

# Arrival at Hospital and Early Treatment for Moderate to Severe Acquired Brain Injury (ABI)

## *Brain Injury Support* in Northern Ireland

This leaflet is part of the series:  
Brain Injury Support in Northern Ireland

## Hospital Accident and Emergency (A&E) Department

After a suspected head or brain injury, many people will be taken to the nearest hospital mainly via the A&E department. Some may not and will be admitted straight to a ward. An initial assessment will be carried out and the doctor will prioritise the treatment needed.

Medical staff will carry out various tests to check for complications such as blood clots or bleeding in the brain. These tests may include a Computerised Tomography (CT) or Magnetic Resonance Imaging (MRI) scan of the head.

## Transfer to Wards

Following assessment in the A&E department, the doctors will decide on the most appropriate ward for treatment depending on the severity of the brain injury. Your relative may be transferred to the Neurosurgical Unit. However, there may be an initial referral to a different ward, eg Orthopaedic Surgery or General Surgery, should they have other injuries which require urgent attention.

## Neurosurgical Unit

The Neurosurgical Unit is a specialist unit at the Royal Victoria Hospital where doctors can continue monitoring the patient and carry out further tests to obtain a clearer picture of the brain injury, its potential effects and what treatment might be required. The professionals involved may include some of the following:-

Neurosurgeon  
Intensive Care Doctors  
Speech and Language Therapist  
Dietitian  
Social Worker  
Rehabilitation Medicine

Neuropsychologist  
Ward Nurses  
Occupational Therapist  
Specialist Nurses  
Physiotherapist

At this stage, your relative may be in coma, confused, drowsy or in an agitated state and unable to communicate properly. Due to the nature of brain injuries, no two people are affected in the same way. The medical and nursing teams will monitor any changes in behaviour or level of consciousness.

Some changes may suggest signs of recovery, whereas others may indicate that there is a worsening or deterioration in the person's condition.

This could be due to swelling of the brain (**oedema**) or bleeding in the brain (**haematoma**). If these complications occur your relative may require neurosurgery. The staff should keep you updated on any significant developments.

## Neurosurgery

Sometimes it becomes apparent that an operation will be needed. This is often to remove a blood clot, drain bleeding or relieve swelling in the brain which would cause further damage. This procedure is called a **craniotomy** or **craniectomy**.

## Intensive Care Unit (ICU)/High Dependency Unit (HDU)

Your relative may be transferred to the Intensive Care Unit (ICU) or High Dependency Unit (HDU). Due to the number of machines, drips and tubes, this can be quite frightening for relatives.

However, in ICU/HDU your relative will be looked after 24 hours a day by highly trained staff, using specialist equipment to monitor and treat them. Whilst in ICU/HDU, the priority will be to reduce risk of further damage to the brain.

Your relative may be sedated or unconscious and may be attached to various machines to assist with breathing (**ventilator**), monitoring pressure within the skull (**intracranial pressure monitor**), keeping them hydrated and nourished (**intravenous infusion**) and draining away urine by **catheter**.

## Early Stages

### Unconsciousness/coma

Often a person with a brain injury will be unconscious at this stage and they may be referred to as being in coma. Coma may last for any period of time from a few minutes to several weeks and it is not possible to predict how long it may continue.

If your relative is in coma, they may look as though they are asleep. As they recover they may seem very restless and agitated. Different people display different levels of responsiveness while in a coma and doctors may use the **Glasgow Coma Scale (GCS)** to assess the level of response. The GCS assesses the level of consciousness by measuring eye, verbal and motor responses to stimulation.

It can be very distressing to see your relative in a coma and you may feel frustrated and helpless. In time, there may be things you can do to help, but some activities can have an unhelpful effect on recovery. Remember to communicate as much as possible with the staff team and be guided by them.

After a period of unconsciousness, a person may appear confused, agitated, or distressed and not be able to remember day-to-day events properly or recognise family or friends. This is known as **Post-Traumatic Amnesia (PTA)** and can be very distressing for families and carers.

The length of time spent in PTA and the length of the period of unconsciousness are regarded as indicators of the severity of the brain injury. This can give an indication of the level of recovery that can be expected however all brain injuries are different so there are no definitive rules.