

NICE TA 279 Percutaneous vertebroplasty and percutaneous balloon kypoplasty for treating osteoporotic vertebral compression fractures

<p>1</p>	<p>Summary of NICE TA 279</p> <p>A spinal (vertebral) fracture is a break in a bone in the spine. In a compression fracture of the spine, the broken bone collapses. Osteoporosis is a condition in which certain bones, including those in the spine, become thin and weak, and more likely to break.</p> <p>Percutaneous vertebroplasty, and percutaneous balloon kyphoplasty without stenting, are recommended by NICE as options for treating osteoporotic vertebral compression fractures only in people:</p> <ul style="list-style-type: none"> • who have severe ongoing pain after a recent, unhealed vertebral fracture despite optimal pain management and • in whom the pain has been confirmed to be at the level of the fracture by physical examination and imaging. <p>Vertebroplasty involves injecting bone cement into the broken bone in the spine. The aim is to relieve pain and strengthen the bone to prevent future fractures. Kyphoplasty involves inserting a balloon into the broken bone and slowly inflating it to increase the height of the bone. The balloon is then deflated and the space is filled with bone cement. Sometimes a stent (a strong metal device) is also put in the space, but this guidance did not look at kyphoplasty with stenting.</p> <p>The aim of kyphoplasty is to reduce pain and curvature of the spine. Both procedures are done through the skin (percutaneously) by injection, and using a local anaesthetic and a painkiller.</p>
<p>2</p>	<p>Number of people in Northern Ireland expected to take up service/therapy (new cases per year)</p> <p>NICE estimates the number of inpatient episodes for people with a diagnosis of osteoporotic vertebral compression fractures at 22 per 100,000 population. Around 6% of those diagnosed with osteoporotic vertebral compression fractures will be deemed eligible for either vertebroplasty or kyphoplasty under NICE TA 279.</p> <p>In NI this translates to around 396 patients per year with the diagnosis of whom 24 would be expected to be eligible for treatment under NICE TA 279. This is summarised in Table 1.</p>

Table 1

Description of Diagnosis	Estimate based on NICE and English Population for NI	Number of people per 100,000 meeting criteria for NICE TA 279 in Northern Ireland
Estimated number of people diagnosed with osteoporotic vertebral compression fractures in England (Patients with M80 as a primary or secondary diagnosis)	396	22
Description of Procedure		% of people
Estimated proportion of people treated with percutaneous vertebroplasty (V444 main procedure)	16	4%
Estimated proportion of people treated with percutaneous balloon kyphoplasty (V445 main procedure)	8	2%
Estimate of patients eligible to receive percutaneous vertebroplasty and percutaneous balloon kyphoplasty procedures within the Northern Ireland population	24	

The introduction of TA 279 using the NICE recommendations at this volume has been discussed and agreed with local clinicians.

These procedures will be funded initially on a cost per case basis. This will, over time, confirm the actual annual volume to be set recurrently.

3 **Costs**

NICE Expert Clinical Opinion suggests that activity is not expected to change as a result of implementing this guidance and therefore resource use in the NHS is unlikely to change. The guidance does go on to say, that there may be a reduction in bed days for patients and some freeing of resources associated with this reduction.

This will not be the case in Northern Ireland. Currently no patients with this diagnosis are receiving surgery in the regional spinal surgery service in Belfast Trust.

At present, patients with a primary or secondary diagnosis of osteoporotic vertebral compression fracture are managed in hospitals throughout Northern Ireland. Introduction of the guidance would result in an increase of up to 24 additional spinal procedures and would represent an additional cost to the HSC. Belfast Trust is the only hospital in Northern Ireland able to offer these procedures which would be undertaken in the regional spinal unit. Following application of the guidance, the future model of care, would suggest that around 24 patients per year will need to transfer to the Belfast Trust for surgery and management.

	It is expected that the remaining patients will continue to be treated in local hospitals with only those patients being eligible for this treatment option being sent to Belfast Trust.												
3.1	<p>Cost per patient per annum</p> <p>The NICE costing statement estimates cost per procedure per PbR tariffs below:</p> <table border="1"> <tr> <td>HC05B</td> <td>Extradural Spine Minor 2 with CC</td> <td>£4,805</td> </tr> <tr> <td>HC05C</td> <td>Extradural Spine Minor 2 without CC</td> <td>£2,375</td> </tr> <tr> <td>HC04B</td> <td>Extradural Spine intermediate 1 with CC</td> <td>£5,454</td> </tr> <tr> <td>HCO4C</td> <td>Extradural Spine intermediate 1 without CC</td> <td>£3,326</td> </tr> </table>	HC05B	Extradural Spine Minor 2 with CC	£4,805	HC05C	Extradural Spine Minor 2 without CC	£2,375	HC04B	Extradural Spine intermediate 1 with CC	£5,454	HCO4C	Extradural Spine intermediate 1 without CC	£3,326
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3.2	<p>In year cost per patient per annum (for new and prevalent cases)</p> <p>In year estimated costs per procedure will be as above.</p> <p>Total in year costs will be related to numbers of procedures undertaken.</p>												
3.3	<p>Cost savings and how these will be secured</p> <p>The NICE costing statement for TA 279 provides 3 PbR tariff costs for the pain relief procedures.</p> <table border="1"> <tr> <td>HD39A</td> <td>Pathological Fractures with major CC</td> <td>£4,865</td> </tr> <tr> <td>HD39B</td> <td>Pathological Fractures with CC</td> <td>£3,131</td> </tr> <tr> <td>HD39C</td> <td>Pathological Fractures without CC</td> <td>£2,070</td> </tr> </table> <p>Assuming a reduction of 24 pain procedures, the estimated savings across 5 Trusts will be £91,000. The bed day savings per procedure for optimal pain relief are estimated at 9.5 days or 228 days in total, this will form part of the PBR cost tariff savings noted above.</p> <p>It is unlikely that cost savings could be realised from these Trusts although some additional capacity may well be generated by this reduction in activity.</p>	HD39A	Pathological Fractures with major CC	£4,865	HD39B	Pathological Fractures with CC	£3,131	HD39C	Pathological Fractures without CC	£2,070			
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3.4	<p>Recurrent overall cost</p> <p>The NICE costing statement for TA 279 provides 4 PbR tariff costs for the procedures. Assuming an additional 24 vertebroplasty/kyphoplasty procedures, the estimated full costs will be £95,000.</p> <p>Should the number of procedures exceed 24, estimated costs will be proportionately greater.</p>												

4	<p>Expected implementation period</p> <p>Belfast Trust has advised that they would be unable to begin the implementation of TA 279 until additional capacity has been procured.</p>
5	<p>Commissioning arrangements</p> <p>This regime will be formally commissioned by the HSCB/PHA via the Specialist Services Commissioning Team.</p>
6	<p>Monitoring arrangements</p> <p>Belfast Trust will be expected to manage the patients on a cost per case basis, sending a monthly update to the Board with details of patients admitted, their condition and the procedure carried out.</p> <p>Belfast Trust will also be expected to confirm that each patient complies with the NICE requirements for these procedures.</p>
7	<p>DHSSPS Legislative/Policy Caveats</p> <p>This advice does not override or replace the individual responsibility of health professionals to make appropriate decisions in the circumstances of their individual patients, in consultation with the patient and/or guardian or carer. This would, for example, include situations where individual patients have other conditions or complications that need to be taken into account in determining whether the NICE guidance is fully appropriate in their case.</p>