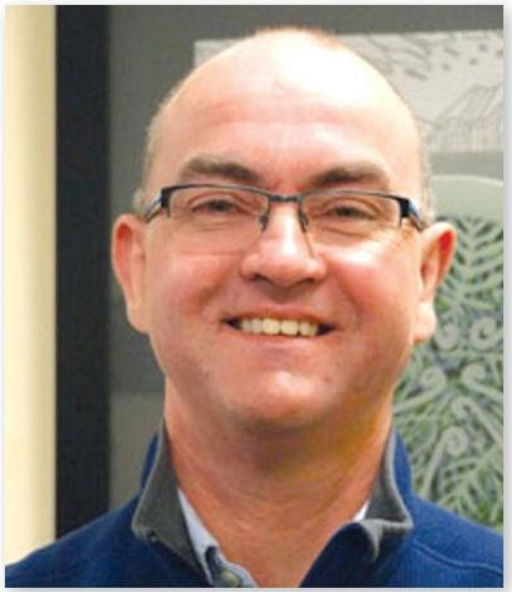


Prof Tim Stokes

General Practitioner

University of Otago, Dunedin

Saturday, August 13, 2016

(Room 8)

11:00 - 11:55 WS #84: Everything You wanted to Know About Clinical Audit but Were Afraid to Ask

12:05 - 13:00 WS #95: Everything You wanted to Know About Clinical Audit but Were Afraid to Ask (Repeated)

Everything You wanted to Know About Clinical Audit but Were Afraid to ask ….

Tim Stokes

GP, Mornington Health Centre

Dunedin

Department of General Practice and Rural Health

Dunedin School of Medicine

Overview

- The Quality Improvement cycle
- Evidence-based audit/review criteria
- Key Steps
- Audit Example

Quality Improvement

Why do quality improvement [audit]?

- The purpose of [medical audit] is to make certain that the full benefits of medical knowledge are being applied effectively to the needs of patients
  - (Paul Lembcke, 1956)
- = quality improvement

Why do quality improvement [audit]?

- A requirement
  - RNZCGP GPEP and MOPS

Levels of implementation

Ferlie EB, Shortell SM. Improving the quality of health care in the United Kingdom and the United States: a framework for change. Milbank Q. 2001;79(2):281-315

Individual health professional – changing behaviour

Before health care consultation

- Educational meetings
  - online
- Educational outreach

During health care consultation

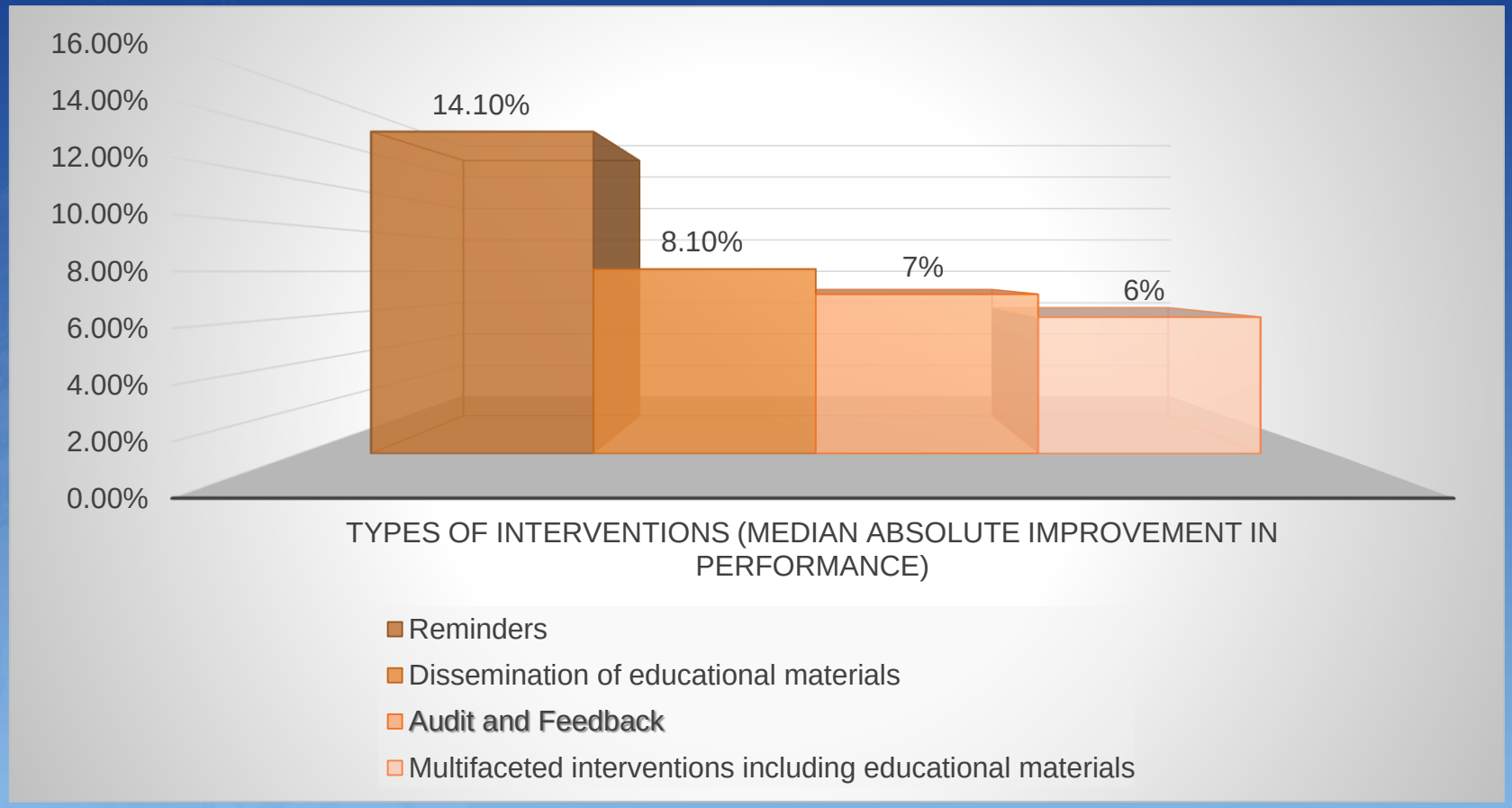
- Reminders
- Computerised decision support
- Patient mediated information

After health care consultation

- Audit and feedback

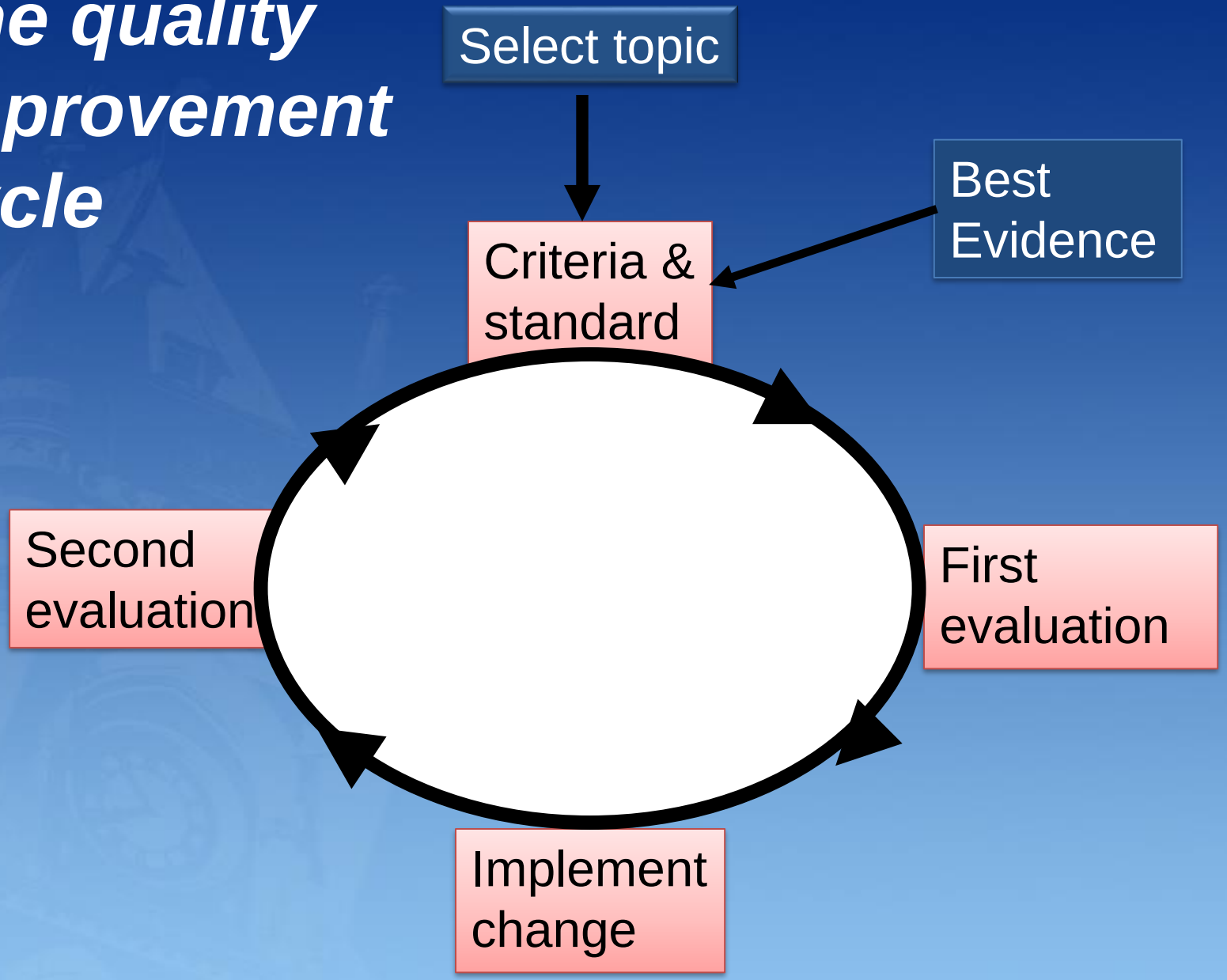
Effectiveness of guideline dissemination and implementation strategies

Grimshaw et al 2006

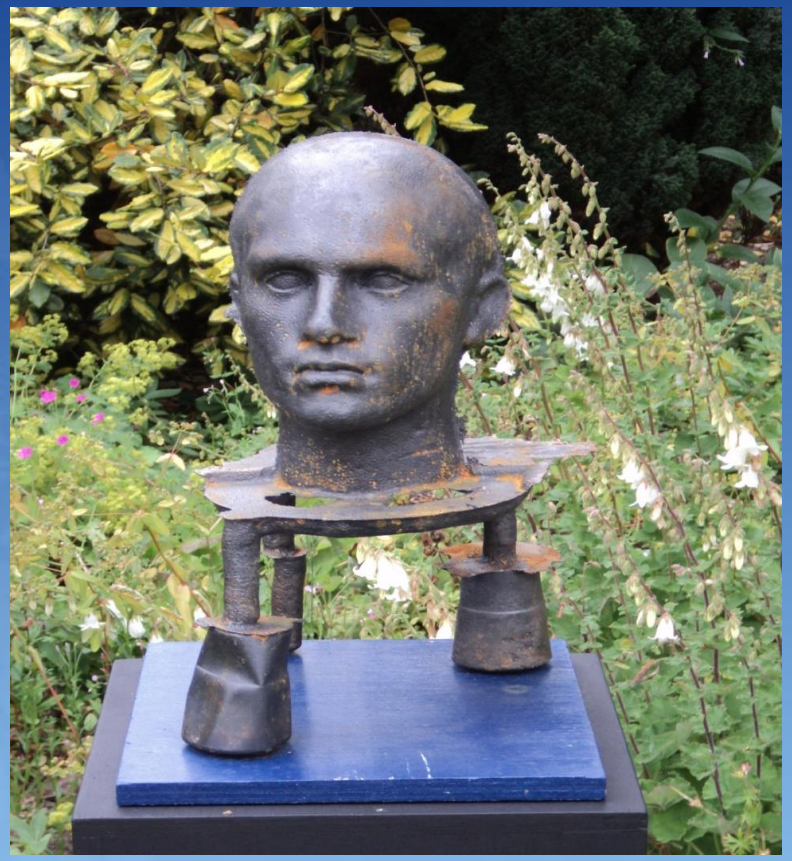


Grimshaw, J., Eccles, M., Thomas, R., MacLennan, G., Ramsay, C., Fraser, C. and Vale, L. (2006), Toward Evidence-Based Quality Improvement. Journal of General Internal Medicine, 21: S14–S20

The quality improvement cycle



Developing evidence based audit criteria



Best Evidence

- Evidence Summaries
  - Patient.info
  - BPAC resources
  - Dynamed
  - Systematic Reviews
- Clinical Guidelines
  - NZGG / MoH Primary Care guidance
  - BPAC NICE NZ contextuslised guidance
  - National Guidelines Clearing House (US)
    - Quality Indicators

Clinical Guideline

- Systematically developed statements to assist practitioner and patient decisions prospectively for specific clinical circumstances
  - Evidence-based (clinical and cost effectiveness)
  - What practitioners “ought” to do
  - Not necessarily easily measurable

Review / Audit criterion

- *Systematically developed* statement that:
  - relates to a single act of medical care that is so clearly defined it is possible to say whether the element of care occurred or not r*etrospectively*
  - in order to assess the appropriateness of specific healthcare decisions, services, and outcomes.

Review / Audit standard

- The level of compliance with a criterion or indicator:
  - A *target standard* is set prospectively and stipulates a level of care that providers must strive to meet
    - Minimum
    - Ideal
    - Optimal (between the two … be realistic)
  - An *achieved standard* is measured retrospectively and details whether a care provider met a predetermined standard

Hypertension

Hypertension – worked example (1)

- Guideline recommendation
- If a blood pressure reading is raised on one occasion, the patient should be followed up on two further occasions within x time.

Hypertension – worked example (2)

- Indicator
  - Patients with a blood pressure of more than 160/90 mm Hg should have their blood pressure re-measured within 3 months.

Hypertension – worked example(2)

- Indicator
  - Patients with a blood pressure of more than 160/90 mm Hg should have their blood pressure re-measured within 3 months.
  - Indicator numerator: Patients with a blood pressure of more than 160/90 mm Hg having had their blood pressure re-measured within 3 months.
  - Indicator denominator: Patients with a blood pressure of more than 160/90 mm Hg.

Hypertension – worked example (3)

- Review criterion
  - If an individual patient's blood pressure was >160/90, was it re-measured within 3 months?
- Standard (Level of Performance)
  - Target standard: 90% of the patients in a practice with a blood pressure of more than 160/90 mm Hg should have their blood pressure re-measured within 3 months.
  - Achieved standard: 80% of the patients in a practice with a blood pressure of more than 160/90 mm Hg had their blood pressure re-measured within 3 months.

Developing audit criteria from evidence

- **directly from the literature X**
  - time
  - resources
  - Expertise

Developing audit criteria from evidence

- **from summaries of evidence** √
  - good quality evidence summaries
  - guidelines
  - good quality systematic reviews

What should audit criteria measure?

Structure

- How care should be structured
  - facilities
  - staff

Process

- What is done for and to a patient and how well it is done
- Diagnosis, treatment …

Outcome

- what actually happens to the health of the patient - the outcome - as a result of the treatment and care they receive

Donabedian, A *Evaluating the Quality of Medical Care,* Milbank Memorial Fund Quarterly: Health and Society 44 (3; pt. 2):166–203; 1966

Example of S-P-O: hypertension UK QOF indicators

STRUCTURE

BP1

The practice can produce a register of patients with established hypertension

PROCESS

BP 4

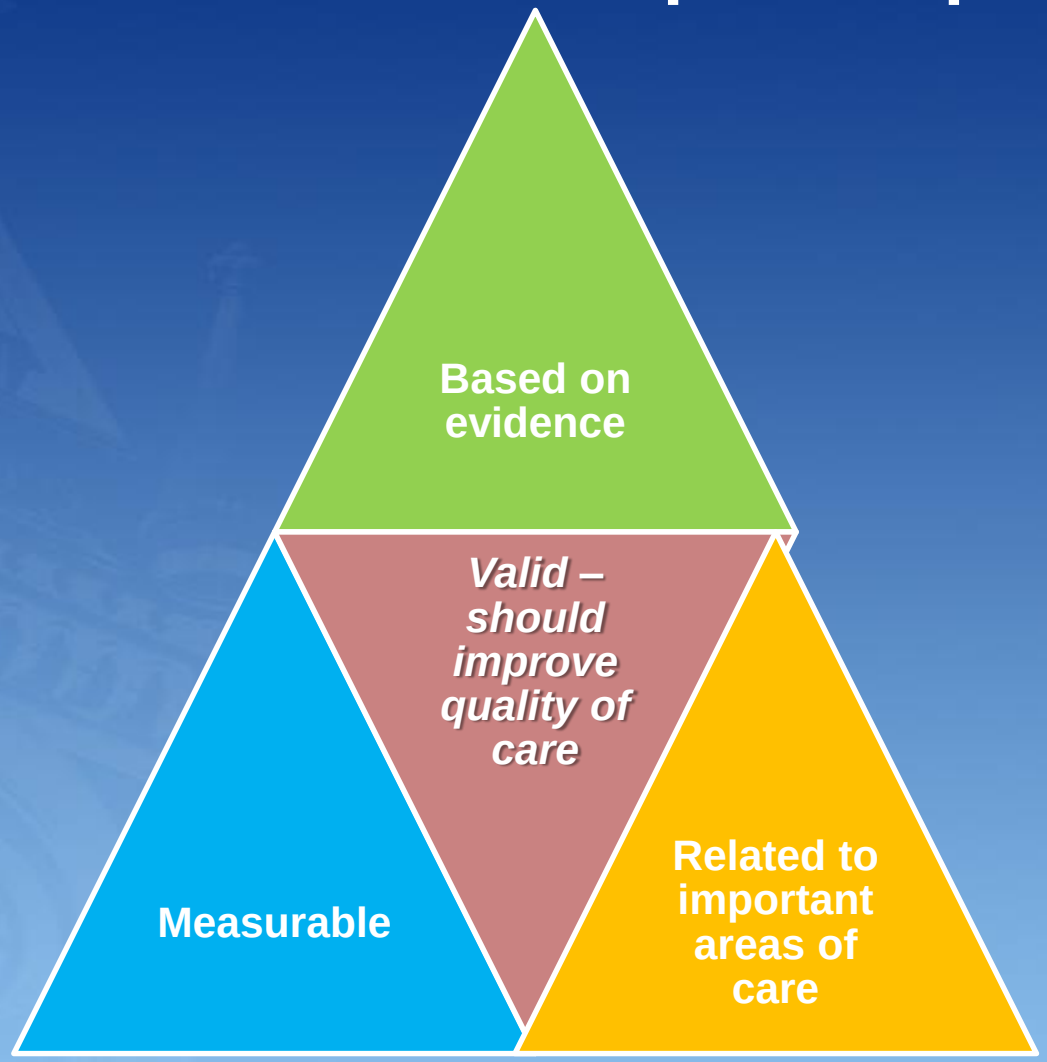
The percentage of patients with hypertension in whom there is a record of the blood pressure in the previous 9 months

OUTCOME

BP5

The percentage of patients with hypertension in whom the last blood pressure (measured in previous 9 months) is 150/90 or less

Audit Criteria - principles



What are good audit criteria?

Top ten desirable characteristics of audit criteria	
1. Described in unambiguous terms	6. Can differentiate between appropriate and inappropriate care
2. Based on a systematic review of the research evidence	7. Are linked to improving health outcomes for the care being reviewed
3. The validity of identified research is rigorously applied	8. Explicitly state the clinical settings to which they apply
4. Include clear definitions of the variables to be measured	9. Collection of information minimises demands on the staff
5. Explicitly state the populations to which they apply	10. Method of selecting criteria is described in enough detail to be repeated

Hearnshaw HM, Harker RM, Cheater FM, Baker RH, Grimshaw GM. Expert consensus on the desirable characteristics of review criteria for improvement of health care quality *Qual Health Care* 2001;10:173-178 doi:10.1136/qhc.0100173

Doing audit – Key Steps

Select topic	• What is relevant, important and practical to you / your team • Preparing for the audit
Develop audit criteria	• Guideline recommendation derived audit criteria • Prioritisation of recommendations
First data collection	• Types of data • How to use and present • Getting to grips with MedTech … query builder • http://www.medtechglobal.com/nz/support-nz/archived-webinars-nz/
Presenting audit and effecting change	
Re-audit Second data collection	

Fragility Fracture Audit (1)

Audit Criteria	Setting: One Leicester (UK) General Practice
Criterion 1	**For all adults aged over 65 with a suspected fragility fracture in the last 12 months the records show that:** - **1a They have documented evidence of a fragility (low impact) fracture** - **1b have a diagnosis of osteoporosis**
Exceptions	None
Standard	100%
Criterion 2	**For all adults aged between 65 and 74 with a documented fragility fracture in the last 12 months the records show that:** - **They have had a DEXA scan to confirm the diagnosis of osteoporosis**
Exceptions	None
Standard	100%

Fragility Fracture (2)

Criterion 3	**For all adults aged over 65 with a fragility fracture the records show that:** - **They are receiving a bone sparing agent**
Exceptions	Patients for whom the notes state that a bone sparing agent is contra-indicated or not tolerated
Standard	100%
Criterion 4	**For all adults aged over 65 with a fragility fracture the records show that:** - **They are receiving calcium and vitamin D supplementation**
Standard	100%
Criterion 3	**For all adults aged over 65 with a fragility fracture the records show that:** - **They are receiving a bone sparing agent**

Fragility Fracture (3)

Criterion 3	For all adults aged over 65 with a fragility fracture the records show that: - They are receiving a bone sparing agent
Relevant NICE proposed QOF indicator	The percentage of patients aged between 50 and 74 years, with a fragility fracture, in whom osteoporosis is confirmed on DXA scan, who are currently treated with an appropriate bone-sparing agent The percentage of patients aged 75 years and over with a fragility fracture, who are currently treated with an appropriate bone-sparing agent
2008 DES Audit criterion	C2. The proportion of women aged between 65 and 74 with a positive diagnosis of osteoporosis confirmed by a DEXA scan (i.e. criterion 1) who are receiving treatment with a bone-sparing agent C3. The proportion of women aged 75 and over with a history of fragility fracture in the previous 12 months who are receiving treatment with a bone-sparing agent
NICE Technology Appraisal recommendation	Alendronate is recommended as a treatment option for the secondary prevention of osteoporotic fragility fractures in postmenopausal women who are confirmed to have osteoporosis
SIGN clinical guideline	Postmenopausal women who have suffered at least one vertebral fracture and who have had osteoporosis confirmed by DXA scanning should be considered for one of the following options: To reduce fracture risk at all sites: treatment with oral alendronate (10 mg daily or 70 mg once weekly + calcium ± vitamin D).

Fragility Fracture (4)

Criterion 3	**For all adults aged over 65 with a fragility fracture the records show that:** - **They are receiving a bone sparing agent**
Exceptions	Patients for whom the notes state that a BSA is contra-indicated or not tolerated
Standard	100%
Result	***37% (7/19)***
Other observations	*3 of the 7 treated cases had a diagnosis of osteoporosis as a coded problem* *In 4 cases therapy started in hospital prior to discharge (2 hip, 1 wrist, 1 vertebral fracture)*

Useful references

- RNZCGP
  - https://www.rnzcgp.org.nz/college-resources-3
- BPAC
  - http://www.bpac.org.nz/Audits/Audits.aspx
- NICE
  - Principles for best practice in clinical audit (2002)
  - http://www.uhbristol.nhs.uk/files/nhs-ubht/best_practice_clinical_audit.pdf

Any questions?

tim.stokes@otago.ac.nz