

It can be a great advantage for nursing home patients to have the X-ray service come to them rather than the reverse.

Useful to have X-ray service at nursing homes

«Why is this elderly patient being sent for X-rays? There is no question of an operation!» It can be depressing for a nursing home doctor to be met with a lack of understanding from a duty hospital doctor (1). How much should we push for chest X-rays of elderly residents at nursing homes when pneumonia is suspected? The crucial point is of course whether it will have consequences for their treatment. In this edition of the Journal of the Norwegian Medical Association, Einar Vigeland et al. show that more than 80 % of mobile X-ray examinations actually did have implications for patients' subsequent treatment (2).

According to the authors, mobile X-ray services at nursing homes have implications for both diagnosis and treatment. At the same time, they can save society money. In nine out of ten cases, the mobile X-rays provided important information for patients and their families. But is this information really necessary, when the outcome of the examination is that the hospital doctor recommends conservative treatment, for example of an undisplaced fracture? Yes, because this information can reduce diagnostic doubt and assist in the planning of further treatment, even if this «only» means painkillers and physiotherapy.

Physical activity is good medicine for elderly people – but a doctor or physiotherapist must ensure that conditions such as rib fractures, impacted hip fractures and vertebral injuries do not remain undetected (3). Over 200 elderly patients in nursing homes in Vestfold County would not have been X-rayed if they had had to be sent to hospital (2). This shows that more mobile X-ray services should be established in Norway, especially when there is a long transport distance from nursing home to hospital. On the other hand, it cannot be concluded from the study in question that the use of mobile X-ray services reduces the number of *unnecessary* hospitalisations. A cost-benefit analysis of this kind could reveal which parts of Norway should receive priority. There are currently mobile health services in Oslo and parts of Akershus County, in Buskerud, Østfold and Vestfold counties and in Bergen.

Only a third of the patients examined were regarded as being mentally sound. In other words, most of them suffered from dementia, cognitive impairment or a severe psychiatric disorder. This is consistent with other reports from Norwegian nursing homes, where up to 80 % of the residents are found to have a dementia diagnosis (4). These patients are often not capable of explaining what led to their being found lying on the floor of their room, for example, which often happens in nursing homes (5). The absence of good communication with the patient makes it difficult to know how acute and severe an incident is. This is probably the patient group that would benefit most from mobile X-ray services.

Many people with dementia do not understand the purpose of having X-rays taken. A worst-case outcome is that they may be sent to hospital under protest by the nursing home doctor for what appears to be a necessary X-ray examination. Lacking insight into their disease, they may object to this, and the examination and transport may

be experienced as an assault. Dementia patients are also more susceptible to delirium if they are sent to hospital by ambulance (6). Possible fractures can be ruled out if a radiographer travels to the nursing home, takes X-rays there and shortly afterwards gets them interpreted by a radiologist at the hospital. This benefits both nursing home and hospital. Thus the benefits of using mobile X-ray services for nursing home patients with dementia and cognitive impairment could have been advocated even more strongly in Vigeland et al.'s article.

When mobile X-ray services are used, it is important for the nursing home doctor to know the patient's habitual state, so as not to overlook *de novo* serious conditions requiring hospitalisation and CT, MRI or ultrasound scans (7). The benefit to A&E and locum doctors will therefore be limited.

The health authorities must consider the need for mobile X-ray services at nursing homes at national level. In this matter – as with all else in the field of care for the elderly – it is the economics that determine whether the service should be made countrywide. And should it be the responsibility of the first or the second line service to develop the service? Nursing home doctors will benefit from the diagnostic aid provided by X-rays, and it is self-evident that society as a whole will benefit through patients not being sent unnecessarily to hospital. Swedish colleagues have also shown recently that it can result in less anxiety for patients (8). The question is thus not whether a mobile X-ray service is a useful option for nursing home patients; the question is who is to pick up the tab – the municipality or the specialist health service?

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