How can electronic decision support inform guideline development process

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PREDICT-CVD

Evidence-Based Guidelines

The GP–patient encounter - where the rubber meets the road

The missing link with guideline development

Alternative title

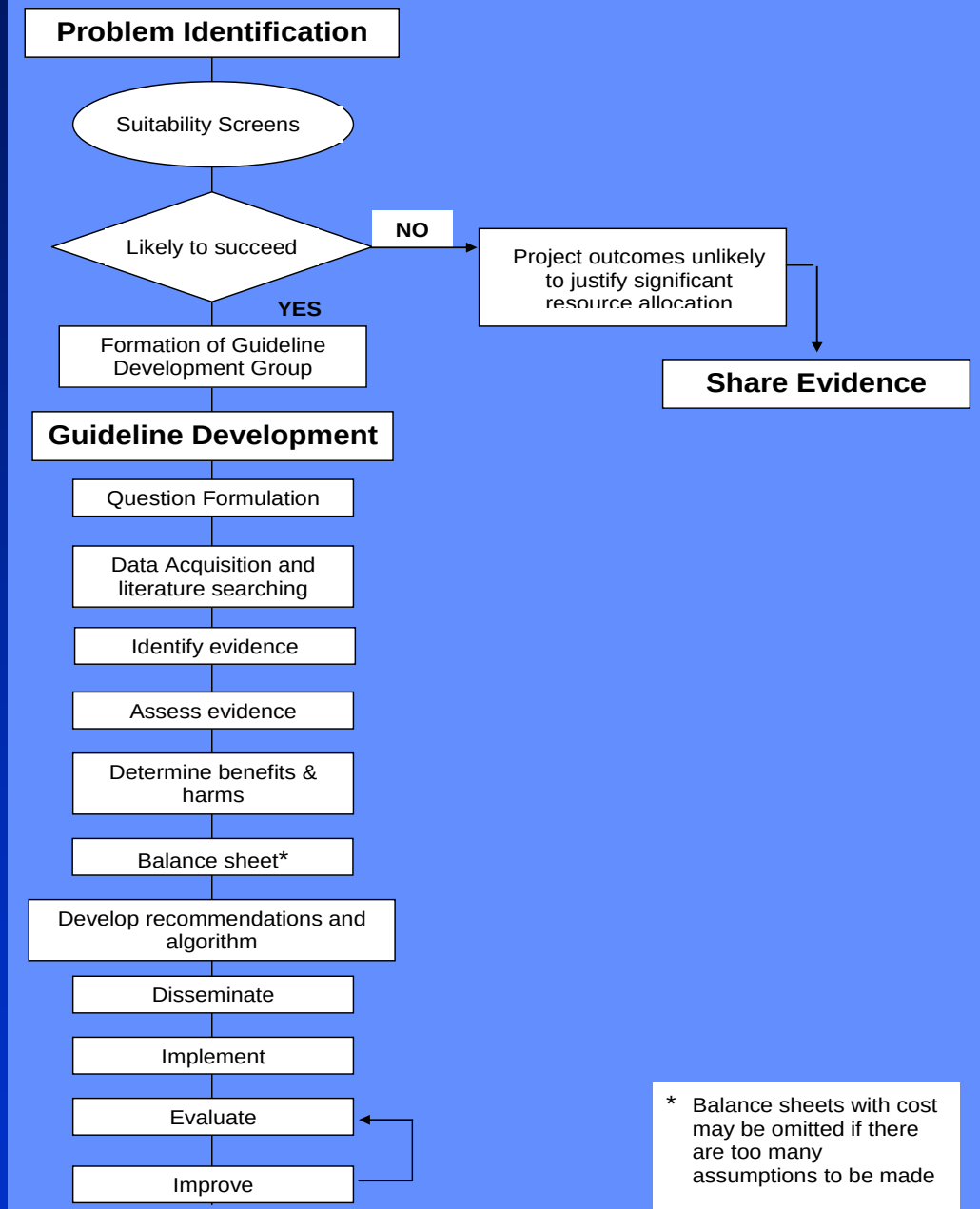
- If I was a guideline project manager now, what would I do differently?

Clinical Questions

- Ely et al. Random sample 103 GPs, Iowa
- Each doctor had about 3.2 questions for every 10 patients seen
- Answers to 64% of questions not pursued
- If pursued, 80% were answered
- Average of <2 minutes pursuing an answer
- Most information comes from colleagues, text books

Ely J et al. BMJ 1999;319:358-61

Fig 1. STEPS IN GUIDELINE DEVELOPMENT



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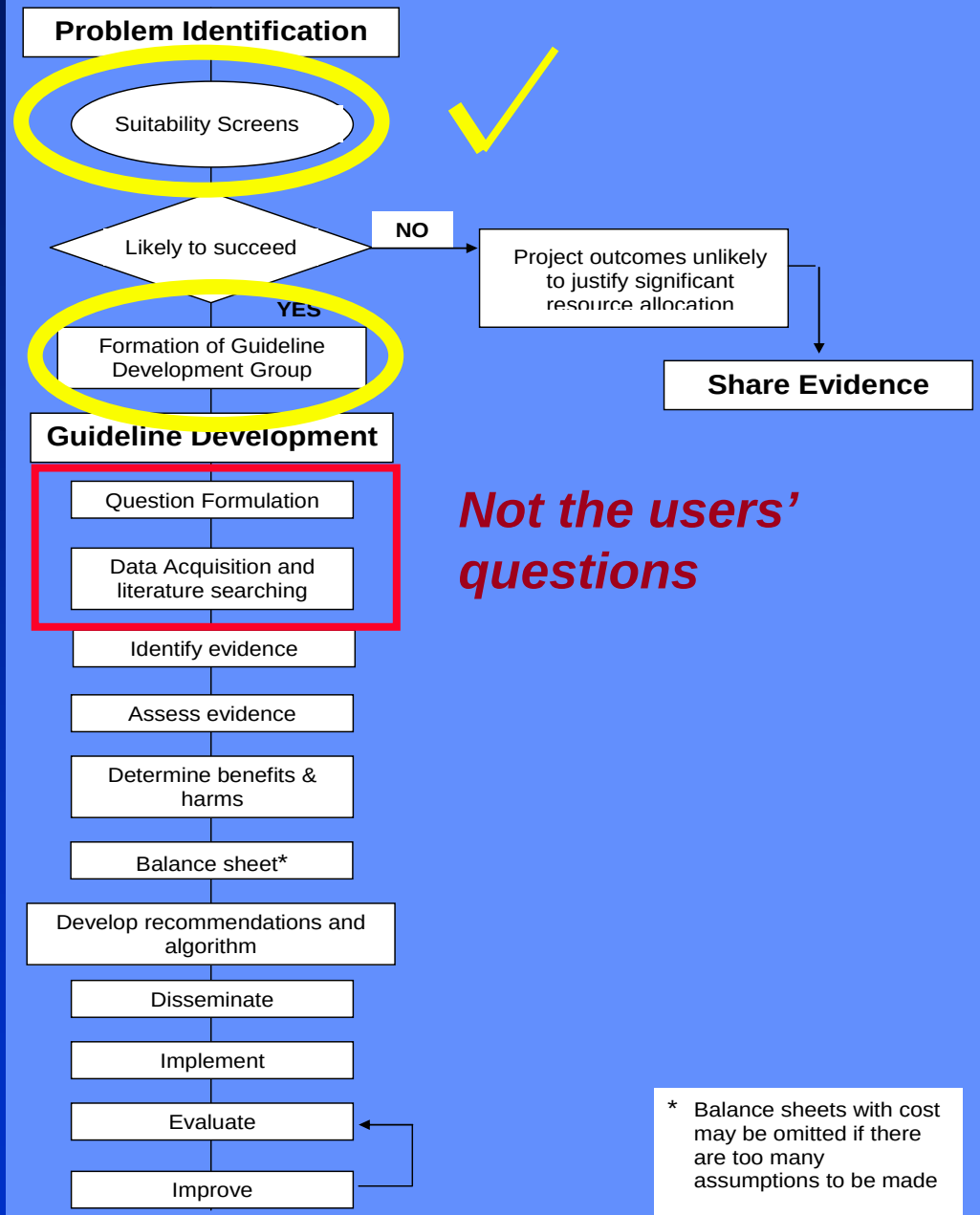


Framework for Question formulation

- Previous guideline
- List of questions that the guideline committee wants to answer
- List of topics that guideline will address

Framework for Question formulation- different types of guidelines

- Prevention/Management of lifestyle risk factor eg smoking cessation, CVD risk screening and management BP, Cholesterol
- Management of a condition eg,stroke, leg ulcer
- Intervention eg,HRT, Caesarean Section
- Health Service eg, cardiac rehabilitation

Framework for Question formulation- scope

- All have target population-age, sex, clinical description
- All have target guideline user group/s
- All have clinical process of care which is similar the world over- identification, history, examination, other diagnostic tests, treat, refer, follow up or discharge,

Framework for Question formulation

- Process of care that the clinician who will be using the guideline normally undertakes/likely to encounter
- Questions must be developed systematically on this basis

Acute knee injury-process of care

- Patient comes in with an injured knee
- First need to diagnose problem, Hx, exam
- Next may order some tests.
- Then decide on best initial treatment
- Advise on follow-up

Patient comes in with an injured knee

First need to diagnose problem

- what questions should be asked,
- what examinations,
- what are the red flags that might change my actions now?

Next may order some tests

- What tests should I do now?
- How do these tests perform in my clinical setting?
- What can they tell me? What can't they tell me?
- If I don't have access to Test X, what do I do?

What is my provisional diagnosis?

- What is the prognosis?
- What should I advise the patient at this stage?

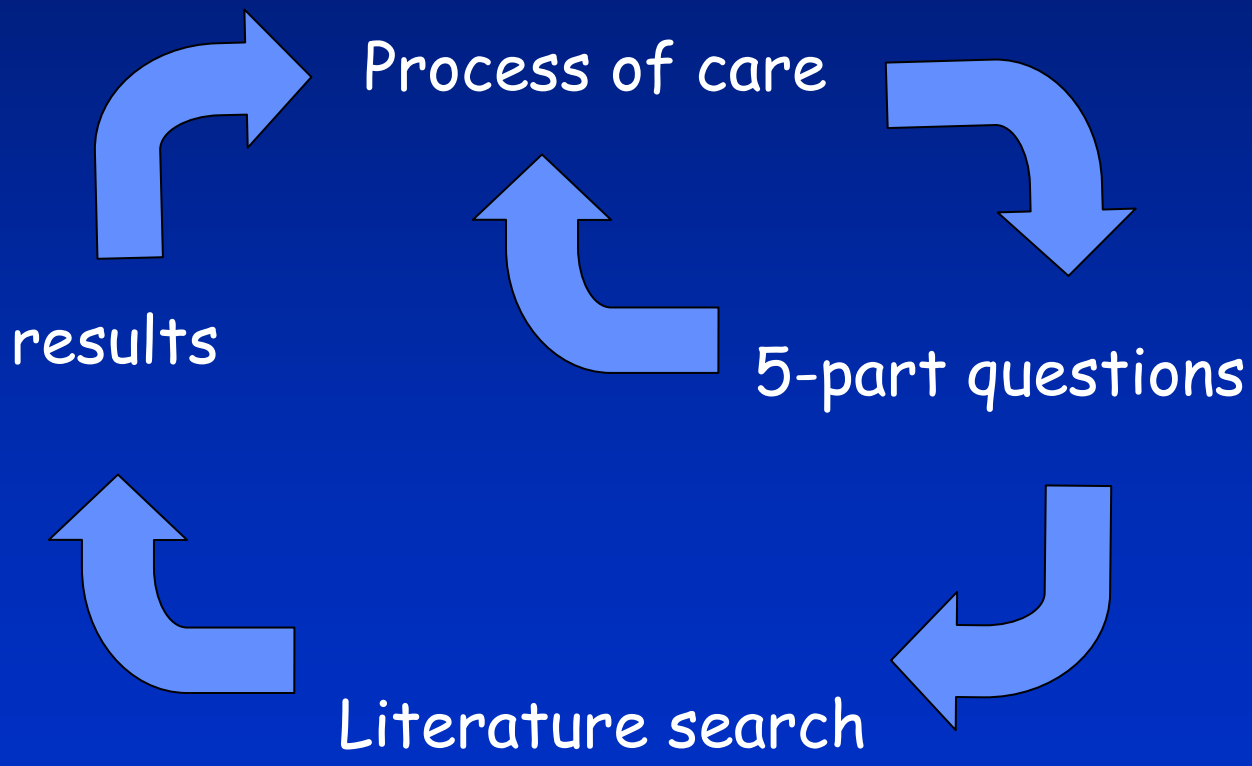
Then decide on best initial treatment

- RICE and crutches ?
- what drug/s,
- what other clinician-physio, acupuncturist, orthopaedic surgeon
- what, why, who, how long

Advise on follow-up

- When should I see the patient again?
- What things might alter my management?

Guideline questions-iterative process



Sub-groups/sub-topics

- Take all the relevant types of patients through the process of care
- Does diagnosis, prognosis, treatment vary?
- What is the evidence for these sub-groups?
- CVD Risk Assessment and management
  - Those who have had a previous event (MI, angina, bypass grafting, stroke, PVD)
  - Those with CVD equivalent eg, Genetic Lipid disorders, or Diabetics with nephropathy
  - Those who have not had an event as yet but characterised in terms of absolute CVD risk

Clinical history of X Yes/No	Examination findings of Y Yes/No	Test results indicate Z Yes/No	On drug A Yes/No	On drug B Yes/no
2	2	2	2	2

Development of subgroup questions

IHD, stroke, PVD, GLD CABG	Diabetes Yes/no	TC/HDL <4.5, (LDL<2.5) TG <1.7	Lifestyle advice yes/no	Statin Yes/No/NT, Fibrates Yes/No/NT
CVD risk levels 20% 15-20% <15%		TC/HDL 4.5-8 TG 1.7-6		Niacin Yes/No/NT, ezetimide Yes/No/NT Sterols Yes/No/NT
8	2	TC/HDL>8 TG >6 6	2	15

Development of subgroup questions

Type 1 Diabetes	HbA1c <7%	Diet only, Metformin sulphonyl urea	Obesity or overweight vs healthy body mass
Type 2 Diabetes	HbA1c 7-10%	Glitazone acarbose	Presence/absence of renal impairment
Type Unknown Diabetes	HbA1c >10%	insulin	Presence/absence of hypoglycaemic episodes

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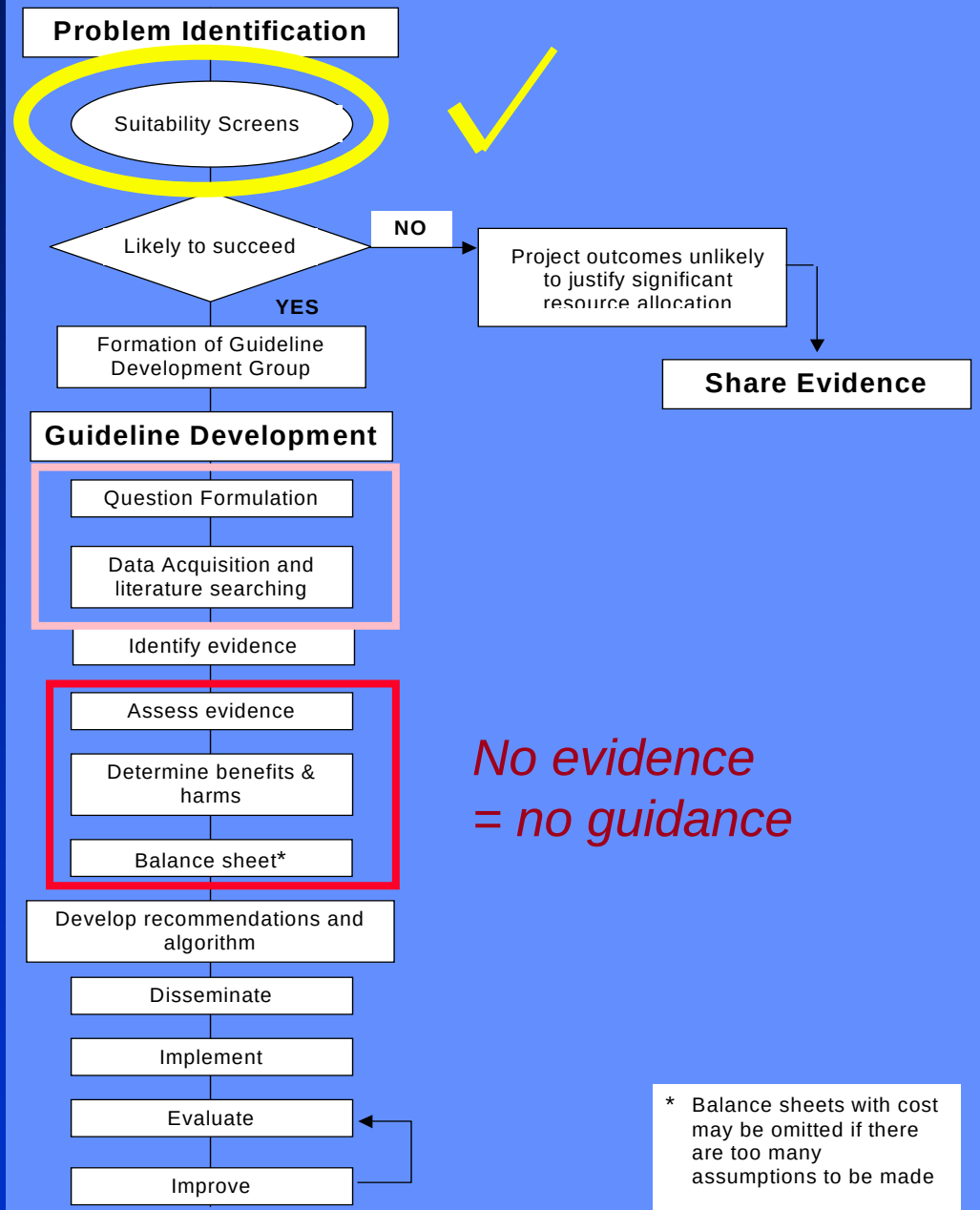
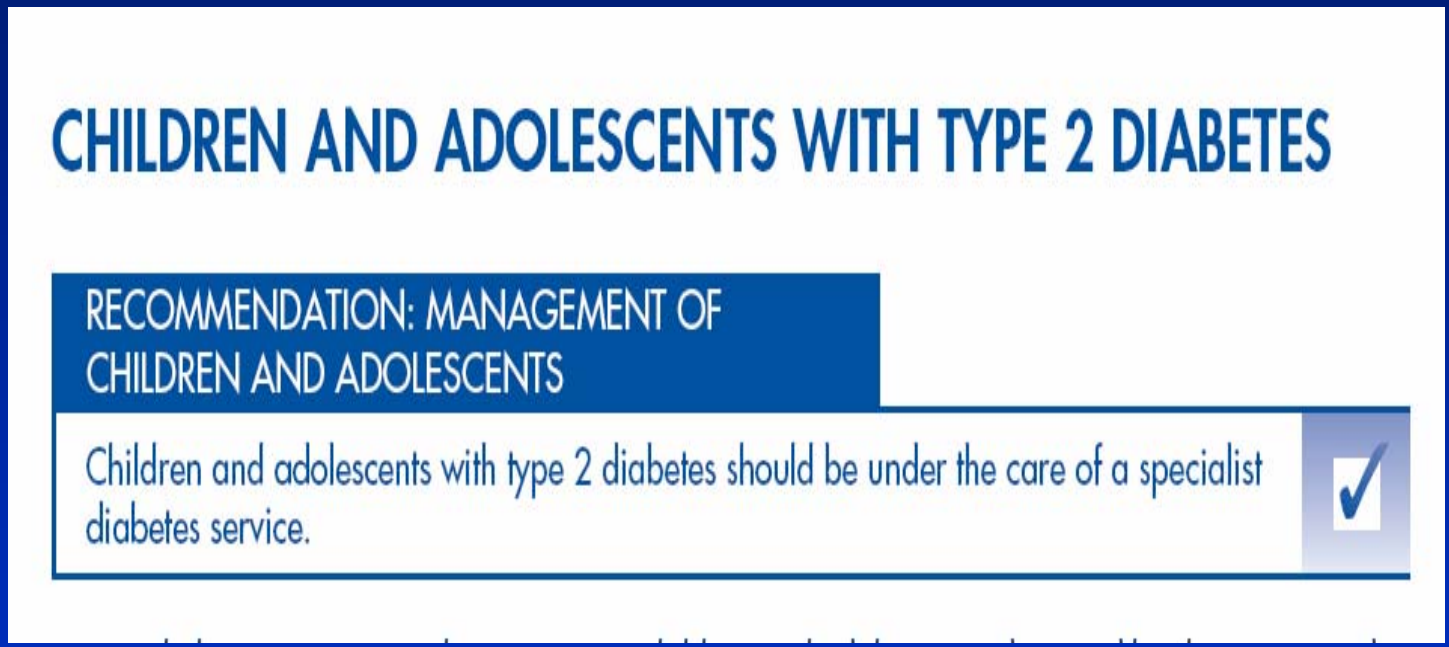


Issue- there is no evidence

- Gaps in evidence
  - Many questions simply have not been asked by researchers
- Solution
  - No problem to user- real world
  - Explicit acknowledgement of lack of evidence
  - Guide given to what to do next

Good Practice Point



CHILDREN AND ADOLESCENTS WITH TYPE 2 DIABETES

RECOMMENDATION: MANAGEMENT OF CHILDREN AND ADOLESCENTS

Children and adolescents with type 2 diabetes should be under the care of a specialist diabetes service. ✓

Management of Type 2 Diabetes, 2003, NZGG

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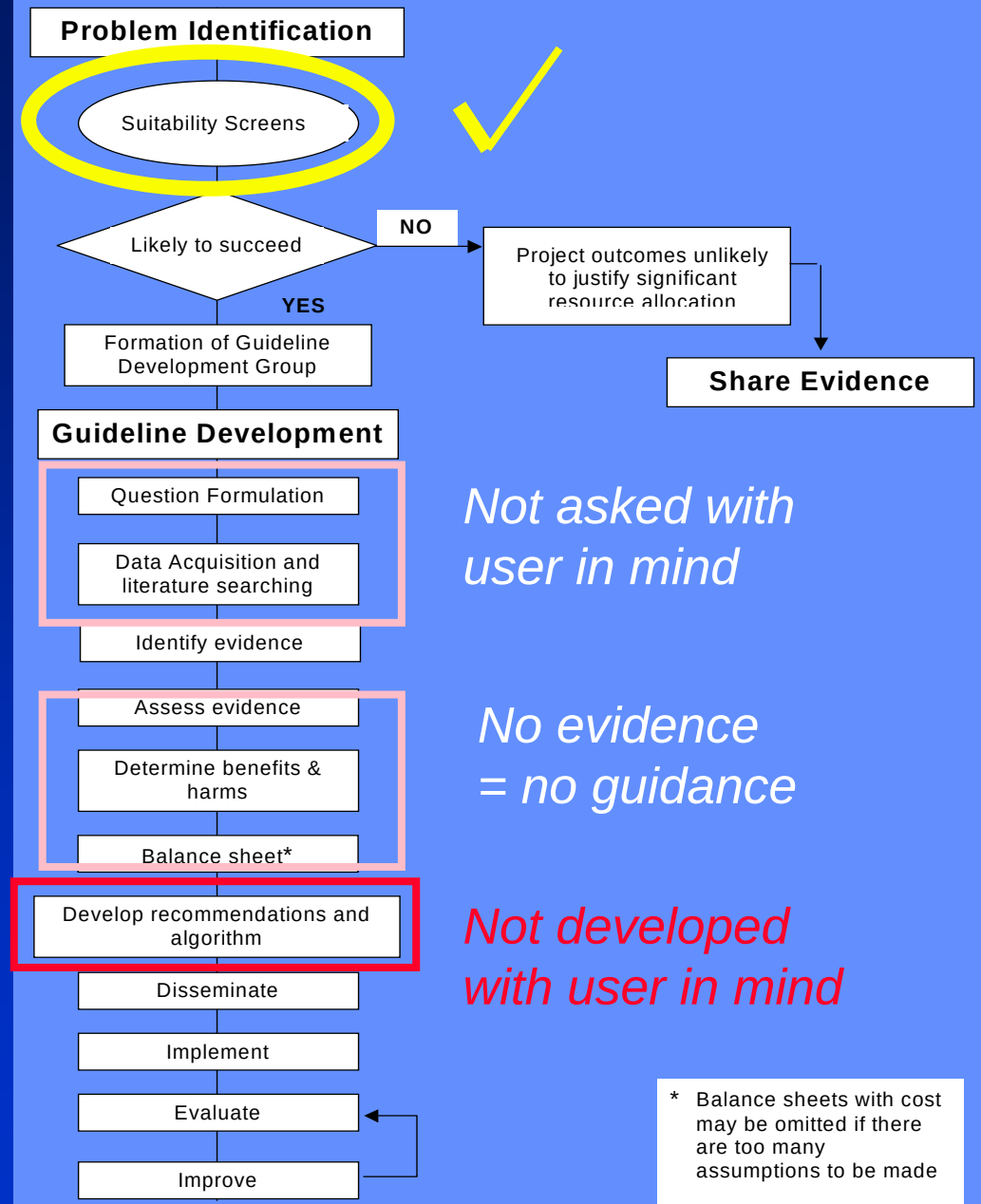
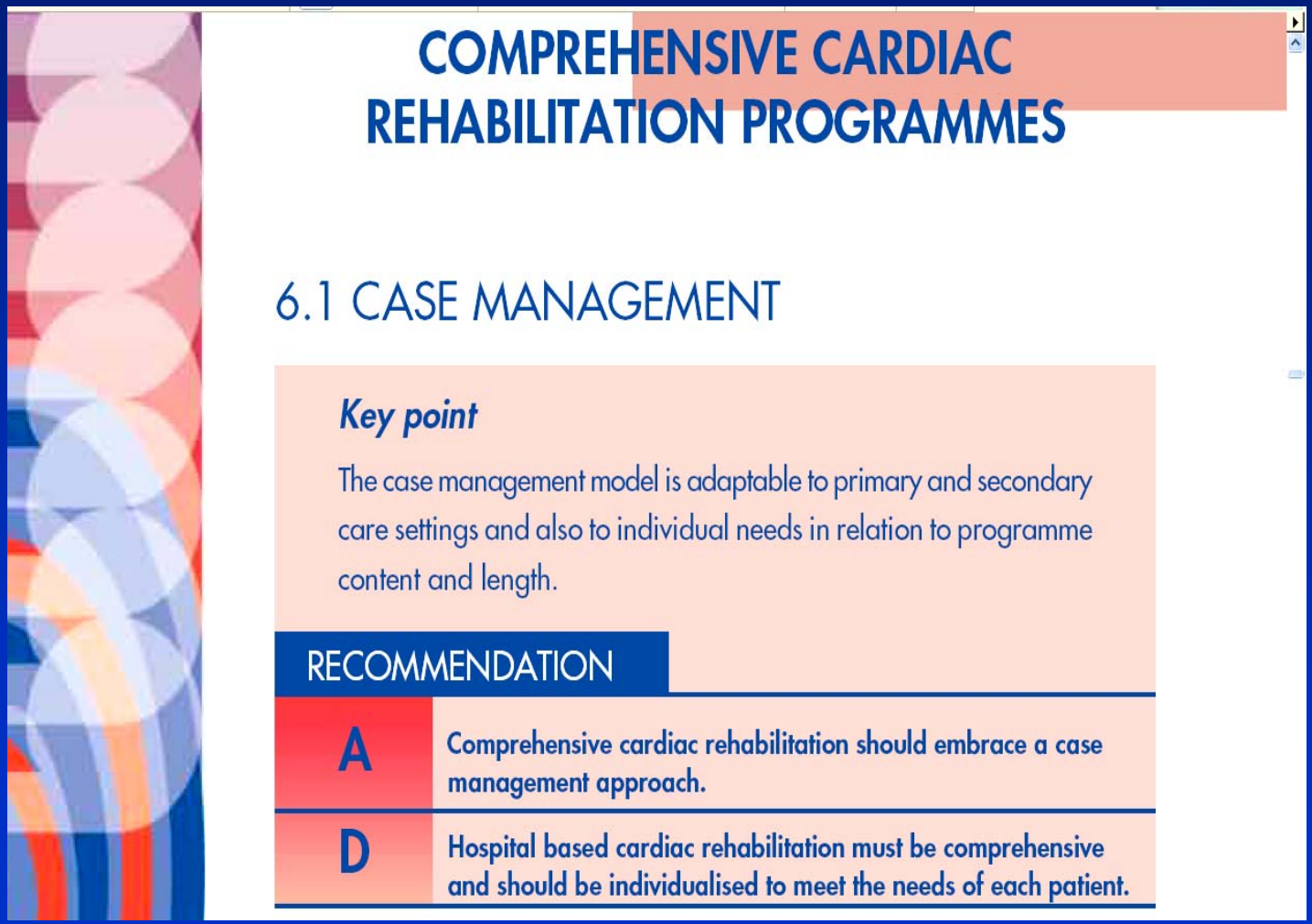


Key Recommendations

- Make them actionable
- Make them specific
- Make them worth having
- Make them answer the initial question/s
  - For what group of patients with what clinical parameters
  - With what do you treat, what dose, what follow-up, what specific monitoring
  - For what reason
  - Who, what, when, how, why
- Use the sub-group questions as headings within the body of the guideline along with evidence statements as relevant

Cardiac Rehabilitation Guideline



COMPREHENSIVE CARDIAC REHABILITATION PROGRAMMES

6.1 CASE MANAGEMENT

Key point

The case management model is adaptable to primary and secondary care settings and also to individual needs in relation to programme content and length.

RECOMMENDATION	
A	Comprehensive cardiac rehabilitation should embrace a case management approach.
D	Hospital based cardiac rehabilitation must be comprehensive and should be individualised to meet the needs of each patient.

CVD Risk Assessment and Management guideline

Due to the increased risk of renal complications, intensive blood pressure management is required (with early consideration of an ACE-inhibitor) in all people with diabetes.	A
More than one drug is frequently required to lower blood pressure to optimum levels.	B
Aggressive blood pressure control is indicated in people with diabetes and overt nephropathy, diabetes and confirmed microalbuminuria or diabetes with other renal disease.	A

What would I do differently

- Re-orientate guideline to achieve the ‘fit’ with clinical context, clinical questions
- Questions can be systematically developed from routine work process
- Literature search and evidence statements, recommendations specifically answer these clinical questions

Random Error

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Bias

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