

Executive summary

Routine referral for radiography of patients presenting with low back pain: is patients' outcome influenced by GPs' referral for plain radiography?

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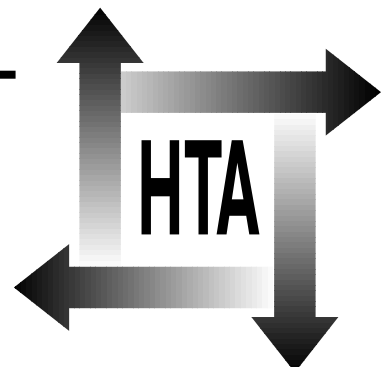
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**Health Technology Assessment
NHS R&D HTA Programme**





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Aim

A study in general practice to compare short- and long-term outcomes for patients with low back pain who are referred or not referred for lumbar spine X-ray after first presentation.

Design

Randomised controlled trial (RCT) in UK general practices, with an observational arm to enable comparisons to be made with patients not recruited to the trial.

Setting

A total of 94 practices in four health authorities in the South Thames Region, recruiting patients over 26 months.

Subjects

Patients who consulted their general practitioner (GP) with low back pain and who had not consulted in the previous 4 weeks.

Intervention

Random allocation to immediate referral for X-ray or not.

Main outcome measures

Roland and Morris disability, Hospital Anxiety and Depression, EuroQol, Short Form with 36 items (SF-36), consultations and referrals at 6 weeks and 1 year.

Results

A total of 153 patients were recruited to the RCT, and 506 patients were recruited to the observational study.

In the RCT, referral for X-ray led to a small improvement in patient psychological well-being over the next 12 months, but there were no differences in physical outcomes, further consultations or referrals to other health professionals. Patients referred for X-ray have higher costs in the short term than patients who are not, a difference that is almost entirely due to the cost of the X-ray itself. There were no significant differences in costs over a 1-year period.

In the observational arm, referral for X-ray was associated with length of episode at presentation, which is an indicator of poor prognosis. Patients referred for X-ray had poorer physical outcomes at 6 weeks and 1 year; however, after adjustments were made for length of episode at presentation, effect sizes were similar to those in the RCT. In the observational arm, patients referred for X-ray had higher costs, both in the short term and in the long term. The poorer prognosis of patients referred for X-ray probably explains these differences.

While the study may have less internal validity than a fully randomised study of the same size, the consistency of the findings from the RCT and the observational arm support the generalisability of the results to a wider population.

Conclusions

There are few significant differences at 6 weeks or 1 year between patients who are referred for lumbar spine X-ray and those who are not. Patients who are referred appear to be in better mental health as measured within the SF-36 quality of life measure.

Implications for healthcare

- Existing guidelines are sound. Early X-ray is not indicated, although it might still be considered when patient anxiety is a major feature.
- This reinforces the message that the benefit from early X-ray is negligible and that the X-ray dose is high.
- NHS costs at 6 weeks are higher among those referred for X-ray.

- This study suggests that there is little evidence that early X-ray referral leads to less morbidity reflected in time off work.

Research questions

- Should there be a more active approach by GPs to encourage patients to reconsult if symptoms do not improve within 6–8 weeks?
- Are there other investigations for back pain of duration greater than 8 weeks that are cost-effective?

- We also suggest a qualitative investigation into X-ray referral decisions.

Publication

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The Standing Group on Health Technology advises on national priorities for health technology assessment. Six advisory panels assist the Standing Group in identifying and prioritising projects. These priorities are then considered by the HTA Commissioning Board supported by the National Coordinating Centre for HTA (NCCHTA).

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The views expressed in this publication are those of the authors and not necessarily those of the Standing Group, the Commissioning Board, the Panel members or the Department of Health. The editors wish to emphasise that funding and publication of this research by the NHS should not be taken as implicit support for the recommendations for policy contained herein. In particular, policy options in the area of screening will be considered by the National Screening Committee. This Committee, chaired by the Chief Medical Officer, will take into account the views expressed here, further available evidence and other relevant considerations.

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The editors have tried to ensure the accuracy of this report but cannot accept responsibility for any errors or omissions. They would like to thank the referees for their constructive comments on the draft document.

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