Managing osteoporosis in a rural community

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› Why improving bone health is necessary
› How to adopt some of these ideas
› Benefits of using this approach

Keywords: Osteoporosis/Bone health/Long-term conditions

This article has been double-blind peer reviewed

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Managing long-term conditions, such as osteoporosis in a rural community, presents particular challenges. This article describes how a specialist service identified patients at high risk of fragility fracture and raised awareness of bone health.

Osteoporosis is a chronic condition causing the deterioration of bone tissue, which increases the risk of fragility fracture (Elliott, 2011). The risk is greater as people age. Hip fracture in the older population, as a consequence of osteoporosis, is a major public health problem.

If we do not improve bone health, patients will continue to have fractures that could have been avoided. While fractures are expensive to manage, perhaps the highest price is the considerable personal cost to patients and families because of the loss of independence. Drever (2009) recognised the increasing evidence showing that assessing patients with a fracture (having resulted from a simple knock or fall) improves the diagnosis and treatment of osteoporosis. This led to the development of fracture liaison services in the UK to undertake the assessments.

While establishing a fracture liaison service has been an integral part of my role, my aim as a specialist osteoporosis nurse is to maintain bone health and prevent fractures by changing practice with the use of research. To make system-wide changes to improve care it has been useful to view osteoporosis as a long-term condition with fractures occurring as an acute problem.

Specialist nurses are in a unique position to organise services and teach patients and families about self-management of bone health, and to educate both health and social care staff. Osteoporosis is treatable and the risk of fracture can be reduced through lifestyle changes (such as stopping smoking) and medication. However, long-term conditions require clear plans for long-term management.

A fractured approach to bone health

The Ceredigion Integrated Osteoporosis Service was set up in 2002. The core of the team comprises a consultant physician and a specialist osteoporosis nurse. There are wide variations in services across the UK (Tanna, 2009). The immediate problem in our locality in 2002 was the lack of an organised or long-term approach to improving bone health and reducing fracture risk for those most in need.

Dual-energy X-ray absorptiometry (also known as DEXA) scans measure bone mineral density and have a role to play in diagnosing osteoporosis in some patients. Certain key risk factors identify those people who are at particularly high risk of a first or second fracture and who are, therefore, a priority for assessment (Elliott, 2011). These groups include:

» Patients on oral steroids;
» Frail, older people (such as care home residents);
» Those who have already had a low-impact fragility fracture;

Lifestyle changes can help to prevent osteoporosis. Nurses are in an ideal position to raise awareness of issues such as bone health and fracture risk.

5 key points

1 Fracture risk can be reduced with lifestyle changes (and medication where appropriate)
2 Improving bone health is a long-term commitment
3 Nurses can manage long-term conditions in rural communities in a variety of settings
4 Working with diverse groups provides opportunities for raising awareness of bone health
5 A knowledgeable health “champion” is essential to underpin services in the long-term
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» Those patients with secondary causes (some medication, for example aromatase inhibitors used in breast cancer, can also increase the risk of fractures).

Recruiting and retaining medical staff in rural communities can be difficult, so our service uses the specialist osteoporosis nurse (with additional training) to run nurse-led clinics with clinical support from the consultant. The nurse carries out thorough patient assessments and the service is audited as part of patient safety. The challenge was to set up robust systems to identify high-risk patients and ensure they are audited as part of patient safety. The challenge was to set up robust systems to identify high-risk patients and ensure they are audited as part of patient safety.

When setting up the service, key issues the specialist nurse had to take into account included the need to:

» Develop a needs-based service across a rural community (with poor communication links) using limited resources;

» Communicate the key aims and objectives to health professionals, social services staff and the public;

» Be able to cope with the workload, while combining technical skills with compassionate care.

A needs-based bone-health service

Over a third of the population of Wales lives in a rural community. The Welsh Assembly Government (2009) recognised that the ageing population is increasing faster in rural than in urban communities. This has a significant impact on local needs and the availability of services to provide high-quality, evidence-based healthcare to all patients regardless of their place of residence.

Our aim has been to see patients in a structured way, in the most appropriate setting, and to gain the support of primary, acute and social care and the voluntary sector for this unified approach. We have done this by building on the perseverance of the consultant physician as a local champion for bone health, and raising awareness of the risk of fracture at all places where healthcare for the high-risk groups is provided.

There is clear, evidence-based guidance to help management decisions for these high-risk groups (Clinie and Stephenson, 2008), and the specialist nurse has seen them in the following settings:

» GP surgeries (targeting those on oral steroids);

» Care homes (there is evidence that calcium and vitamin D supplementation significantly decreases the incidence and risk of fracture and falls in care home residents);

» Acute care wards and a fracture liaison clinic (we assess all adults who have sustained a low-impact fracture as part of our fracture liaison service);

» Osteoporosis clinic (patients who have been referred by their GP with more complex needs and may require second-line drugs that are prescribed in acute care).

Spreading the word on bone health

The Welsh Assembly Government’s (2007) chronic conditions management programme aimed to improve the prevention, detection and management of long-term conditions through self-management and community support.

Locally we have promoted patient choice and involvement in service development by establishing a local National Osteoporosis Society support group and encouraging patients to influence service development. Although disseminating health information across a rural locality is challenging, we have found “champions” in our community to help with raising public awareness of osteoporosis and changing attitudes about managing fracture risk.

We asked patients who they spent time discussing their general health issues with and they often answered “hairdressers”. Reasons given included the fact that they are accessible (some have mobile services) and have time for a chat. Subsequently we ran a campaign in collaboration with the local National Osteoporosis Society support group that included encouraging hairdressers (among others) to reinforce messages on bone health (through word of mouth and bilingual information packs).

Age Concern (now Age UK) has helped us circulate information to remote villages through its luncheon clubs. There are also organisations that the public has not traditionally considered to have a role in health (such as the Forestry Commission and Countryside Council for Wales) that have participated in our bone-health roadshows.

Men over 50 years of age have a higher risk of osteoporotic fracture than of prostate cancer (Voda, 2009). An ongoing challenge is spreading the word among men about their risk of osteoporosis.

Liaising with staff

Engaging with other professionals in a variety of settings has been vital. We needed to change attitudes towards managing osteoporosis and fragility fracture risk across the breadth of a rural community. At the inception of our service it was clear that the patients who had previously been assessed for osteoporosis were those who were knowledgeable (and may themselves have requested an assessment) but were not necessarily at the greatest risk of fracture.

We supported the service’s launch by providing educational sessions to discuss the rationale behind the new approach – that is, the aim was to reduce the risk of fragility fractures and not just treat osteoporosis.

We debated this approach with those who had the power to influence changes in practice, such as the acute health trust and local health board management teams, and also included those who could drive the changes forward, such as nurses (in primary, acute care and care homes), pharmacists, radiology staff, biochemists and social services home carers.

The key to successful change was to clearly describe the benefits to both patients (including timely assessments and understandable management plans) and professionals involved. The orthopaedic consultants agreed that, by referring to us those patients who had sustained a fragility fracture, the issue of risk management was addressed; nurses were given the necessary knowledge about osteoporosis to be actively involved in supporting patients, and GPs were reassured that the drug budget was being spent on those most in need.

However, it is not simply the prescribing of drugs that improves bone health or achieves fracture reduction. Our approach to making bone health understandable on an individual level has been to provide education about both appropriate prescribing and lifestyle issues to patients and families, administrative workers in GP practices, and community pharmacy staff (Jones and Stone, 2009).

Nurses’ role in bone health

Improving bone health requires a long-term approach; many services have been developed on the understanding that money would be saved in the long term but now savings need to be made “up front” (Stone, 2009). To drive change from the bottom up, nurses need to be able to provide meaningful measurement of outcomes including audit and benchmarking against best practice.

Locally we have used the Royal College of Physicians’ (2011) National Audit of Falls and

50 years

For men over this age, the risk of osteoporotic fracture is higher than that of prostate cancer

Society support group and encouraging physicians involved. The orthopaedic consultants agreed that, by referring to us those patients who had sustained a fragility fracture, the issue of risk management was addressed; nurses were given the necessary knowledge about osteoporosis to be actively involved in supporting patients, and GPs were reassured that the drug budget was being spent on those most in need.
BOX 1. THE ROLE OF NURSING STAFF IN BONE HEALTH ACROSS THE LIFESPAN

Midwives The Department of Health recommends that pregnant and breastfeeding women and children aged six months to five years take vitamin D supplements.

Health visitors can influence parents to establish patterns of eating with their children that include calcium-rich foods and avoid excessive salt and carbonated drinks.

School nurses can highlight the impact of physical activity on maximising bone strength and the harm that smoking inflicts on bones.

General nurses can be knowledgeable advocates by ensuring that high-risk people are offered drug therapy rather than those at low risk, in whom the disadvantages often outweigh the benefits.

Orthopaedic nurses can encourage patients who are prescribed osteoporosis treatments to be adherent.

District nurses can undertake falls risk assessments as part of older people’s care plans. Older people often do not realise the consequences that a fall and fracture may have on their independence.

Practice nurses can be involved in the Quality and Outcomes Framework, which now includes incentives to manage patients with fragility fracture risk.

Occupational health nurses The increasing age for retirement means there will be many older people in the workplace. The risk of fracture rises with age and occupational health nurses are well placed to encourage regular weight-bearing exercise and the maintenance of muscle strength.

Bone Health in Older People to identify good practice and highlight where we can improve. The audit showed that those patients known to the service are assessed and treated in line with national guidance but our systems of referral needed improving.

The Royal College of Nursing (2012) recognises that nurses have key roles in initiating care to prevent people becoming ill in the first place and in minimising the impact of illness. Nurses are an important influence in public health because they can contribute to the lifespan approach to bone-health protection and improvement. Nurses in a variety of settings have opportunities across the lifespan to promote bone health (Box 1).

Ongoing challenges Combining with the workload, while combining technical skills with compassionate care, remains a challenge. Limited resources mean nurses have to find innovative ways of working: when setting up services they should never underestimate issues such as funded administration support. Nurses can waste many hours of clinical time undertaking administrative work.

Having good administration support also helps with efficient planning of clinics (such as being mindful that older people are not given appointments too early in the day for them to attend) and this is reflected by the low rate of non-attendees in our clinics.

IT solutions – such as electronic databases for patient assessments, which can also generate clinical letters and be used for auditing practice – can free up time. Although robust IT systems can stream- line data collection (investigation results, for example), ultimately results, and their relevance, should be explained in a compassionate way and made understandable to patients. This is necessary to encourage them to feel actively involved in deciding on a long-term plan for their bone health, rather than simply being presented with results that appear to have no link to their future wellbeing.

Accessibility in rural communities to accurate and personalised information on health is not just a problem for patients but also for clinicians who may feel professionally isolated. Clinicians in rural communities routinely use telemedicine to support cancer services and this may also offer a way forward in terms of managing osteoporosis. Telephone support has been shown to be a cost-effective way of promoting health. We offer a telephone helpline that is used not only by patients but also the public, health professionals and social services staff.

Conclusion Nurses are in a powerful position to change attitudes throughout the community on bone health, osteoporosis and fracture risk. By taking a long-term view of bone health from conception to older life and using a public health approach in a variety of settings, it is possible to provide unified care across a community.

References

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