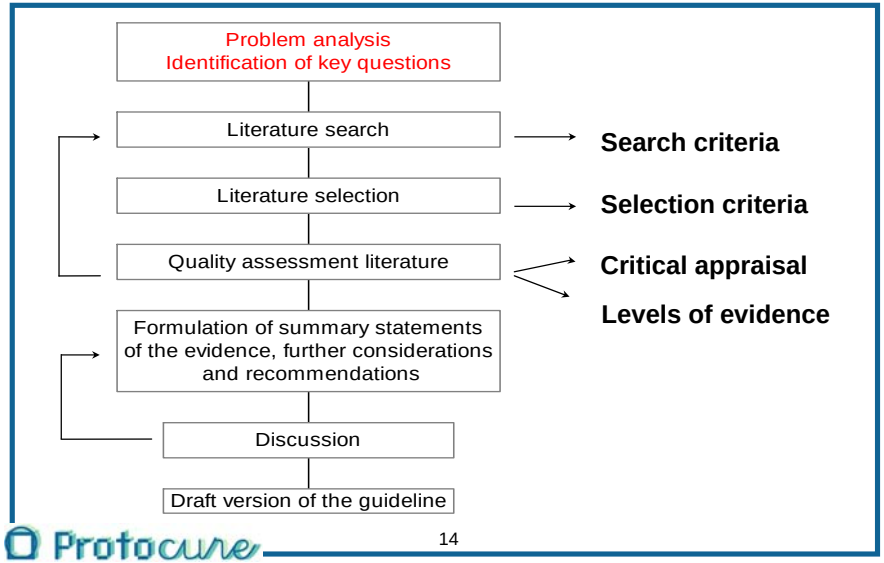


# Design phase






# Design phase



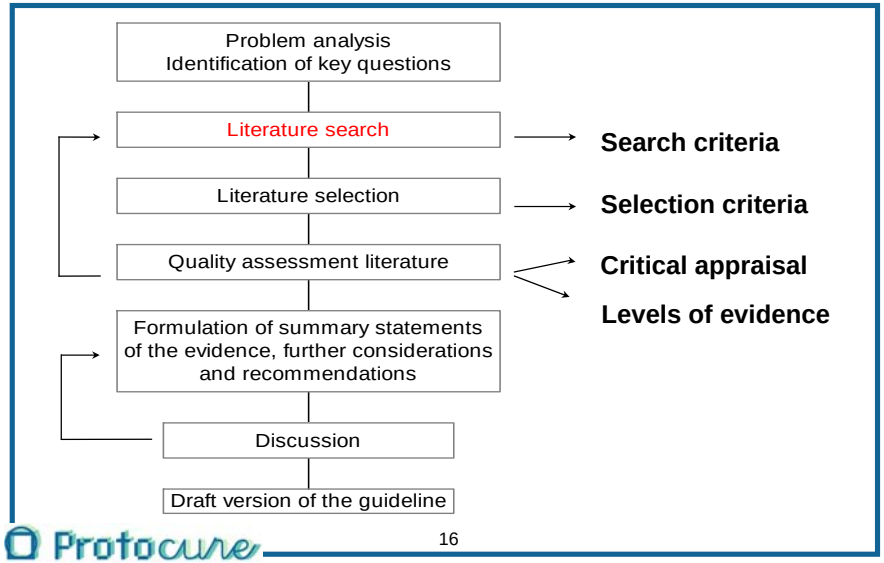



# Problem analysis and identification of the key questions

- Problem analysis by expert panel or survey
  - Focus on major issues in daily practice
  - No cookbook!
- Identification of the key questions



# Design phase

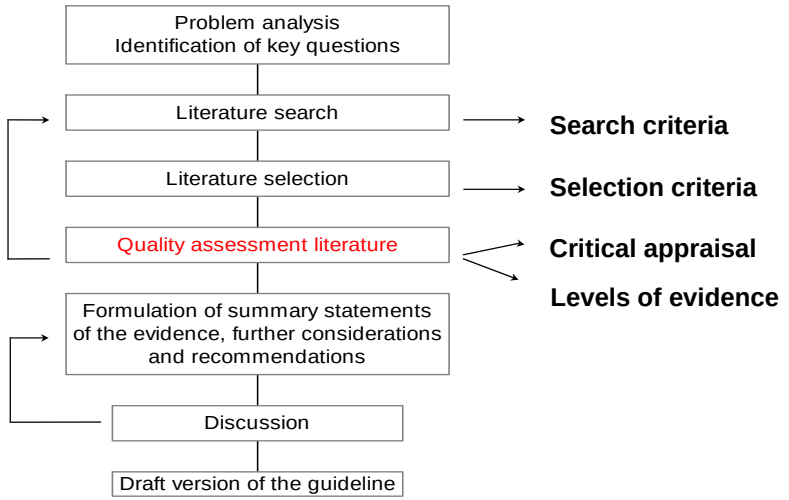


# Literature search

- Identify all existing evidence (Medline, Embase, Cochrane databases, Psychinfo etc)
- Define inclusion and exclusion criteria
- Select the evidence



# Design phase






# Critical appraisal

- Quality assessment of the study design
- Applicability in the Dutch Health Care System



# Grading the evidence
## Prevention and Treatment

| | |
|---|---|
| A1 | Meta-analysis of randomised trials of A2-level, with consistency between the independent studies |
| A2 | Double-blind randomised controlled clinical trial of good quality |
| B | Other comparative studies (cohort, case-control-studies) |
| C | Non-comparative study |
| D | Expert opinion |

# Evidence table

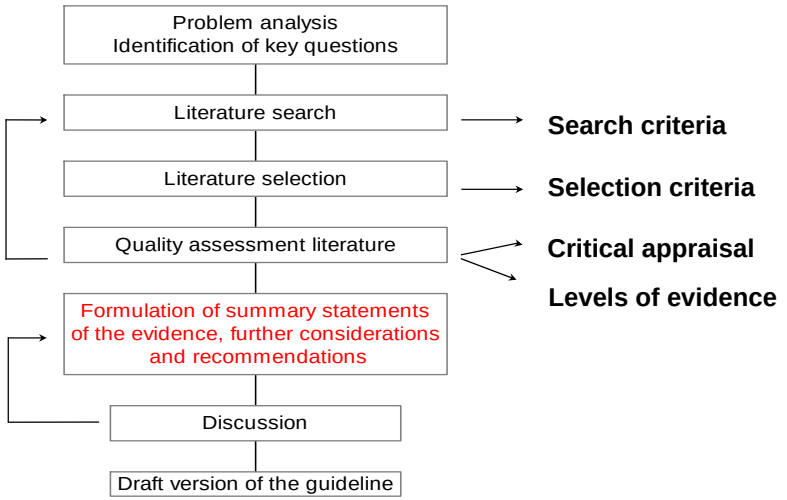
Tabel 4a. Onderzoeken naar het effect van preventieve interventies

| Studie | Studie-kenmerken | Studie-duur | Populatie kenmerken (indicatie, gemiddelde leeftijd, geslacht, aantal patiënten, exclusiecriteria)[1] | Behandelgroep (aantal patiënten) | Controlegroep (aantal patiënten) | Eindpunt(en) | Resultaten | Mate van bewijs | Sponsoring |
|---|---|---|---|---|---|---|---|---|---|
| Sievert, 1991[3] | RCT, crossover design | 3 weken | Gezonde vrijwilligers (50), naproxen 1.000mg/dag | algeldraat 4 dd 1 tablet (20) | placebo (20) | Endoscopie | Significant meer maagerosies in de algeldraat groep | B | ? |
| Agrawal, 1991[4] | RCT, multicenter | 12 weken | OA, ibuprofen, piroxicam of naproxen | sucralfaat 4 gram (177) | misoprostol 200mcg 4dd (179) | Endoscopie | maagulcus: misoprostol: 2/122 (1,6%) sucralfaat 21/131 (9,2%) | A2 | ? |
| Agrawal, 1999[5] | RCT, multicenter | 6 weken | OA, 62 jr, 67% vrouw, 1203 pt, excl.: cortico's of anticoagulantia, actieve GI-ziekte | diclofenac 75mg en misoprostol 400mcg 2dd (393) | nabumetone 1.500mg (426) of placebo (380) | Endoscopie | maagulcera: diclofenac/ misoprostol: 4% nabumetone: 11% placebo: 5% | A2 | Ja |
| **Chan, 2001[2]** | **RCT, 1 centrum** | **24 weken** | **OA of RA, 75 jr, 64% vrouw, 90 pt, excl. : comedicatie cortico's, anticoagulantia, zuurremmers ; actieve GI-ziekte, *Hp*-eradicatie in verleden** | **naproxen 500-1.000mg dd met misoprostol 200mcg 2dd (45)** | **nabumetone 1.000-1.500mg dd (45)** | **GI-bloeding** | **GI-bloeding nabumetone: 22,2% nab. / misoprostol: 6,7%** | **A2** | **Nee** |
| Graham, 2002[6] | RCT, multicenter, 63 centra | 12 weken | NSAID-gebruikers, evt. met lage dosis aspirine gem. 60 jr, 65% vrouw, 537 pt, excl.: GI-ulcera of erosie, *Hp*-positief | lansoprazol 15mg (136) of 30mg (133) | misoprostol 200mcg 4dd (134) of placebo (134) | Endoscopie | maagulcus: placebo: 49% misoprostol: 7% lansoprazol 15mg: 20% lansoprazol 30mg: 18% | A2 | Ja |
| Bianchi-Porro, 2000[7] | RCT | 12 weken | RA of OA, chronisch NSAID-gebruik, 22-80 (gem. 59) jaar, 104 pt | pantoprazol 40mg (70) | placebo (34) | Endoscopie | maagulcus: placebo: 41% pantoprazol : 28% | A2 | Ja |

[1] *RA = Reumatoïde artritis; OA= osteoartritis; Hp=Helicobacter pylori. Bij exclusiecriteria worden tdkens alleen degene genoemd die van belang zijn in verband met de beoordeling van de maagtoxiciteit; 'ulcera in anamnese' slaat meestal op de periode direct voorafgaand aan de studie (i.h.a. 6 maanden); GI = gastro-intestinale; vetgedrukt = harde eindpunten (= perforatie, ulcera, bloedingen, obstructies)*



# Design phase






# Summary statement of the best evidence (format)

| | |
|---|---|
| **2** | Meloxicam is as effective as piroxicam in treating patients with osteoarthritis.<br><br>$A_2$ Linden 2002, Marshall 2002, Hovell 2001 |



# Strength of summary statement of best evidence

1. At least 1 study of A1 or 2 studies of level A2
2. At least 2 independent studies of level B
3. Other studies than mentioned in level A or B
4. Opinion of the expert panel

# Recommendations based on:

- The best available scientific evidence
- Further considerations
  - Organisational aspects
  - Compliance
  - Patient perspectives
  - Costs
  - Etc.



**Therapeutic interventions in headache patients**

**Scientific justification**

A meta-analysis of 22 randomised controlled trials showed a reduction in headache episodes in male headache patients using drug A.[1] The headache episodes in the treatment group were less severe and the duration of the episodes was shorter than in the control group. Two randomised controlled trials compared the effectiveness of drug A and drug B with a placebo. Both drugs reduced severity and duration of the headache episodes[2,3]. No difference in effect was found between both drugs.

**Conclusion**

| | |
|---|---|
| **Level 1** | Drug A and drug B are both effective in reducing severity and duration of headache episodes in male patients.<br>*A1* *Thijssen et al*[1]<br>*A2* *Vianden et al*[2], *Swartz et al*[3] |

**Other considerations**

Drug A has to be taken 3 times a day, drug B one time a day. For both drugs nausea is mentioned as adverse effect. This should be discussed with the patient.
A cost-effectiveness analysis showed that drug B is more cost-effective than drug A.[4]
All mentioned medical literature was based on male patients. However de guideline development group thinks that the results can be extrapolated to female patients.

**Recommendation**

As therapy for male and female headache patients drug B is recommended. Although the side effects should be taken into account and clearly discussed with the patient.

Literature

# Format

**Antacida en mucosaprotectiva**

Eén onderzoek is verricht met algeldraat/magnesiumoxide. Deze medicatie had een onverwacht averechts effect.[3] Sucralfaat, dat in een dosering van 4 gram per dag werkzaam is bij bestaande ulcera, bleek in een preventieve onderhoudsdosering van 2 gram per dag minder effectief dan misoprostol.[4]

**Conclusie**

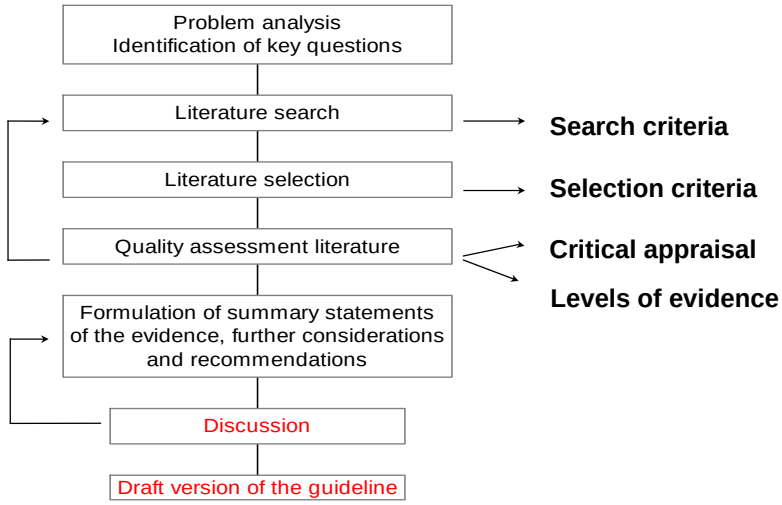
| | |
|---|---|
| Niveau 3 | Er zijn geen aanwijzingen dat algeldraat en sucralfaat werkzaam zijn bij de preventie van maagulceratie door NSAID's<br>*B* *Sievert1991[3] (algeldraat); Agrawal 1991[4] (sucralfaat)* |

**Aanbeveling**

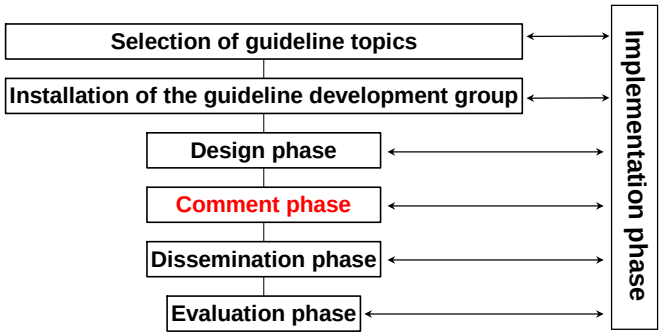
Mucosaprotectiva en antacida dienen niet te worden voorgeschreven ter preventie van maagulceratie door NSAID's.



# Design phase



# Guideline development process






# Comment Phase

- Feedback of the medical scientific associations
- Draft guideline presented and discussed at national open meeting

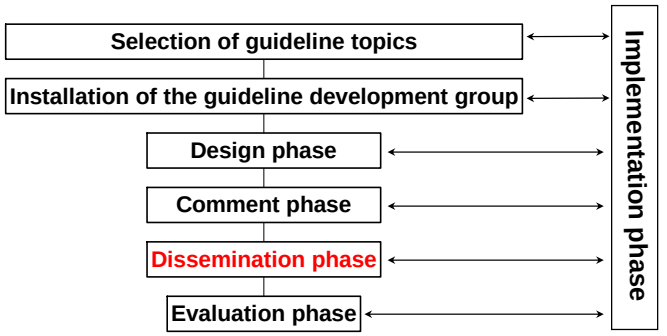



# Authorisation phase

- Scientific societies formally approve the guideline
- Guideline is to be used by all physicians involved with patient care of the topic of the approved guideline



# Guideline development process

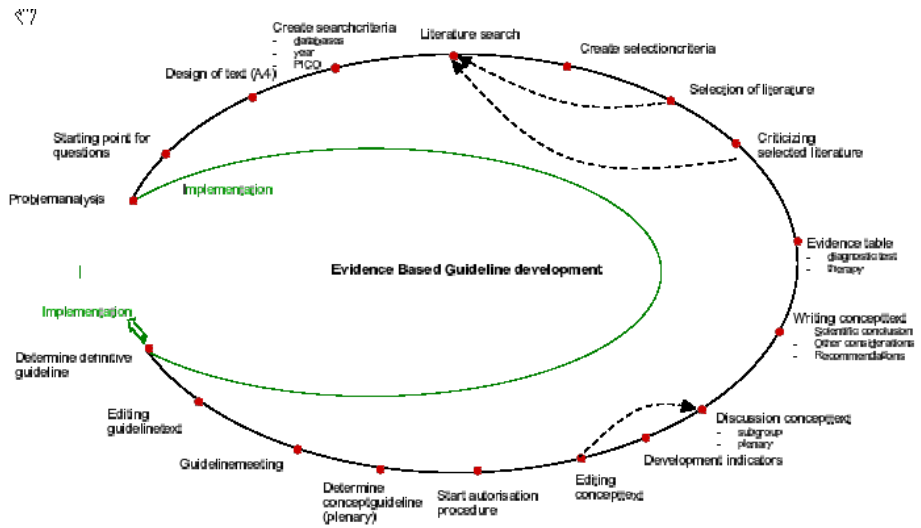


# Dissemination phase

- Distribution of final guideline
- Publication in Nederlands Tijdschrift voor Geneeskunde (Dutch Journal of Medicine) and other journals
- www.cbo.nl
- Implementation tools



## Flowchart Guideline development






# Work in progress (1)

- Grading system
- Audit
- Pilots during the development process
- Combination with Breakthrough
- Implementation tools



# Work in progress (2)


- More ICT applications
- Patient involvement in the guideline development process
- Gaps in evidence reported to research funding organisations
- Efficiency of guideline development process
- Living guideline

# Living guidelines

- Maintenance on a more continuous basis
  - Now: 2 yr of development, revision after 5 yr -> recommendations in guidelines can be outdated or ineffective in practice
  - Future: 2 times a year judgement of actuality of guideline
  - For example maintenance based on:
    - New evidence or practice data
    - Feedback from users
    - Medical audit data
    - Expansion or limiting the scope of the guideline



# Living guidelines

- Pilot with two guidelines
  - Aids
  - Breast cancer (mamma carcinoma)
- Testing:
  - How frequently is updating necessary?
  - How can be judged if updating is necessary?
  - How can you organise this in a structured way?
  - How to design the authorisation procedure?
  - Which IT-support is necessary?