Creating a nurse-led community osteoporosis service

Osteoporosis is a silent condition, in which bone density and quality are reduced. One in two females and one in five males aged >70 years (National Osteoporosis Society, 2015) and it can devastate patients' quality of life (QOL) and health outcomes. One in two females and one in five males aged >50 years will break a bone related to osteoporosis (National Osteoporosis Society, 2015).

People with osteoporosis are largely unaware of their condition until they have an initial fragility fracture. Once diagnosed after a fracture, ongoing care for the condition reverts to their GP. However, gaps in long-term care often occur: for example, patients may remain on bone-health medication far longer than recommended, which increases their risk of atypical fracture, and reassessment is frequently insufficient.

Patients with osteoporosis are often vulnerable and frail. Without consistency in their assessment, management and treatment, they are at risk of regular refractures. In one study, approximately 50% of cases with a hip fracture needed permanent social care placement (Dyer et al, 2016).

Nottinghamshire Fracture Liaison and Osteoporosis Service (NFLOS) has optimised treatment of patients with osteoporosis by providing zoledronic acid as a first-line treatment – this was previously only accessible in secondary care. Our data demonstrates the success of the intervention. A recent audit of 511 patients undergoing a first review by the service found only 4% had sustained refractures; >70% of cases resulted in just 20 refractures.

Service aims
From the service's outset in July 2015, our overarching aim has been to reduce the incidence of fractures. We have focused on significantly improving care, and educating patients about their condition. We also wanted to act as a contactable reference point for allied health professionals.

Key points
- Osteoporosis affects one in two females and one in five males aged >70 years
- Inconsistency of care means patients could be regularly refracturing
- A specialist nurse-led community osteoporosis service in the heart of the community means patients need not travel to secondary care clinics
- Giving zoledronic acid as a first-line treatment helps to reduce the risk of refracture by avoiding the problems often associated with oral bisphosphonates

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Abstract
Osteoporosis is a silent condition that affects one in two females and one in five males aged >70 years. Nottinghamshire Fracture Liaison and Osteoporosis Service wanted to provide a high-quality comprehensive, cost-effective community service, making the most of shared care with local acute trusts. Its vision was for care to be delivered by a specialist team in the heart of the community to avoid the need for patients to travel to secondary care clinics. Challenges included cross-boundary working before the creation of sustainability and transformation partnerships. Since the service was established in 2015, it has delivered 99.5% patient satisfaction and reduced refracture rates to <4% per annum, in contrast with the national 25% average.

Citation
on the identification, assessment and management of those at risk of osteoporosis, and avoid the need for patients to visit the secondary care clinic by operating an innovative virtual clinic.

This facility is a commissioned service and ensures all care decisions are assessed and approved by a bone-health consultant.

To optimise treatment, we chose to provide intravenous zoledronic acid to reduce fracture rates and improve patients’ experience of treatment. Alternative treatments to zoledronic acid (such as oral medications including alendronic acid and raloxifene) are often not tolerated, leading to poor adherence and increasing fracture/refracture rates.

Other aims were to act as a triage point for patients identified by community colleagues as being at risk of osteoporosis, and to provide a systematic follow-up service for all referred patients to ensure they received seamless long-term care. We provide a credible, specialist service and a survey we conducted revealed that GPs are confident of its quality and consistency.

What have we achieved?
To develop the service, and establish its presence in the area, it was important to engage with all key stakeholders to gain their support. The service had to be seen to be effective, not just from the perspective of people with/at risk of the condition and healthcare providers. This model of shared care would work.

Innovating and delivering change was an exciting and integral aspect of our remit; it required us to develop strong interprofessional relationships with the wider MDT. Initially, there was much opposition to the service as primary care clinicians were sceptical about whether this model of shared care would work.

Consistency, professionalism, credibility and functionality were the four important criteria that ensured the service became a trusted adjunct to existing primary care, and community services were happy to refer patients to us. Our 2018 audit showed we undertook 511 infusions of zoledronic acid – 448 in females and 63 in males. No serious noticeable adverse side-effects were reported, including any incidences of osteonecrosis (death of bone tissue due to reduced blood supply) of the jaw or atypical fracture.

We found a 3.9% risk of refracture, compared with the national average of 25% (Royal College of Physicians, 2013) – a significant improvement in patients’ QOL, substantial cost savings to the NHS and a significant reduction in admission rates to secondary care. National comparative data demonstrates that NFLOS produces a consistently stepped reduction in fracture rates, compared with the national rate, which is increasing (RCP, 2013). One clinical commissioning group reported saving £100,000 on avoidable clinic visits as its patients are managed in the community by NFLOS specialist nurses and consultant-led care for patients with complex needs is provided via the virtual clinic.

We also monitored and optimised all treatment that consistently reduce fracture risk and optimised medications with targeted treatments to patient outcomes and QOL, along with a replicable best-practice model that provided achievable, desirable outcomes for patients and care providers. This success was further underpinned by consistently high patient satisfaction rates – our patient-friendly survey returns sit at 70-80% and we have consistently achieved a 95% satisfaction score.

Next steps
This project has attracted much regional and national interest and is considered by key stakeholders, including the Royal Osteoporosis Society, to be an exemplary service model. The former service lead, Donna Rowe, gave presentations at numerous local and national events, and was asked to present to members of the Cabinet Office and the Department of Health and Social Care to demonstrate the quality and effectiveness we have achieved in a short period with minimal financial investment.

Advice for setting up similar projects
- Scope out the impact of osteoporosis in the area
- Liaise with other key stakeholders, particularly commissioners and the Royal Osteoporosis Society (theros.org.uk) to quantify the local burden of osteoporosis, from the perspective of people with/at risk of the condition and healthcare providers. This will help you develop a stronger business case for proposing and implementing a fracture liaison/osteoporosis service
- Include anticipated measurable effect on patients’ quality-of-life indicators, and positive and robust financial implications when developing a business case
- Once investment is approved, develop and maintain relationships with patients/carers, other relevant health professionals and outside agencies
- Identify ‘influencers’ who can help you provide a high-quality, evidence-based service
- Undertake regular audits of the service against key performance indicators determined by commissioner requirements

References

For more on this topic online
- Osteoporosis: risk assessment, management and prevention. bit.ly/NTOsteo