clinical audit

Using clinical audit data to support local quality improvement

- The evidence base on clinical audit
- Understanding the clinical audit and quality improvement processes
- Linking the process components — problem, cause, action, evidence of improvement — in practice
- The clinical audit lead roles

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Some evidence on clinical audit

No. audits	No. recommendations	No. (%) implemented	No. (%) of audits with repeat data
12	216	38 (17.6%)	0 (0.0%)
29	63	18 (28.6%)	0 (0.0%)
61	--	--	13 (21.3%)

Balogh R, Bond S. Completing the audit cycle: the outcomes of audits in mental health services. *Int J Qual Health Care* 2001;13(2):135–42; Prasad KRS, Reddy KTV. Auditing the audit cycle: an open-ended evaluation. *Clinical Governance: An International Journal* 2004;9(2):110–14; Iqbal HJ, Pidikiti P. Audit of orthopaedic audits in an English teaching hospital: Are we closing the loop? *Open Orthop J* 2010; 4:188-92

Systematic review evidence on clinical audit

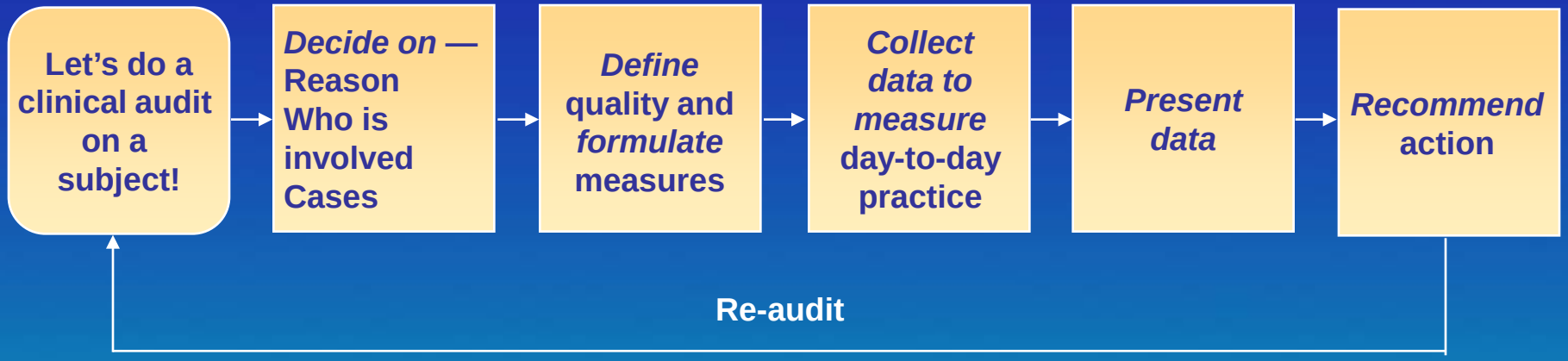
‘The effect of audit and feedback on professional behaviour and on patient outcomes ranges from little or no effect to a substantial effect....’

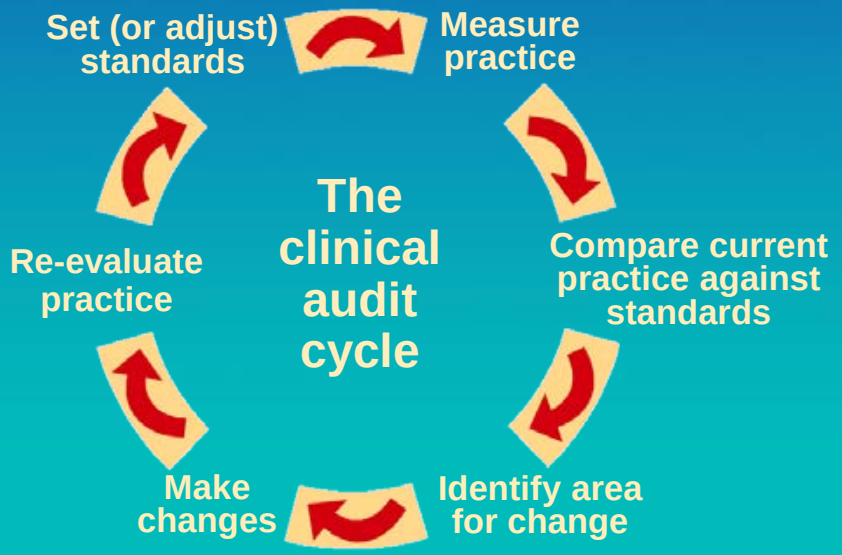
Ivers N, Jamtvedt G, Flottorp S, Young JM, Odgaard-Jensen J, French SD, O’Brien MA, Johansen M, Grimshaw J, Oxman AD. Audit and feedback: effects on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews* 2012;Issue 6. Art. No.: CD000259. doi: 10.1002/14651858.CD000259.pub3

Considerations about the Cochrane review

Model	Collect data and provide feedback to clinicians about the data
Definition	Any summary of clinical performance over a specified period of time

The traditional model of clinical audit — ‘audit and feedback’





Assumptions made in the traditional model

Telling clinicians **about their performance** ***will lead to*** **needed** ***improvement*** **in the quality of care**

Feedback — as an intervention — **is** ***effective*** **to achieve improvement in the quality of care**

Assumptions are *faulty*

Important measures of quality in a clinical audit often involve the *delivery of a multi-professional package of care on a timely basis*

Feedback as an action *assumes that individual clinicians have direct and exclusive control over services*

Conclusion — *Action needed to achieve improvement can be beyond the authority of individual clinicians to make happen*

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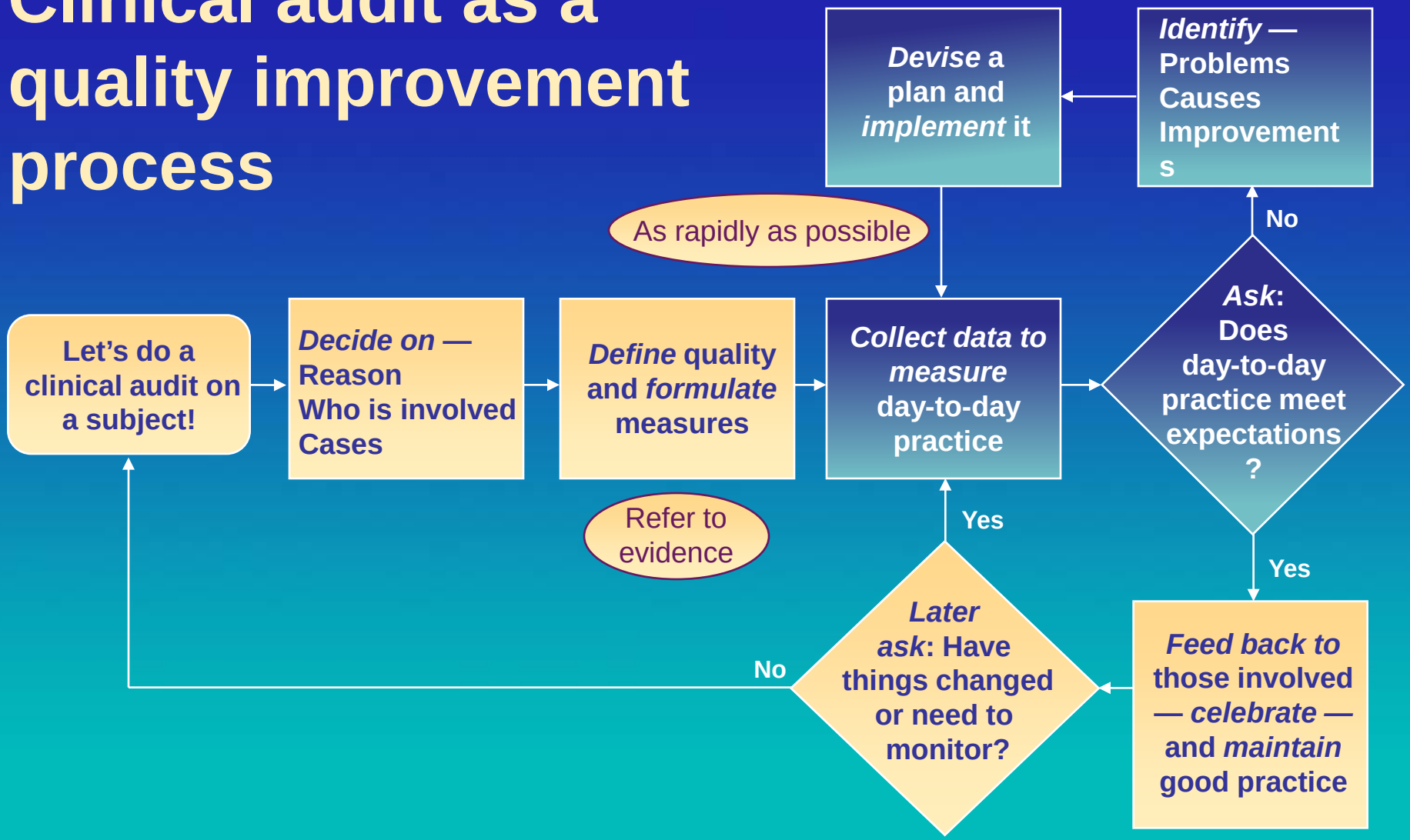
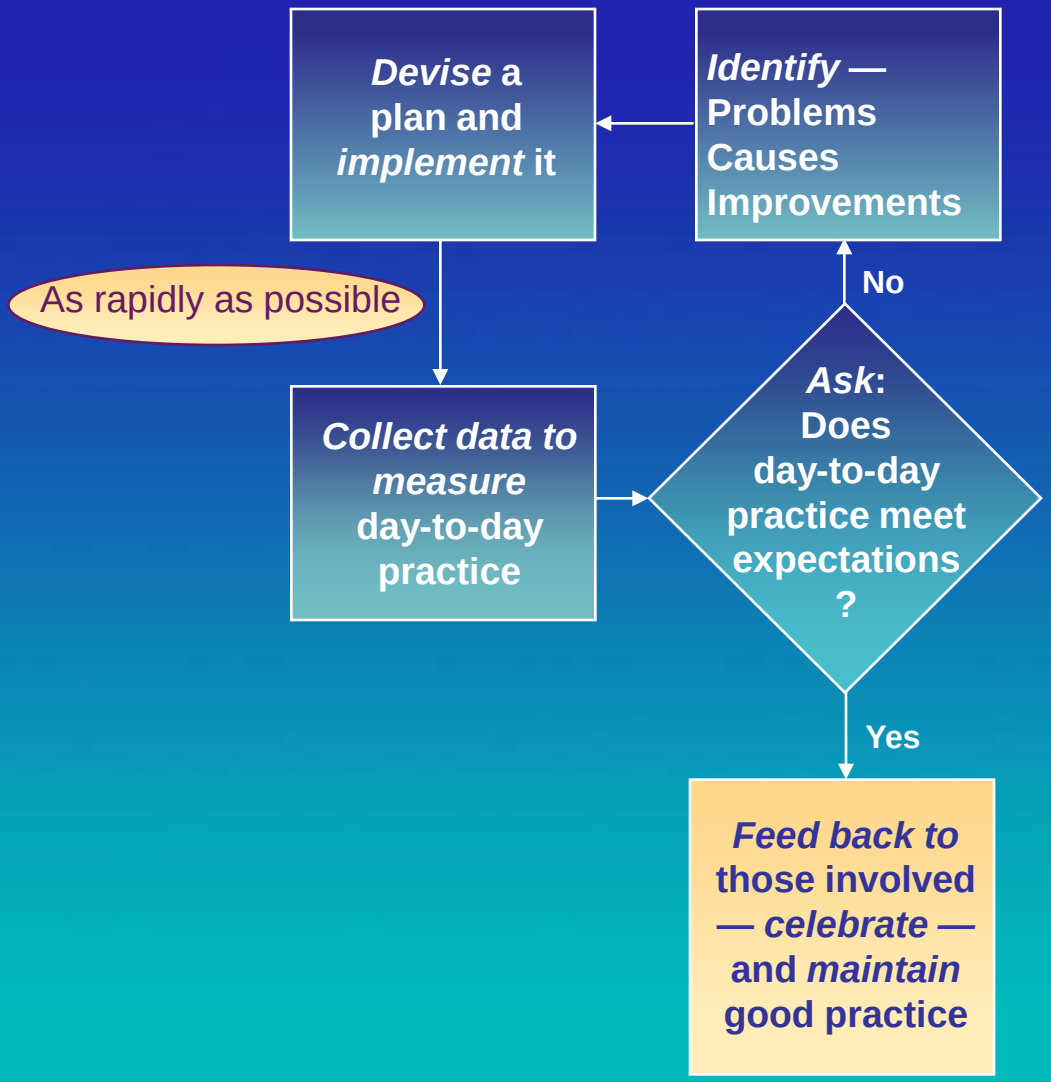
Clinical audit is a *quality improvement process* that seeks to improve patient care and outcomes through systematic review of care against explicit measures and the implementation of change

Adapted from National Institute for Clinical Excellence. *Principles for Best Practice in Clinical Audit.* Abingdon: Radcliffe Medical Press; 2002

Clinical audit as a quality improvement process



The ‘quality improvement’ cycle in clinical audit



Changing the paradigm of clinical audit

Current practice	Improvement-focused practice
Feedback on audit data	*Shortcomings* in the quality of care are identified explicitly
'*Action plan*' on audit data	The *causes* of the shortcomings are identified through using analysis tools
	Interventions to address the *causes* are identified and implemented
	Data collection is repeated to see if the interventions were effective

Quality improvement refers to systematic, data-guided activities designed to bring about immediate, positive changes in the delivery of health care in particular settings

Lynn J, Baily MA, Bottrell M, Jennings B, Levine RH, Davidoff F, et al. The ethics of using quality improvement methods in healthcare *Ann Intern Med* 2007;146:666–73

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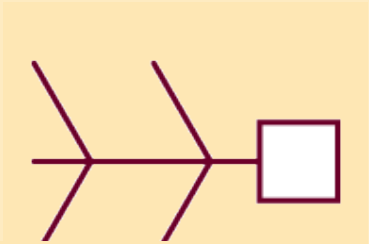
A *shortcoming* or problem in care is current actual practice that does not represent good practice or is not acceptable

A *cause* is the reason for the occurrence of the shortcoming in care

Example — My local hospital's shortcomings based on clinical audit findings

Quality indicator	% of patients NOT meeting indicator
Major trauma patient pre-alerted	42%
Major trauma patient triaged to a resuscitation room	36%
Major trauma patient seen by an ED consultant within one hour	80%
Patient with a GCS ≤12 and/or a base of or depressed skull fracture who had a head CT scan within one hour	70%

What's involved in root cause analysis — *Using quality improvement tools!*



Fishbone diagram

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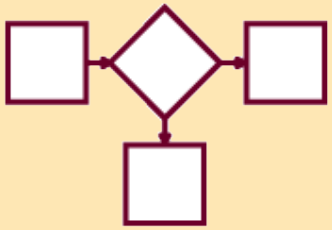
Ask 'Why' 5 times

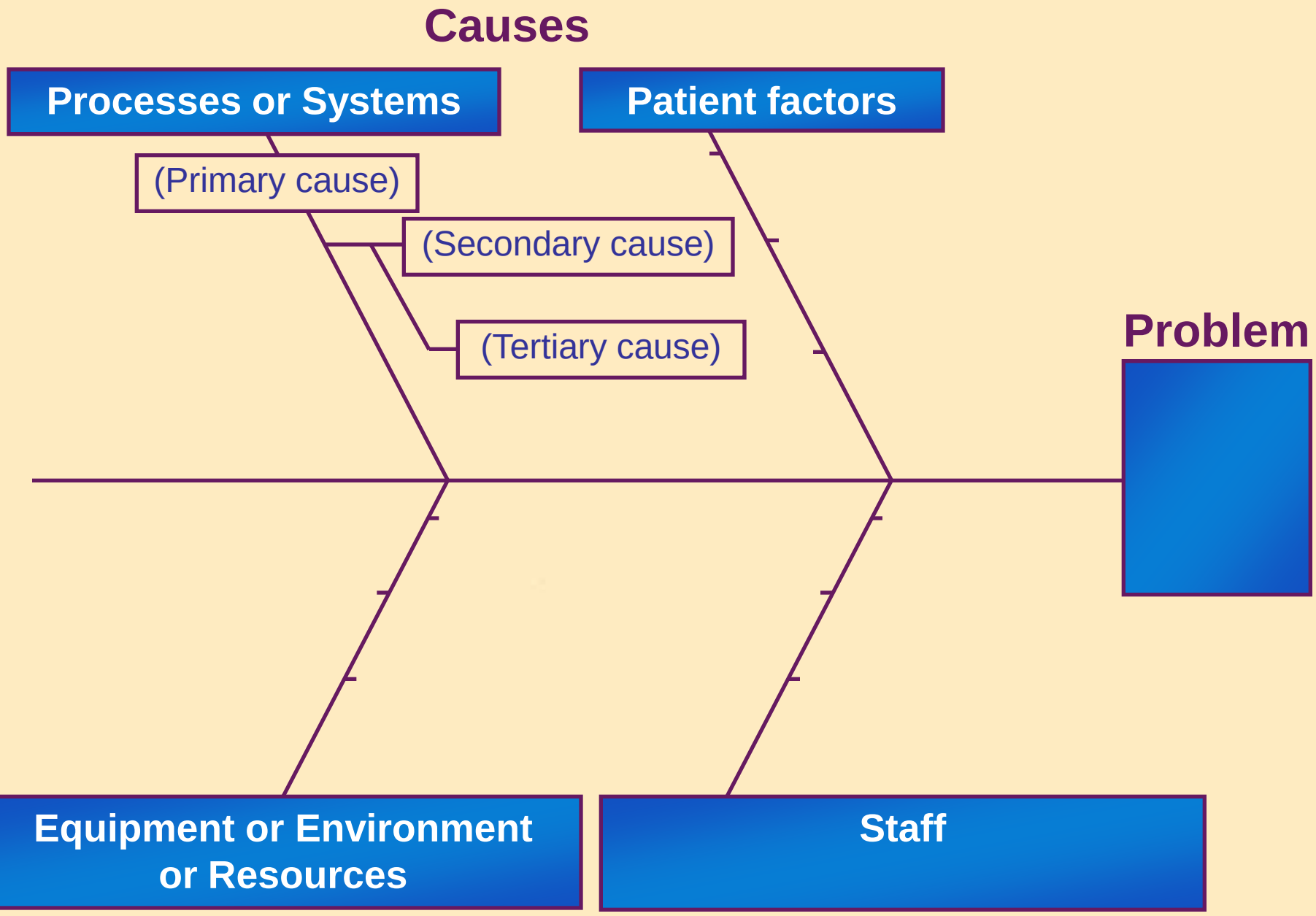


Analyse the process

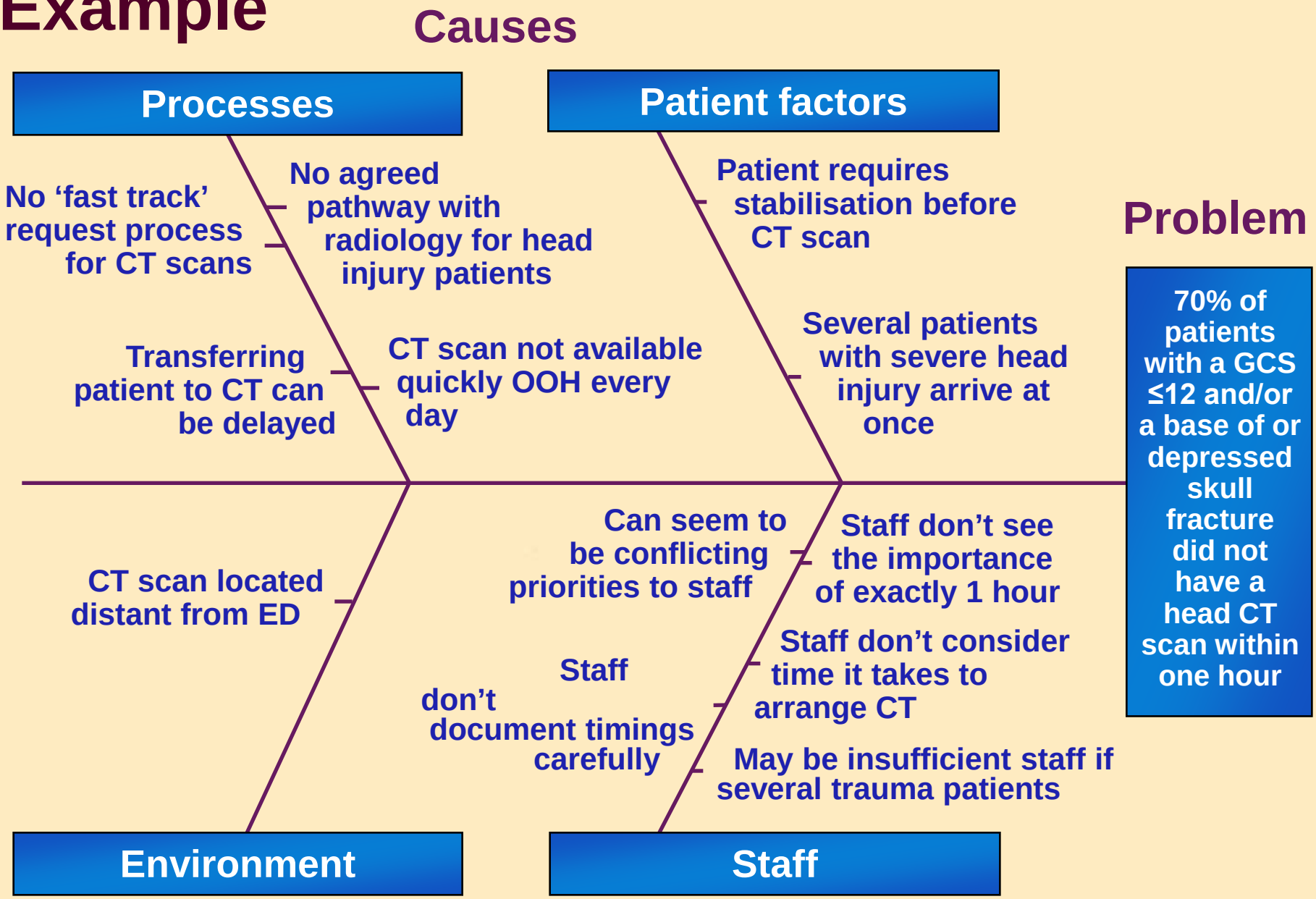
A *fishbone diagram* is a cause-and-effect diagram used to facilitate the identification of factors (causes) that are contributing to an outcome or result (effect)

Fishbone diagram

Purpose	Find possible causes of a problem
Nature	Generating and analysing ideas
Process	Draw a fish skeleton Write the problem in the head of the fish Label the spines Brainstorm possible causes Agree on the next steps


Causes
Processes or Systems
Patient factors
(Primary cause)
(Secondary cause)
(Tertiary cause)
Problem
Equipment or Environment or Resources
Staff

Example


Causes
Processes
Patient factors
No 'fast track' request process for CT scans
No agreed pathway with radiology for head injury patients
Transferring patient to CT can be delayed
CT scan not available quickly OOH every day
Patient requires stabilisation before CT scan
Several patients with severe head injury arrive at once
Problem
70% of patients with a GCS ≤12 and/or a base of or depressed skull fracture did not have a head CT scan within one hour
CT scan located distant from ED
Can seem to be conflicting priorities to staff
Staff don't see the importance of exactly 1 hour
Staff don't consider time it takes to arrange CT
Staff don't document timings carefully
May be insufficient staff if several trauma patients
Environment
Staff

Asking why five times is a technique for getting past the symptoms of a problem to identify its root cause by systematically analysing a cause-and effect chain backwards from the problem to what led to the problem

Asking why 5 times

Purpose	Find the root cause of a problem
Nature	Analysing links in a chain
Process	Write down the problem Write 'Why' 5 times Answer each 'why' in sequence Keep asking until the team finds the root cause

Problem:

Why?

Why?

Why?

Why?

Why?

Example: Consultant seeing major trauma patients

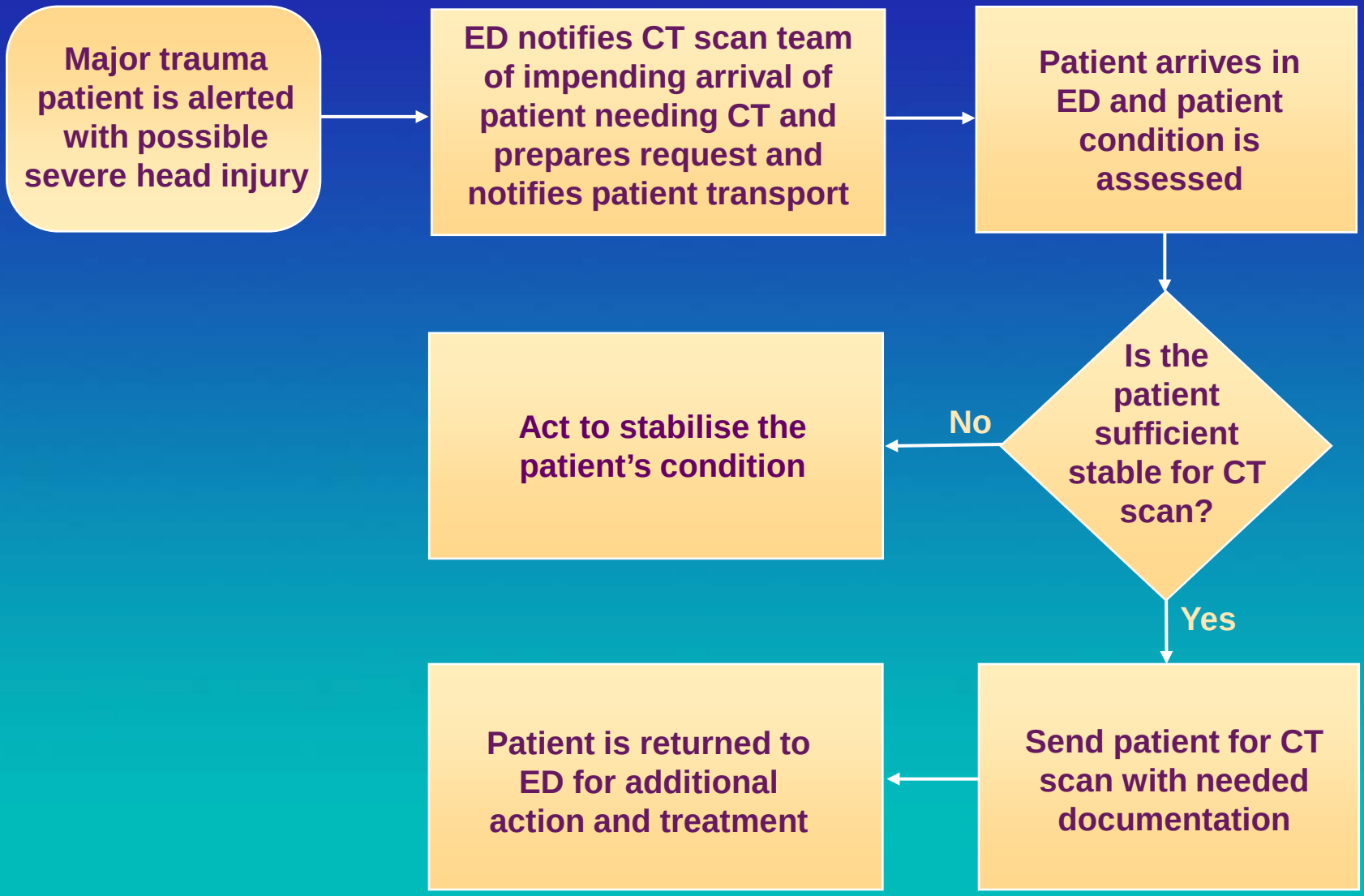
Problem:	80% of major trauma patients aren't seen by a consultant in one hour
Why?	Consultants don't see the importance of a consultant documenting seeing a major trauma patient in one hour
Why?	Consultants believe that Registrars are delivering the right care to major trauma patients and Registrars will be creating appropriate documentation of care
Why?	Consultants observe Registrars' care of major trauma patients and offer advice or direction, but don't think to document the time when they have seen the patient or their observations or directions
Why?	Consultants may be diverted to patients who can be dealt with quickly or to avoid breaches of target times
Why?	Consultants try to balance all the priorities facing the ED and don't give priority to documentation of their actions for major trauma patients

A *process map* is a picture of a process that shows in sequence every major step or activity in the process and the relationships among the steps or activities

Process map

Purpose	Help a team understand how things work now
Nature	Drawing a picture of the way work is done
Process	Agree on what work to analyse — and where it starts and stops Describe the steps and decisions in the work

Example: Detailed process map



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The jobs to translate clinical audit data to local improvements

1. Review the data and the cases
2. Find the shortcomings or problems in the delivery of patient care
3. Risk assess the shortcomings and decide which to work on
4. Find the root causes of shortcomings
5. Act to address the root causes

What's wrong with relying on the data provided by the audit

There could be …

- Errors in data collection
- Clinically acceptable exceptions to the quality indicator
  - Forgotten
  - Complex
  - Rare

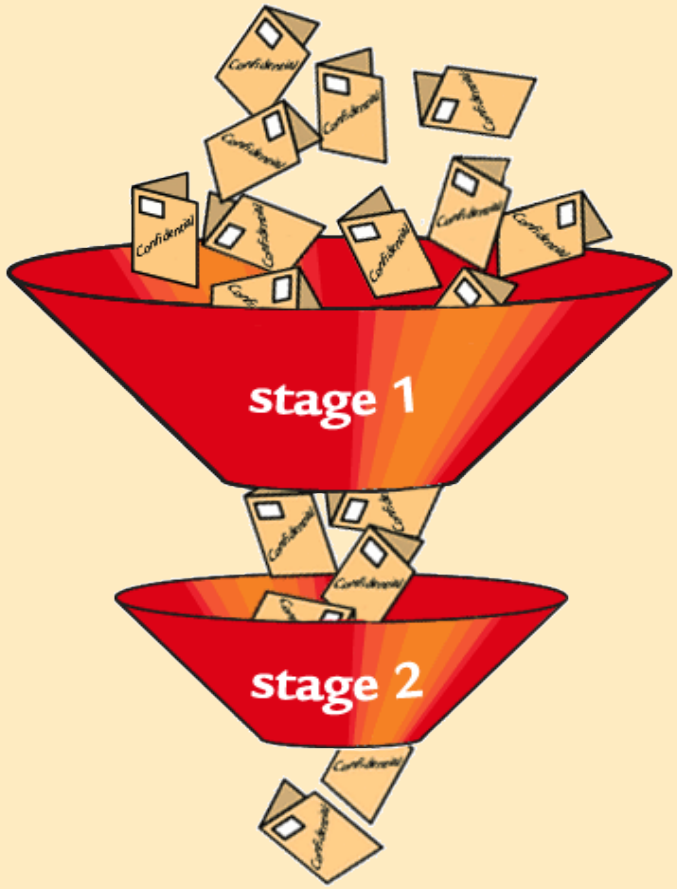
Is there ANY clinical justification for any case that does not meet a quality indicator?

Two-stage approach to clinical audit

Use explicit measures to screen all cases

Use structured implicit review of flagged cases

Analyse problems to find causes



Without the two stages, there is a threat to the validity of clinical audit data

Through PEER REVIEW, confirm the findings

Quality indicator	Preliminary N	%	N clinically justified	Final N	%
1. The patient was pre-alerted	82	84.5	*4*	86	88.7
2. The patient was triaged to resuscitation	71	73.2	*10*	81	83.5
3. The patient was seen by an ED consultant in one hour	58	59.8	*16*	74	76.3
All quality indicators	45	46.4	*12*	57	58.8

What's wrong with 'action plan'

- **Too general — sometimes simply a restatement of standards to be met**
- **'Easiest' actions to take, *not* necessarily what will *work***
- ***Not involve all* the groups of *staff or services* involved in delivering the care involved**
- ***Not address* the *systems* that have to be changed**
- ***Vague* on *accountability* for achieving improvement**

Not based on a thorough analysis of the shortcomings in care and their root causes

Practical suggestion

Some Emergency Department Registrars anticipating completion of the requirements for Fellow may carry out a Quality Improvement Project instead of a Clinical Topic Review

see http://www.rcem.ac.uk/Training-Exams/Exams/FRCEM

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HEALTHCARE
QUALITY QUEST

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