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AUDIT AND FEEDBACK NATIONAL MEETING

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COCHRANE REVIEW

- Cochrane 2012 review – 140 trials of audit and feedback, median absolute improvement +4%, interquartile range +1% to +16%

Ivers (2012) *Cochrane Library*

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COMPLEXITY OF FEEDBACK – A TALE OF TWO TRIALS

NEXUS

ARTICLES

Effect of audit and feedback, and reminder messages on primary-care radiology referrals: a randomised trial

Martin Eccles, Nick Steen, Jeremy Grimsdale, Lois Thomas, Paul McNamee, Jennifer Soutter, John Willison, Lloyd Matlow, Gillian Needham, Fiona Gilbert, Sangeeta Bond

Summary

Background Radiological tests are often used by general practitioners (GPs). These tests can be overused and contribute time to clinical management. We aimed to assess two methods of reducing GP requests for radiological tests in accordance with the UK Royal College of Radiologists' guidelines on lumbar spine and knee radiographs.

Methods We assessed audit and feedback, and educational reminder messages in six radiology departments and 244 general practices that they served. The study was a before-and-after, pragmatic, cluster randomised controlled trial with a 2×2 factorial design. A random subset of GP patients' records were examined for concordance with the guidelines. The main outcome measure was number of radiograph requests per 1000 patients per year. Analysis was by intention to treat.

Findings The effect of educational reminder messages on the change in request rate after intervention) was an absolute change of -1.53 (95% CI: -2.5 to -0.57) for lumbar spine and of -1.61 (-2.6 to -0.62) for knee radiographs, both relative reductions of about 20%. The effect of audit and feedback was an absolute change of -0.02 (-1.3 to 0.9) for lumbar spine and 0.04 (-0.95 to 1.03) for knee radiograph requests, both relative reductions of about 1%. Concordance between groups did not differ significantly.

Interpretation 6-monthly feedback of audit data is ineffective but the routine attachment of educational reminder messages to radiographs is effective and does not affect quality of referrals. Any department of radiology that handles referrals from primary care could deliver this intervention to good effect.

Introduction

General practitioners (GPs) can overuse radiological tests, particularly lumbar spine and knee radiographs. Such tests are frequently of little clinical use. Guidelines for use of these investigations are in the UK Royal College of Radiologists' publication *Making the best use of a radiology department*. However, few studies have been done of interventions designed to change GP behaviour. Although these studies showed that GPs altered their use of radiological tests, they were badly designed,^{1,2} used inappropriate analysis, had short duration of follow-up,³ or omitted cost considerations.⁴ Goss⁵ and Lomas⁶ have summarised the theory of how to change doctors' behaviour, and Oxtman and colleagues⁷ have reviewed the effectiveness of interventions. Specific prompts at the time of consultation are a powerful strategy⁸ and have been shown to alter GP behaviour—eg, when referring patients for audiology investigations⁹—but the effect of the widely-used strategy of audit and feedback is not so certain.¹⁰

We assessed two methods (audit and feedback, and educational messages) of reducing GP requests for radiological tests in accordance with the UK Royal College of Radiologists' guidelines. Our hypothesis was that either intervention alone would be more effective than a control and that both interventions together would be more effective than either alone.

Methods

Study design

The study was based in six radiology departments in the north-east of England and Scotland and in GP surgeries (practices) that referred patients exclusively to them. The study was a before-and-after, pragmatic, cluster randomised controlled trial, with a 2×2 factorial design: practices were the units of randomisation and analysis.¹¹ Randomisation, stratified by radiology department and practice size, was done by the study

- ▶ RCT of audit and feedback to 240 general practices in the North East of England and Scotland to reduce unnecessary lumbar spine and knee x-rays.



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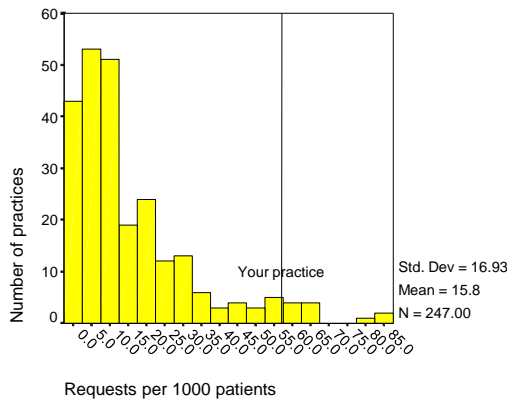
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COMPLEXITY OF FEEDBACK – A TALE OF TWO TRIALS

NEXUS feedback



Requests for knee x-rays



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COMPLEXITY OF FEEDBACK – A TALE OF TWO TRIALS

- ▶ Which (if any) feedback intervention was effective?
 - NEXUS
 - DRAM
 - Both
 - Neither

COMPLEXITY OF FEEDBACK – A TALE OF TWO TRIALS

- ▶ NEXUS
 - No effect
- ▶ DRAM
 - 16% relative reduction
 - Reductions seen in 8/9 tests (3/9 statistically significant)

COMPLEXITY OF FEEDBACK – A TALE OF TWO TRIALS

Question

- ▶ Why are the results of the two trials different?
 - Differences in tracer conditions
 - Differences in number of tracer conditions
 - Differences in adopters
 - Differences in interventions
 - ?others

CURRENT UNCERTAINTIES

- ▶ When is audit and feedback likely to lead to practice change?
- ▶ How can we optimise audit and feedback to maximise practice change?
- ▶ Internationally, lots of research ongoing (with clear early recommendations). The Audit and Feedback meta-lab is an international collaboration of A&F researchers trying to maximise learnings
- ▶ Aim of today is to provide update of current best practices and recent research.

THANK YOU
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