



Title	X-rays of the Lower Back in the 20 to 49 Patient Groups Referred From Primary Section
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Aim

To identify indications for referral to lumbar spine radiography in patients aged 20 to 49 years; to assess small area variation in utilization of the technology; and to determine the impact of altered utilization on patients and the economy.

Conclusions and results

For patients in the 20 to 49 age group, x-rays of the lower back should be used primarily for “red flag” situations (indicate, eg, fracture, infection, arthritis, tumor).

There is no support for automatically referring a patient with unspecified lower back pain for x-ray after a certain period. A new British clinical randomized study shows that such an approach has no effect. However, 12 of 13 earlier and new guidelines recommend that the patient be referred after a certain period. Similar to the latest guidelines from DSAM (Danish College of General Practitioners), it is recommended that clinicians may refer the patient for x-ray after 6 weeks with unspecified lower back pain.

There is no support for the assumption that the patient's condition (eg, emotional wellbeing) should prevent a change in utilization. From 1998 to 2004, utilization at chiropractors has decreased by 32%, while utilization with referral from GPs has decreased by 12% (reports from 6 counties). From 2003 to 2004 minor increases in utilization were registered, ie, 5% and 3% for chiropractors and GPs respectively. The discrepancy between data extracts from local hospital units (by county) and the Danish National Patient Registry on x-ray of the lower back averages 6%, and for some counties up to 14%.

Some counties probably have unexplained overutilization of x-ray examinations in diagnosing lower back pain. Theoretically, and according to the economic model, this may be interpreted as practice variation. The literature suggests it represents overutilization rather than underutilization.

Subject to the assumptions included in the model, the economic analysis estimated a potential savings of around 1.6 million Danish kroner (DKK) annually. The total cost for x-ray examination of the lower back in patients aged 20 to 49 years referred from the primary sector is around DKK 27 million per year.

Based on foreign cost-effectiveness analyses, the economic cost of patients with lower back pain is generally lower in patient courses without the use of x-ray than in courses including x-ray.

Recommendations

Clinical studies documenting the genuine clinical effect of x-raying patients with lower back pain are needed. The effect of x-raying after 6 weeks of unspecified pain should be further documented. Studies are needed that document patient-related consequences based on primary endpoints. It should also be documented whether information can serve as an equal alternative to x-ray exams. A more uniform and consistent registration practice is required, especially in registering “form of referral”, ie, who referred the patient. The increased utilization from 2003 to 2004 shows that a focus on lowering/maintaining utilization is still needed.

Methods

The report uses an evidence-based approach related to national/international HTAs and clinical guidelines, review articles, and recent primary studies not assessed in connection with a systematic followup. Literature was searched and assessed based on an established protocol. Specific search strategies were prepared and are maintained as documentation. The analysis of the organizational and economic perspective is based mainly on data and registry extracts.