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**The information in this document is currently in development and has been shared as part of a consultation. If you are seeking guidance or information on this topic, please ensure you refer to final published content which can be found on [rcslt.org](https://rcslt.org).**

We appreciate any comments provided to us during the consultation, all of which will be reviewed by the working group within the context and scope of the project. We ask that, where possible and relevant, you accompany any counter arguments to statements made in the document with supporting evidence e.g. a research reference.

Members of the working group should not be contacted directly, and all feedback should be made through the assigned route e.g. via survey or project manager. Feedback made through unassigned routes or after the closing date will not be accepted or responded to.

Thank you for your support with this project.

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# RCSLT overview of awake craniotomy

## 1. What is awake craniotomy?

In the UK, over 12,000 people are diagnosed with a primary brain tumour each year (The Brain Tumour Charity, 2025).

Awake craniotomy, also known as awake brain surgery, has become the gold standard and common practice for the removal of brain tumours close to, or within, areas of the brain used for language and speaking. The aim of awake craniotomy is to monitor and preserve a patient's speech and language function, while safely removing the tumour.

This is achieved through the patient being awake for all, or part, of the surgery. The patient should not feel pain as the brain does not have pain receptors. An anaesthetist will be present throughout the surgery to ensure the patient is comfortable and pain-free at all times.

### 1.1 Brain mapping

The process of 'brain mapping' involves a neurosurgeon using pain-free, electrical stimulation to different areas of the brain, whilst a speech and language therapist assesses the patient's speech and language function. If the patient's speech and language skills are disrupted during the stimulation, the speech and language therapist will inform the neurosurgeon immediately. This will help the neurosurgeon to locate areas of the brain which are important for speech and language function and should therefore not be disturbed.

Patients should not be alarmed by the temporary disruption to speech and language function, as the stimulation effects wear off within 5 seconds.

## 2. How can speech and language therapy help?

Speech and language therapists (SLTs) are experts in speech, language and communication and have an in-depth knowledge of the language network in the brain. They are part of a specialist multi-disciplinary team, and the speech and language therapist will work collaboratively with neurosurgeons to provide the high-quality care.

SLTs will work closely with patients before, during and after their awake craniotomy.

## 2.1 Pre-operative speech and language therapy

Before the operation, a speech and language therapist (SLT) will complete a comprehensive pre-operative assessment. This will include:

- providing patient and family/friends (if present) education on the process of awake craniotomy, including brain mapping and language testing and the role of SLT after the operation
- completing a comprehensive case history
- practice of the language tasks which will be done during the surgery
- carry out an assessment of the patient's overall speech, language and communication skills
- rapport building and understanding the patient's interests to enable individualised assessment and conversation during the surgery
- answering any questions patients or family/friends may have.

## 2.2 Intra-operative speech and language therapy

During the operation, a SLT will:

- continuously provide the patient with guidance and reassurance
- help determine when patients are ready to start speech and language testing after being awoken
- carry out a range of targeted speech and language assessments during brain mapping and tumour removal (these may include assessments such as naming a picture or repeating words or sentences)
- identify, interpret and communicate any temporary changes to the patient's speech or language skills to the neurosurgeon
- monitor patient speech and language skills through dynamic conversation.

## 2.3 Post-operative speech and language therapy

The same SLT will see patients after their surgery. All patients should receive a comprehensive assessment of their speech, language and communication skills in the day(s) following their operation.

Many patients will not experience changes to their communication. Some may experience temporary difficulties, which should resolve in the days, weeks or months after the operation. For other patients, some difficulties may persist.

For those experiencing changes to their communication, a speech and language therapy can offer:

- education, advice and strategies to patients and friends/family to enhance successful communication and alleviate frustration
- individualised and targeted therapy interventions
- alternative methods of communication – see AAC section for more details
- referral to community based SLT support at home, or inpatient neurological rehabilitation
- signpost to charities and support networks – see resources.

### 3. Multilingual patients

Multi-lingual patients, or those who do not speak English, should be offered language testing before, during and after awake craniotomy in their preferred language(s).

Speech and language therapists will work closely with qualified interpreters to ensure optimal translation of all resources and patient responses.

Speech and language therapists are dedicated to providing patient-centred and bespoke care. As such, they will work closely with the patient, their family/friends and the interpreter to ensure all testing materials used are culturally appropriate and relevant.

For further information, please read RCSLT [bilingualism](#) information.

## 4. Resources

### 4.1 Key charities and organisations

- [The Brain Tumour Charity](#)
- [The Brain Trust](#)
- [Brain Tumour Support](#)
- [Astro Brain Tumour Fund](#)
- [Cancer Research](#)
- [Brainwaves NI](#) - Northern Ireland
- [Brain Tumour Research Campaign](#)
- [Head Smart \(for children and teenagers\)](#)
- [Brain Tumour Research](#)

127 • [Tessa Jowell Foundation](#)

## 128 4.2 RCSLT resources

- 129 • [Bilingualism](#)
- 130 • [Augmentative and alternative communication \(AAC\)](#)
- 131 • [Aphasia](#)
- 132 • [Supported decision-making and mental capacity](#)

## 133 4.3 Other resources

134 \*\*NB awaiting formal permission for video to be included\*\*

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136 A patient information video has been created by the MDT at University Hospitals  
137 Birmingham NHS Trust.

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139 This video is approximately 15 minutes and follows a patient journey through the pre,  
140 intra and post operative phases and demonstrated the key roles of MDT members.

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142 [Awake craniotomy surgery](#)

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