

**National Institute for Health and Clinical Excellence**

**802 Deep brain stimulation for refractory chronic pain syndromes (excluding headache)  
Consultation Comments table**

**IPAC date: Thursday 13 January 2010**

<b>Com. no.</b>	<b>Consultee name and organisation</b>	<b>Sec. no.</b>	<b>Comments</b>	<b>Response</b> Please respond to all comments
1	Consultee 1 NHS Professional	<b>1</b>	I agree with these recommendations	Thank you for your comment.
2	Consultee 2 NHS Professional	<b>1.3</b>	1.3 ^ DBS should only be used in patients with refractory chronic pain syndromes which other treatments have failed to control OR ARE UNSUITABLE SUCH AS THE USE OF OTHER NEUROSTIMULATORY PROCEDURES SUCH AS MOTOR, SPINAL AND PERIPHERAL NERVE STIMULATION. Patient selection should be carried out by a multidisciplinary team specialising in pain management. Note: deafferentation pain due to spinal or nerve root injury may respond better to DBS than post-stroke pain. This may be due to the heterogenous nature of post-stroke pain.	Thank you for your comment. The Committee considered this comment and decided not to change the guidance.
3	Consultee 3 Specialist Adviser	<b>1</b>	Agree	Thank you for your comment.
4	Consultee 1 NHS Professional	<b>2.1</b>	The majority of pain syndromes are central post-stroke pain, brachial plexus lesion, phantom limb and atypical facial pains as well as anaesthesia dolorosa	Thank you for your comment.
5	Consultee 3 Specialist Adviser	<b>2.1</b>	It should be stated that the managing doctors have carefully considered all alternative treatments before embarking on DBS. Even in severe deafferentation pain there are non-invasive treatments available, including psychological interventions. While the importance of multidisciplinary assessment is commented on above, I recommend this high degree of selectivity be emphasised	Thank you for your comment. Psychological treatments have been added as an alternative treatment option in Section 2.2.1.

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6	Consultee 2 NHS Professional	<b>2.1.2</b>	Section 2.1.2 Neurostimulatory techniques such as spinal, MOTOR CORTEX and peripheral nerve stimulation have been introduced as treatment options for patients whose condition is unresponsive to other forms of treatment.	Thank you for your comment. Section 2.1.2 of the guidance will be changed.
7	Consultee 1 NHS Professional	<b>2.2</b>	Typical sites are sensory thalamus ad periaqueductal grey, not hypothalamus (this is used for the trigeminal autonomic cephalalgias such as cluster headache). Another less common target is the rostral anterior cingulate cortex (rACC)	Thank you for your comment. Section 2.1.2 of the guidance will be changed.
8	Consultee 2 NHS Professional	<b>2.2.1</b>	Section 2.2.1 Deep brain stimulation involves stereotactic targeting of specific anatomical sites within the brain (such as the sensory thalamus AND PERIAQUEDUCTAL GREY AREA) to modulate the central processing of pain signals. Section 2.2.2 Postoperative CT OR MR SCANS should be used to assess the position of the electrodes and to identify complications such as local haemorrhage	Thank you for your comment. Section 2.1.2 and 2.2.1 of the guidance will be changed.
9	Consultee 3 Specialist Adviser	<b>2.2</b>	Comment on the need for assessing the placebo response? See e.g. Hamani et al (Pain 2006;125:188-196) where there was an "insertional effect" in 43% of patients	Thank you for your comment. This study will be added to table 2 of the overview.
10	Consultee 1 NHS Professional	<b>2.3</b>	This is a fair summary	Thank you for your comment.
11	Consultee 3 Specialist Adviser	<b>2.3</b>	I personally think Hamani et al (2006) paper is worth listing in this section (2.3) as it is a careful description of what happens at different stages of assessment and follow up. The bottom line is that in this advance centre good long term outcome was seen in 5/21 patients with neuropathic pain. Not clear why the very small study of Nandi et al (2002) was included as it was non-randomised	Thank you for your comment. The case series by Hamani et al (2006) will be added to table 2 of the overview. Nandi et al (2002) (like both studies from Katayama et al.) was included in table 2 because it was non-randomised and there were no published randomised controlled trials retrieved from the literature search.
12	Consultee 1 NHS Professional	<b>2.4</b>	Cerebral infarction secondary to haemorrhagic stroke but infarction per se is unlikely	Thank you for your comment. Section 2.4.6 of the guidance is a summary of the opinion of the Specialist Advisers.

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13	Consultee 2 NHS Professional	<b>2.4.1</b>	Section 2.4.1 The risk of intracranial haemorrhage is usually not as high as 4% in most modern case studies. In a series of 522 electrode insertions for DBS, one group only reported 2 haemorrhages (1.4%). (reference: Vergani F et al(2010)World neurosurgery 73(4): 338-344) Older studies (or operations performed in the 1990s) report a higher haemorrhage rate due to the techniques used at that time.	Thank you for your comment. Vergani et al (2010) was a study which performed DBS for Parkinson Disease. The guidance will not be changed.
14	Consultee 3 Specialist Adviser	<b>2.4</b>	Agree	Thank you for your comment.
15	Consultee 1 NHS Professional	<b>2.5</b>	This is accurate	Thank you for your comment.
16	Consultee 2 NHS Professional	<b>2.5</b>	The committee should note that motor cortex stimulation is a useful alternative to DBS for the surgical treatment of central neuropathic pain. The world wide published literature suggests that it is as effective as DBS but without the attendant risks of brain haemorrhage and stroke (the electrode is placed above the dura and outside the brain in motor cortex stimulation unlike DBS). Motor cortex stimulation can also be used when the brain targets for DBS are destroyed. There are fewer studies regarding motor cortex stimulation as it is performed in fewer centres. Personal experience shows that its positive effects last as long as DBS for pain. Reference: Lima, MC et al (2008) Neurology 70(24): 2329-2337 <a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2888303/?toolpubmed">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2888303/?toolpubmed</a>	Thank you for your comment. The IP programme does not compare the efficacy and safety of interventions against comparator interventions. Section 2.1.2 of the guidance will be changed.
17	Consultee 3 Specialist Adviser	<b>2.5</b>	Agree	Thank you for your comment.
18	Consultee 1 NHS Professional	<b>General</b>	I have applied for funding from NIHR for a randomised trial of DBS for pain	Noted, thank you.

*"Comments received in the course of consultations carried out by NICE are published in the interests of openness and transparency, and to promote understanding of how recommendations are developed. The comments are published as a record of the submissions that NICE has received, and are not endorsed by NICE, its officers or advisory committees."*