

1	<p><b>Treatment &amp; Condition</b> <i>(Title)</i></p> <p>Symptomatic bradycardia due to sick sinus syndrome without atrioventricular block</p>
2	<p><b>Associated appraisal body &amp; Summary of ruling</b></p> <p>NICE Technology Appraisal Guidance 324 (November 2014) (part review of TA 88)</p> <p>Dual-chamber pacemakers are recommended as an option for treating symptomatic bradycardia due to sick sinus syndrome without atrioventricular block.</p> <p>Bradycardia is a slow heart rate, defined as a heart rate of less than 60 beats per minute. Bradycardia can be caused by a range of factors, including diseases such as:</p> <ul style="list-style-type: none"> <li>• Sick sinus syndrome – a number of abnormal heart rhythms caused by an irreversible dysfunction of the sinus node (the heart’s natural pacemaker), including: <ul style="list-style-type: none"> <li>➢ sinus arrest or pause, in which the sinus node occasionally does not generate electrical impulses, from a period lasting a couple of seconds to several minutes</li> <li>➢ sinoatrial exit block, in which the sinus node generates electrical impulses normally, but the signal is blocked before it leaves the sinus node</li> <li>➢ alternating bradyarrhythmias and tachyarrhythmias (a fast heart rate), such as bradycardia-tachycardia syndrome</li> </ul> </li> <li>• atrioventricular block (a condition in which electrical impulses from the sinus node are slowed or blocked). Atrioventricular block can occur independently from sick sinus syndrome, and so people with symptomatic bradycardia due to sick sinus syndrome may also have or develop atrioventricular block.</li> </ul>
3	<p><b>Number of people in Northern Ireland expected to take up service/therapy</b> <i>(including new cases per year)</i></p> <p>The prevalence of sick sinus syndrome is thought to be about 0.03% of the whole population, and increases with age. However, both the prevalence of bradyarrhythmias due to sick sinus syndrome needing permanent pacemaker implant, and the prevalence of sick sinus syndrome with atrioventricular block, is unknown.</p> <p>Sick sinus syndrome usually occurs in older adults, but it can affect people of any age, and affects men and women equally. The incidence of atrioventricular conduction abnormalities also increases with increasing age.</p>

	Patients in NI with symptomatic bradycardia are already being provided with pacemaker implants. This TA recommends use of dual chamber rather than single chamber implants for the subset of patients who have sick sinus syndrome without atrioventricular block.
<b>4</b>	<b>Patient Access Scheme availability</b>  Not applicable
<b>5</b>	<b>Costs</b> ( <i>before PAS if applicable</i> )
<b>5.1</b>	<b>Drug cost per patient per annum (for new and prevalent cases)</b>  Not applicable
<b>5.2</b>	<b>Infrastructure costs per patient per annum</b>  Not applicable
<b>5.3</b>	<b>Current in year costs</b>  NICE do not anticipate a significant impact on resources.
<b>5.4</b>	<b>Recurrent overall costs per annum</b> ( <i>including additional costs</i> )  NICE has concluded that in clinical practice, dual chamber rather than single-chamber devices were already being implanted for symptomatic bradycardia due to sick sinus syndrome without atrioventricular block in most of the patients. Therefore, NICE did not anticipate a significant impact on resources.
<b>5.5</b>	<b>Opportunities for cost savings and how these will be secured</b>  Not applicable
<b>6</b>	<b>Expected implementation period</b>  There are no anticipated barriers to implementation.
<b>7</b>	<b>Commissioning arrangements</b>  These devices are commissioned via Specialist Services Commissioning Team on a cost per case basis.
<b>8</b>	<b>Monitoring arrangements</b>  The Trust will generate monthly reports on the cost per case returns which will be reviewed by SSCT.

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**DHSSPS Legislative/Policy Caveats**

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.