

HOLY CROSS HOSPITAL



ANNUAL CLINICAL AND OUTCOMES REPORT IN PATIENT SERVICES 2012

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HOLY CROSS HOSPITAL

ANNUAL CLINICAL REPORT AND OUTCOME MEASUREMENT – IN PATIENT SERVICES 2011

INTRODUCTION

Holy Cross is a specialist hospital offering care for adults with highly complex needs including total dependency and reliance on mechanical ventilation. The hospital provides a relaxed, informal and safe environment and is situated in its own pleasant grounds, set back from the road in a semi-rural location but within one mile of Haslemere town centre.

Accommodation is of a very high standard with 40 single bedrooms with en suite facilities. Communal areas include sitting rooms, quiet areas, therapy gyms, multi-sensory room and the very popular living room where many varied activities take place.

Visitors comment on the warm, welcoming atmosphere, we strive continuously to improve the quality of life for our patients. We consider the provision of support to families and friends to be a high priority and welcome their participation.

SERVICE DESCRIPTION

Following initial assessment a detailed care plan programme is developed and agreed with the patient (if able) and their family. Each plan takes account of each individual patient's needs and interests and is evaluated at least every month or when there is a change in the patients' needs.

Patients are involved as much as they are able. Patient forum meetings are held every month and provide opportunities for seeking patients' views, new ideas and suggestions.

STAFF

The multi-disciplinary team includes Consultant in Rehabilitation Medicine, Hospital Doctors, Consultant Neuropsychologist, Nurses, Physiotherapists, Occupational Therapist, Speech and Language Therapist, Dietician, Activities Organisers, Art Group Leader and Volunteers. Team members have considerable expertise and high levels of skill and knowledge as well as the motivation to work with the patient group.

The contribution of each member of staff is highly valued and there is a commitment to develop their full potential through substantial investment in a comprehensive learning and development strategy. Continuing professional development is carried out systematically; clinical staff are supported in professional portfolio development and maintenance. A comprehensive competency framework and assessment is in place with support to ensure staff are competent in their professional area. The hospital is accredited with the Investors in People award.

PATIENTS

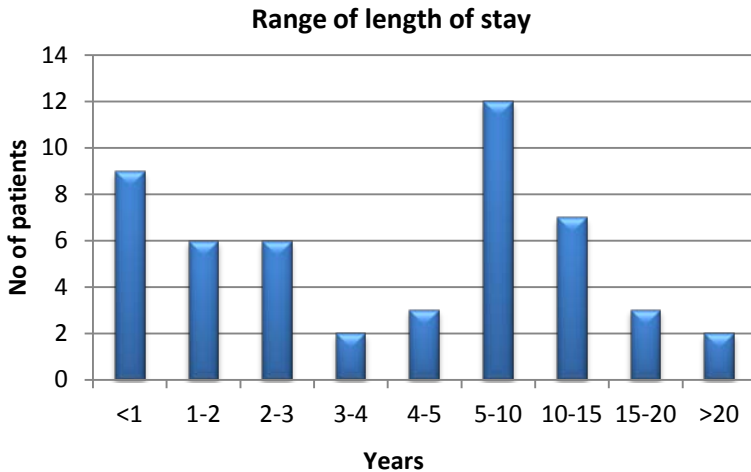
Occupancy

Occupancy rates remained high during 2011. We admitted 7 new patients and there were 6 deaths; one of whom was a very long term patient. One of the newly admitted patients died within the year. In total 46

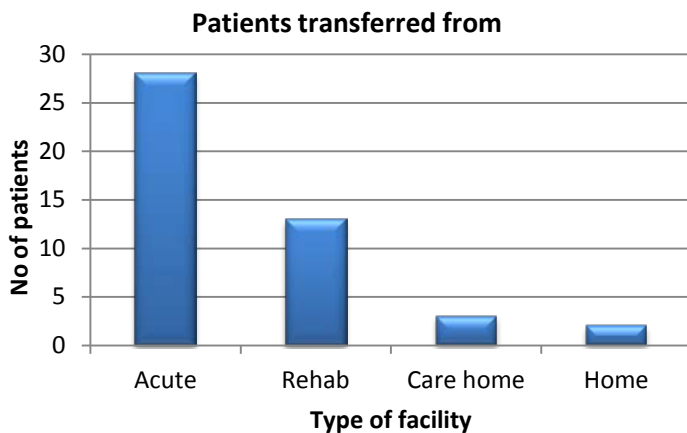
patients were treated during the course of the year excluding the 2 regular respite patients who were admitted for short periods when a bed was available.

Length of stay

The range of length of stay of patients including those deceased is shown below:



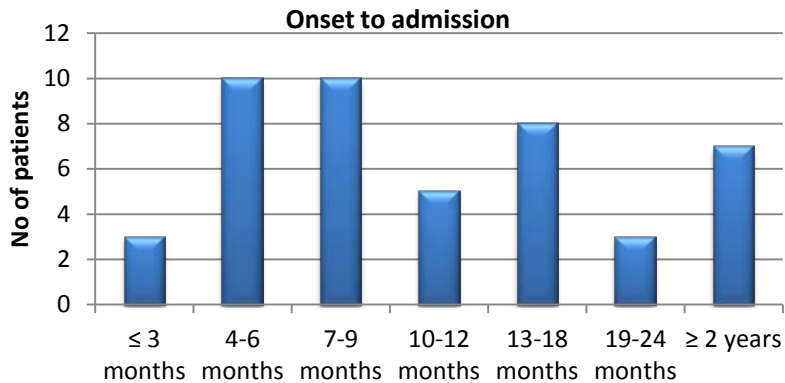
Where do patients come from?



The majority of patients (61%) were transferred directly from an acute hospital; 28% were transferred from rehabilitation units with the remaining 11% from a care home or home after breakdown of a homecare package.

The trend for admission directly from an acute hospital continues with 5 of the patients admitted during 2011 transferring directly from the acute sector and 2 following rehabilitation.

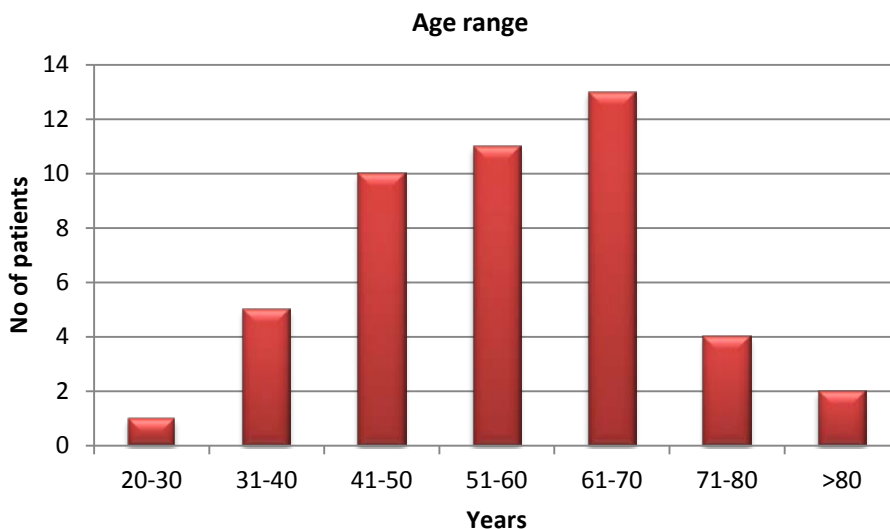
The time between injury or onset of illness and admission to Holy Cross ranged from 1 month to several years with most patients being admitted within 1 year.



DESCRIPTIVE INFORMATION ON PATIENTS

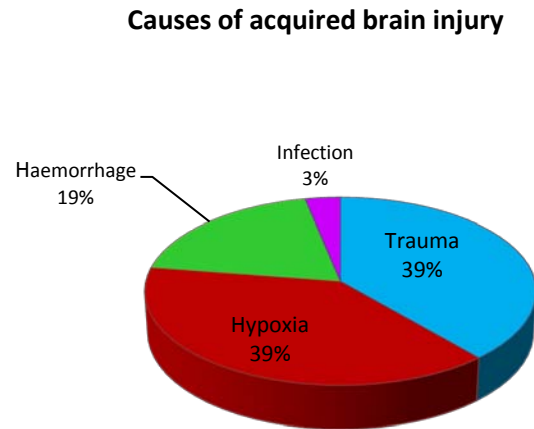
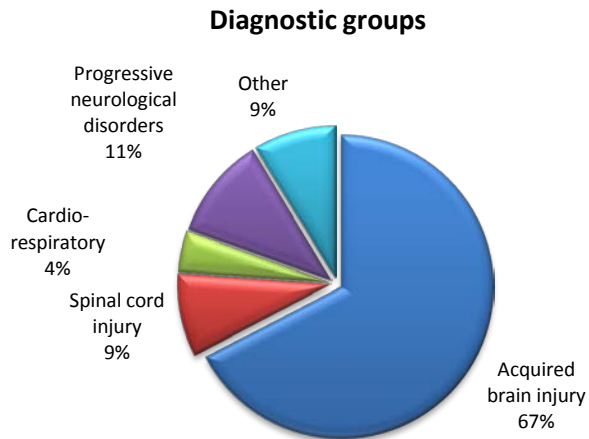
Age and gender

The percentage ratio of males to females in 2011 was 65:35; a slight increase in males compared to 2010 (61:39). The youngest patient was 24 years and the oldest 89 years. More than half of the patients treated during the year were over 50 years as shown in the age range chart below:



Diagnostic groups

In line with previous years the largest diagnostic group is acquired brain injury with hypoxia and trauma the main causes. Progressive neurological disorders included Multiple Sclerosis, Huntingdon's Disease and Spino-cerebellar degeneration. All Spinal Cord injuries were at a high level and the patients required mechanical ventilation. The 'other' category included Cerebral Palsy, Achondroplasia, Temporal Arteritis and Chronic Pain. The following charts show the diagnostic groups and causes of acquired brain injury in patients treated during 2011.



DEPENDENCY LEVELS

Patients remain highly dependent needing detailed care planning, skilled care and treatment to maximise potential for improvement and prevent complications. The complexity of patients referred or admitted is increasing with a high proportion requiring tracheostomy and mechanical ventilation. Dependency levels have been divided into 3 main sections with sub sections.

1. Physical needs:

- ✚ Breathing
- ✚ Nutrition and swallowing
- ✚ Feeding
- ✚ Bowel and bladder management
- ✚ Personal hygiene
- ✚ Dressing
- ✚ Management of additional medical issues

2. Mobility, transfers and posture management

3. Level of awareness, cognition and behaviour

Physical needs

Breathing

The number of patients needing a tracheostomy increased further in 2011 with 5 out of the 7 admissions having tracheostomies. All were managed well with no related complications.

The number of patients requiring mechanical ventilation also increased; 2 of the 7 admissions were ventilated and one existing patient deteriorated and needed mechanical ventilation. We continued to benefit from the link with the Lane Fox Unit, St Thomas' Hospital.

Nutrition

Good nutritional status is vital to prevent complications such as pressure ulcers. The Malnutrition Screening Tool (MUST) is used for all patients and repeated every month and action taken if necessary.

A very high number of patients (35) required enteral feeding; in all but one case this was via a percutaneous gastrostomy tube (PEG).

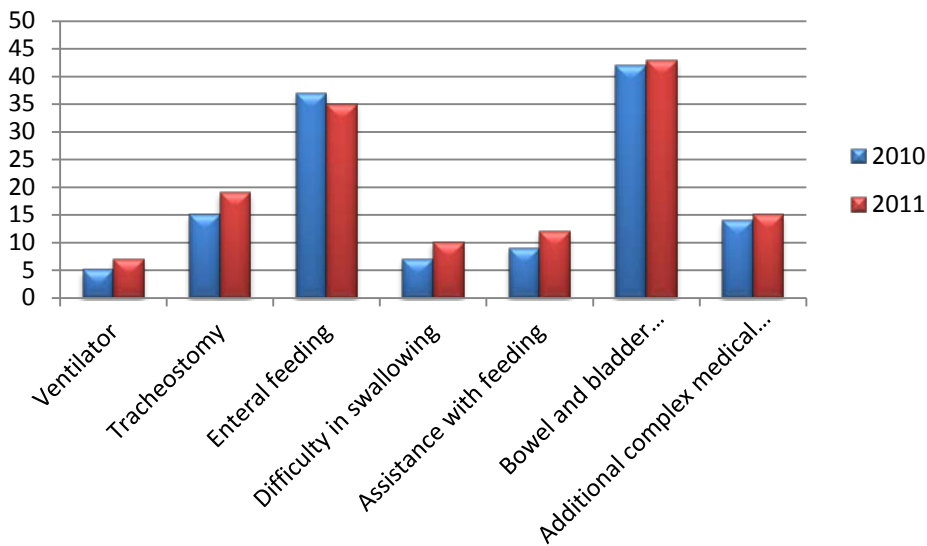
13 patients were able to enjoy an oral diet; 5 required 'top up' with enteral feeding. 10 required a modified texture diet and safe swallow techniques due to swallowing difficulties and 12 required assistance with feeding. The Dietician, Speech and Language Therapist and Nurses and Catering Team work very closely together to implement very detailed plans; great care is needed to ensure patients remain well-nourished especially those having a modified texture diet.

Bowel and Bladder Management

The majority of patients needed assistance in this area. Urinary catheters were kept to a minimum and usage reviewed regularly in line with current guidance.

Additional Medical Issues

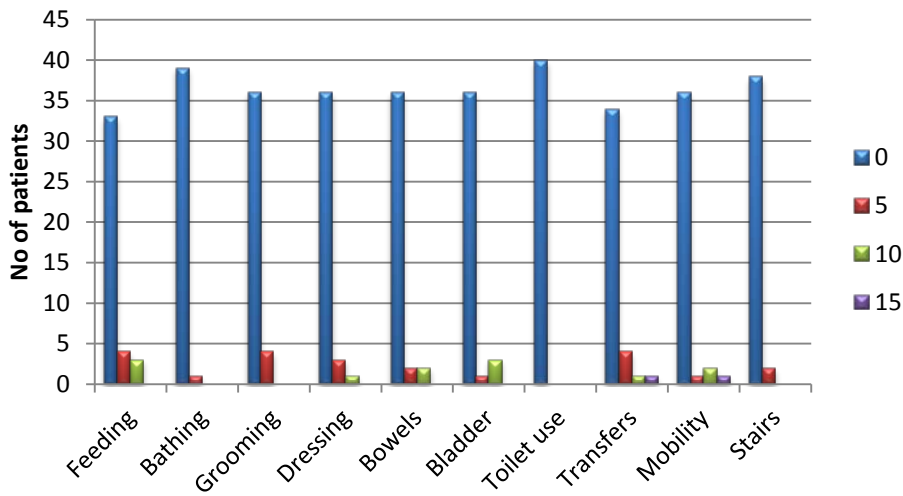
Medical issues needing special treatment included diabetes, epilepsy, electrolyte imbalance, autonomic dysreflexia and post- transplant rejection management.



Barthel index

This is a very simple scoring system of what a patient actually does with regard to activities of daily living. It is widely used in stroke rehabilitation. Scores are added to give a total out of 100 with 100 being total independent.

Barthel Index Scores December 2011



When scores are added to total scores out of 100 the highest score was 95 and the lowest 0. This demonstrates the large number of totally dependent patients; this is shown in the table below:

Total scores	No of patients December 2010 (excludes deceased)	No of patients July 2011 or on admission	No of patients December 2011
0	30	29	31
5	2	4	3
10	2	4	1
20			1
30	1		1
45	1	1	1
70	1	1	1
80		1	
95			1

Most patients remained at the same high level of dependency, 3 patients with progressive disorders became more dependent and 2 improved significantly becoming less dependent.

Mobility, transfers and posture management

Patients admitted to Holy Cross undergo a comprehensive assessment by the Physiotherapists and Occupational Therapist to address issues related to mobility, transfers and posture management. Depending on their condition patients receive regular therapy sessions on dry land and in the hydrotherapy pool.

Spasticity management is one of the main treatment interventions provided to patients admitted to Holy Cross. The in-patient physiotherapy team consisting of 3 registered physiotherapists and 2 full time physiotherapy assistants are equipped with specialist skills related to spasticity management. They keep up-to-date with

developments in this field by attending post graduate modules, specialist courses and other relevant lectures. They are supervised by the Consultant in Rehabilitation Medicine who has a special interest in the management of spasticity in people with neurological conditions. The following information presents the outcomes specific to patients who received focal treatment using Botulinum toxin and Intrathecal treatment using Phenol during 2011.

What is spasticity and why is it a problem?

Spasticity is over activity in the muscles, which follows damage to the brain or spinal cord, e.g. following stroke, trauma or hypoxic insult. It may take the form of sustained high tone, intermittent spasms or a mixture of the two. In simple words it is tightness of the muscles. Uncontrolled spasticity leads to contractures, which are described as permanent shortening in the muscles and soft tissues.

Spasticity matters because it causes pain and deformity which:

- ✚ Increase disability (reduced mobility, self care, ease of hygiene etc)
- ✚ Increase complications, e.g. pressure sores
- ✚ Feed into a vicious cycle of poor posture, which in turn exacerbates the spasticity

Treatment options

A variety of treatment options are available for the management of spasticity including:

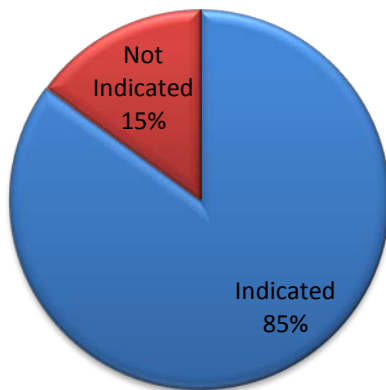
- ✚ Oral anti spasticity medication e.g. Baclofen, Tizanidine, Dantrolene
- ✚ Intrathecal treatment using Phenol or Baclofen
- ✚ Focal treatment using Botulinum Toxin type A (Botox, Dysport etc)
- ✚ Physical treatment e.g. Physiotherapy, splinting, positioning

The mainstay of treatment is physical and involves:

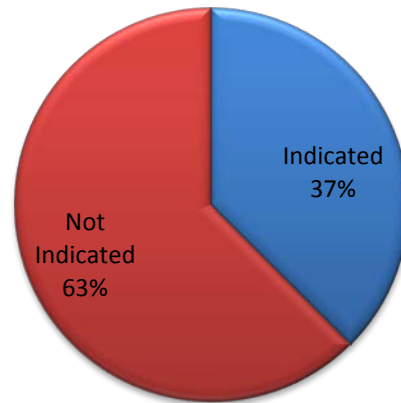
- ✚ Careful positioning throughout 24 hours to maintain muscle length and reduce deformity
- ✚ A regular physiotherapy programme, which may include stretching and splinting
- ✚ Active treatment of exacerbating factors such as infection, pain, constipation and other nociceptive influences

The following charts show the percentages of patients receiving regular physiotherapy treatment:

Physiotherapy Intervention



Hydrotherapy Intervention



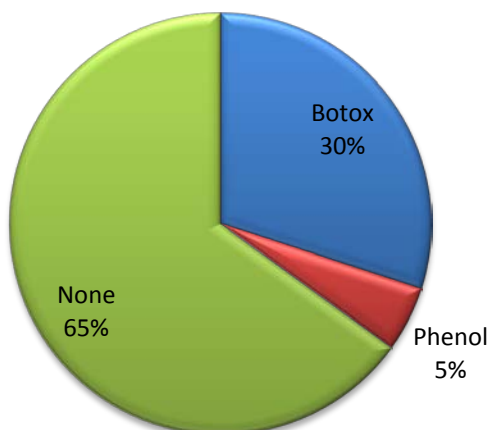
Many patients at Holy Cross present with varying degrees of spasticity which is focal, regional or generalised. Botulinum Toxin (BoTN) is widely used in the management of increased muscle tone and has been shown to be effective in conjunction with other therapies such as splinting and positioning.

A range of outcome measures are used to measure the effect of treatment. They include:

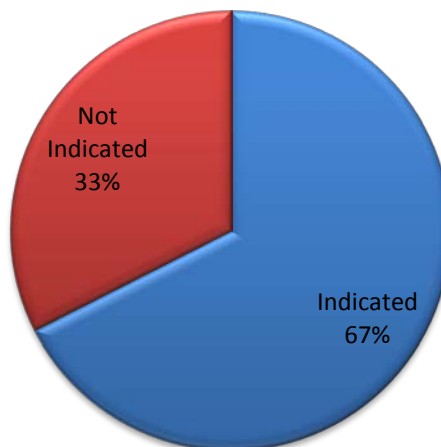
1. Modified Ashworth score (MAS) to measure spasticity
2. Range of movement of joints
3. Distance between limbs/ body parts
4. Goal Attainment scale
5. Spasm frequency score

The common outcome measures used at Holy Cross are range of movement and Modified Ashworth Score (MAS) for grading of spasticity. Patients receive a variety of interventions to manage spasticity. Common interventions include stretching, splinting, oral antispasticity medications or specialist interventions e.g. Botulinum injections or Intrathecal treatments. The next 2 charts provide information on the range of interventions:

Specialist Spasticity Intervention



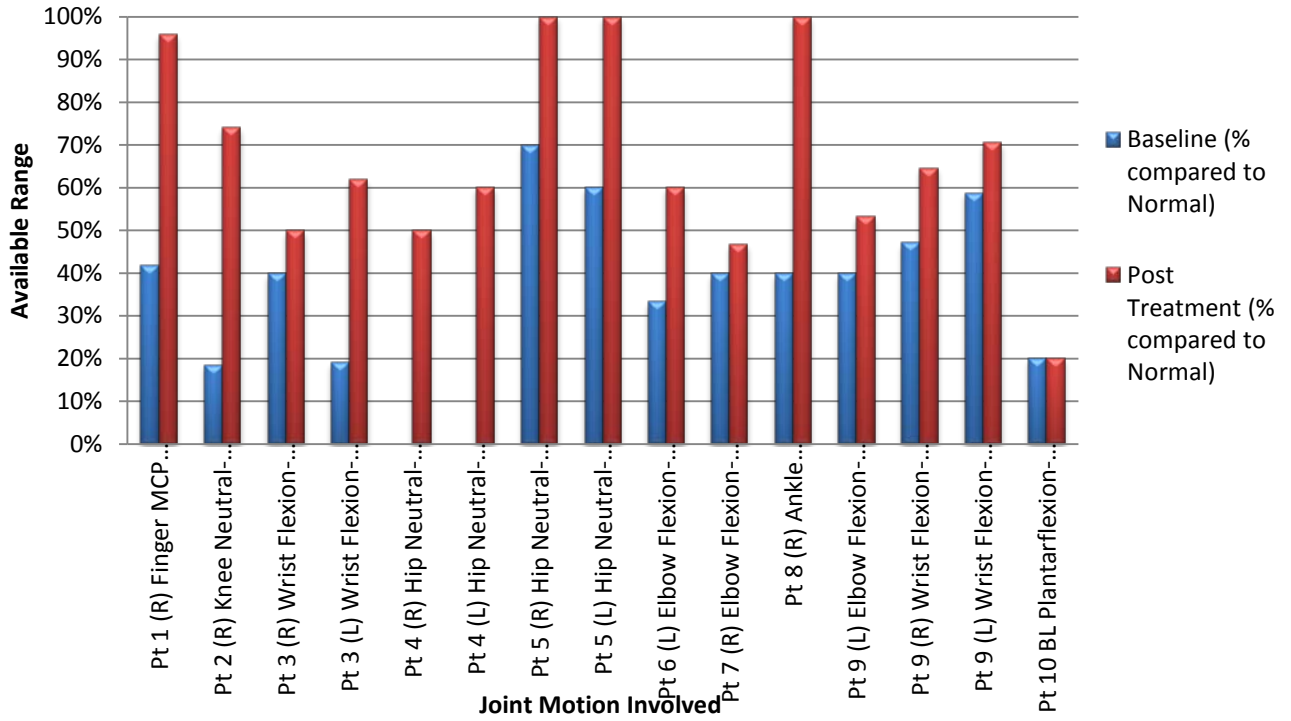
Splinting



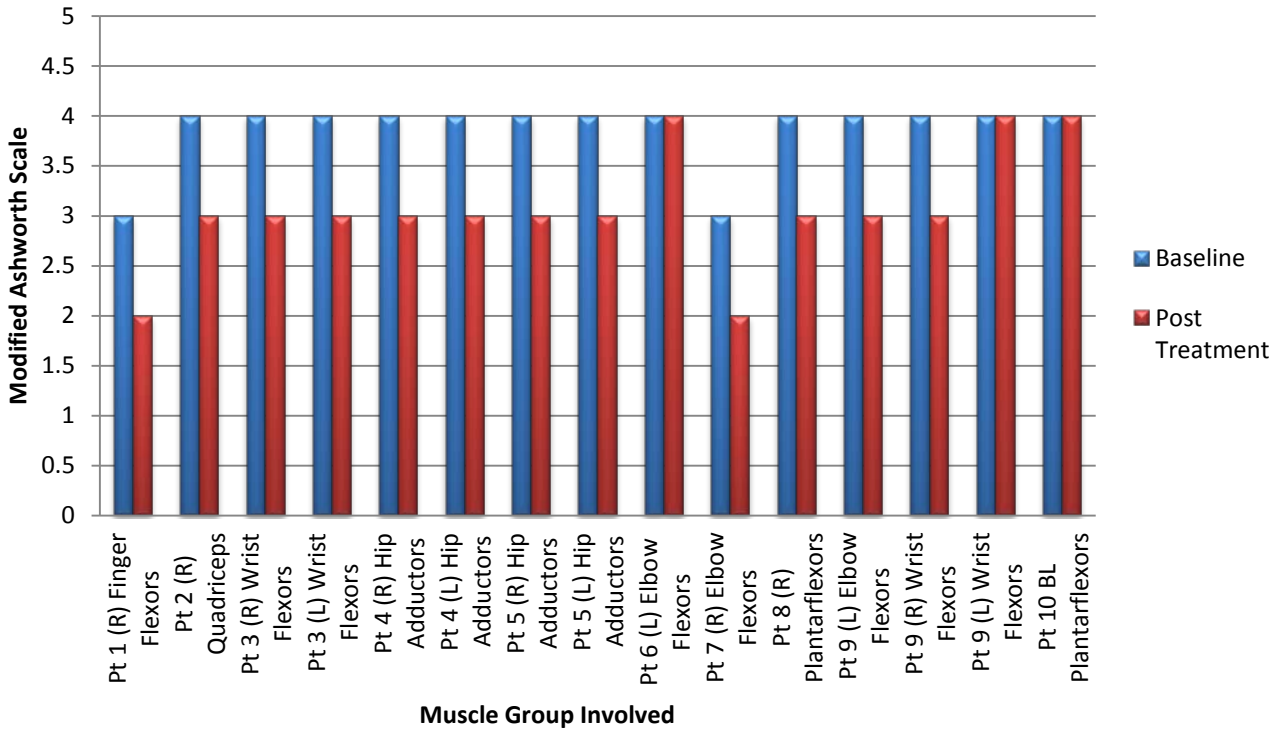
Range of movements of major joints and MAS scores of major muscle groups are recorded during routine assessments and pre/post specialist interventions e.g. Botulinum Toxin injections. A graphical representation of the outcomes for a sample group of patients (n = 10) treated in 2011 is provided in the following charts. 10 patients received treatment using Botulinum toxin in 2011. 1 patient received 2 cycles of injection in the 12 month period. Doses used per patient range from 50 units of Botox to 360 units of Botox (maximum recommended dose). The outcome measurement data pre and post treatment is provided in the following charts.

The charts show the improvement in patients' range of movements (ROM) and tone (MAS) in specific joints/muscle groups (described in the horizontal axis). The **blue** colour shows the baseline (joint ROM/MAS) and **red** colour shows the improvement in range/reduction in tone.

Passive Range of Movement - Pre/Post Botox Treatment

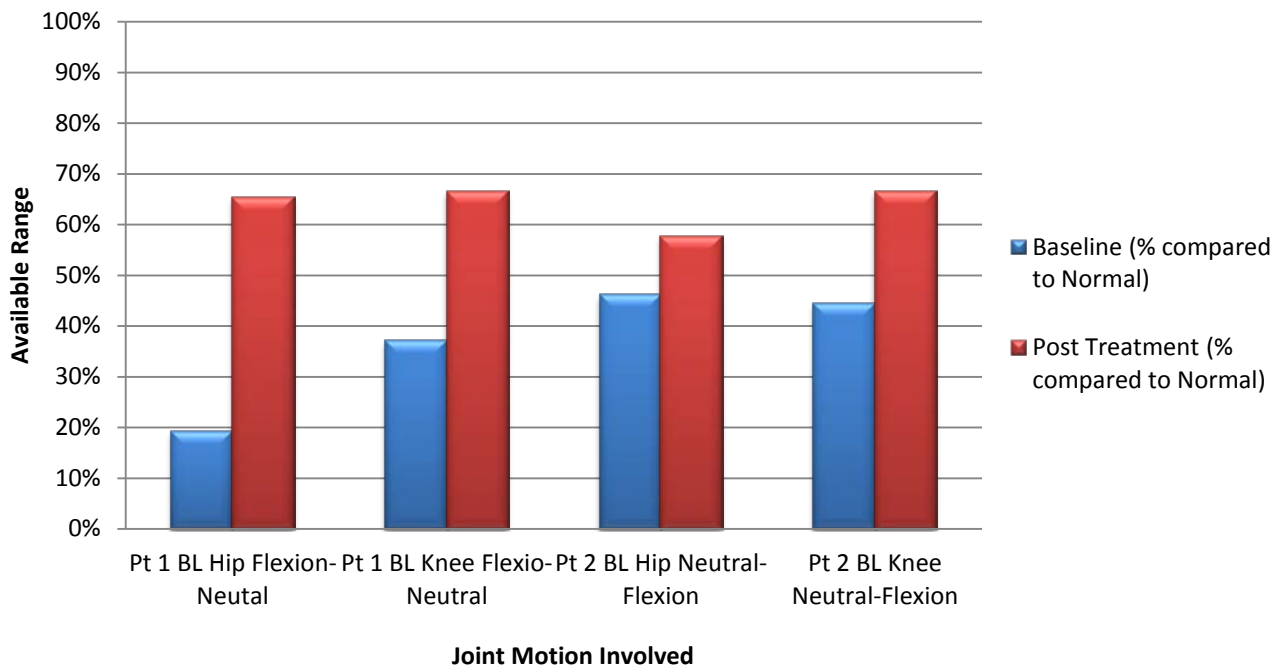


Muscle Tone - Pre/Post Botox Treatment

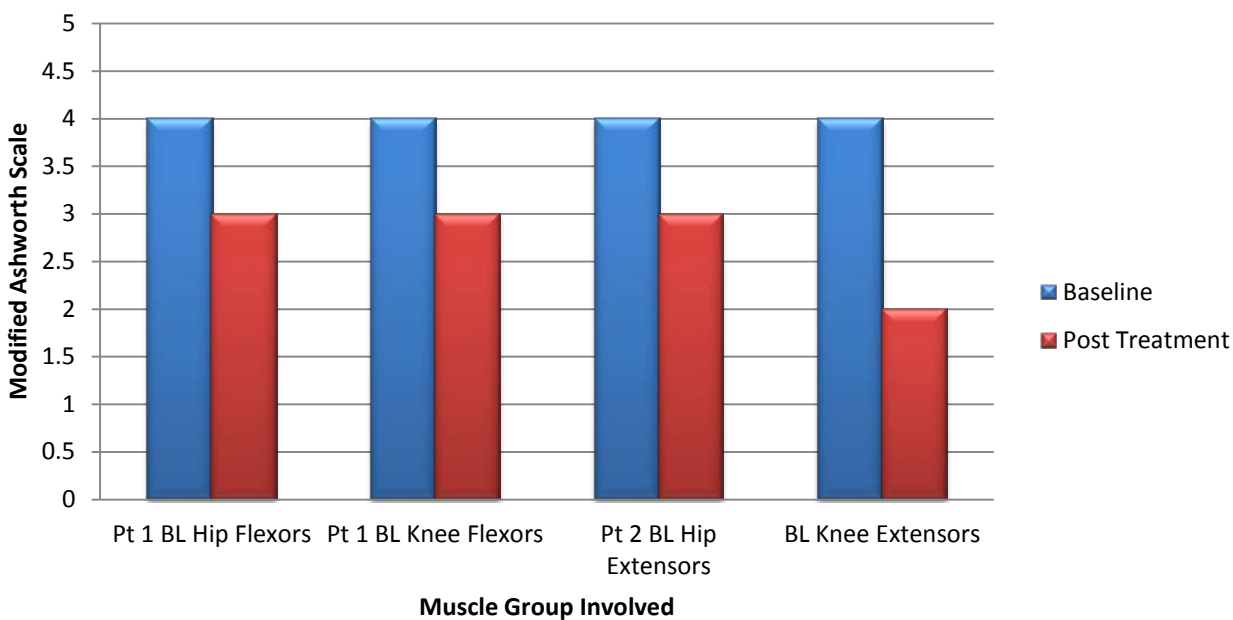


2 patients who received various cycles of Botulinum toxin injections were referred to specialist clinics for Intrathecal phenol (IP) treatment and were accepted. The IP treatments were very effective resulting in improved patient comfort, considerable reduction in spasticity, ease of handling for staff and better positioning in wheelchairs.

Passive Range of Movement - Pre/Post Phenol Treatment



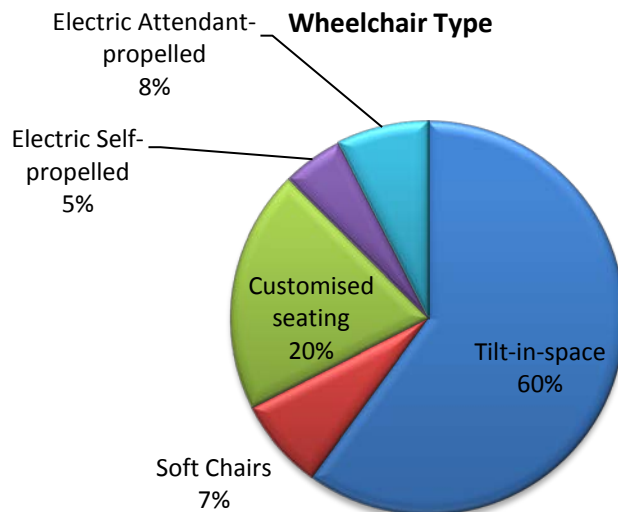
Muscle Tone - Pre/Post Phenol Treatment



Wheelchairs

Patients use a variety of wheelchairs including, self controlled electric wheelchairs, attendant propelled electric wheelchairs, tilt in space manual wheelchairs, soft chairs (Kirton) and special seating systems.

The majority of patients are transferred using manual handling aids such as slings, hoists and sliding sheets. Patients with abilities need varied levels of assistance and/or supervision when transferring. Aids used include banana boards and rota stand with or without verbal cues.



Posture management forms the major part of physical management. All patients are assessed and provided with necessary posture management aids for positioning. Written documentations include care plans and positioning guidelines that are used to act as a point of reference and to maintain consistency in positioning.

Impairments of awareness, cognition and behavioural control

Low awareness states

Awareness refers to the ability of having experiences of any kind e.g. surroundings, bodily sensations, memories, thoughts etc. Injury to the brain can impair some aspects of awareness and leave others intact; it is important to remember that many brain processes can occur in the absence of awareness. There is no single clinical sign or test of awareness; its presence is assessed from a range of behaviours which indicate the person can perceive self, surroundings and has an intention to communicate.

A person in a low awareness state does not show any awareness of their environment but their body maintains their essential physiological functions such as breathing, heart rate, digestion etc. Advances in medical science and technology have allowed more severely brain injured people to survive, leading to an increase in the number of people in low awareness states (Royal College of Physicians, 2003).

People in low awareness states are often described as being in a vegetative state where responses to stimuli are reflexive in nature without any meaningful response to the environment. A patient described as being in a minimally conscious state shows signs which are not reflex in nature but do not occur consistently enough to be

used to demonstrate awareness or to establish a method of communication. The term low awareness state is used in this report to describe both groups of patients.

A low awareness state can follow a number of severe insults to the brain most commonly traumatic and hypoxic brain injuries. We treated 25 patients diagnosed to be in a low awareness state during 2011; the causes are shown in the table below:

Number of patients	Cause
10	Hypoxic brain injury
10	Traumatic brain injury
2	Stroke (haemorrhagic)
3	Other causes

All patients in low awareness states were objectively assessed; medications were reviewed to minimise any sedative effects. The Sensory Modality Assessment Rehabilitation Technique (SMART) was used; this is an extensive standardised sensory assessment which is carried out over time and in various settings. It ensures a thorough and accurate assessment by assessing a patient's response to multi-sensory stimuli including vision, hearing, taste, touch and smell. It also assesses wakefulness/arousal, motor skills and functional communication. Assessments are repeated at regular intervals or if a change in the patient is observed by a staff or family member.

Cognitive impairments

We treated 12 patients with cognitive impairments during the year including difficulties with:

- ✚ Memory
- ✚ Attention/concentration
- ✚ Speed of information processing
- ✚ Executive functioning
- ✚ Perceptual and visuo-spatial processing
- ✚ Language skills

Various standardised assessment tools including the Mini Mental Health Test, BECKs Depression Scale, Lowenstein Occupational Therapy Cognitive Assessment (LOTCA) and Addenbrooke's Cognitive Assessment Battery (ACER) were used to establish a baseline of cognitive function for patients with identified cognitive problems. The results informed treatment planning and enabled all 12 to actively participate in a full social activities programme including outings with families and visits home.

Behavioural control

Changes in behaviour commonly occur after a brain injury; many are minor and cause no problems. When the changes are significant the patient can be difficult to deal with and there is a risk of him/her becoming excluded and isolated. It is one of the greatest causes of stress to families. We treated 7 patients with moderate to severe problems including:

- ✚ Irritability, verbal and physical aggression
- ✚ Impulsivity

- ✚ Disinhibited, inappropriate social behaviour
- ✚ Lack of drive, initiative and motivation
- ✚ Lack of insight
- ✚ Inflexibility

Detailed behaviour management guidelines were established and followed using a consistent approach and all 7 were supported to join in activities including outings with families and in one case to visit home.

COMPLICATIONS

Patients with highly complex needs such as those treated at Holy Cross are at great risk of developing complications including:

- ✚ Pressure ulcers
- ✚ Contractures
- ✚ Infections

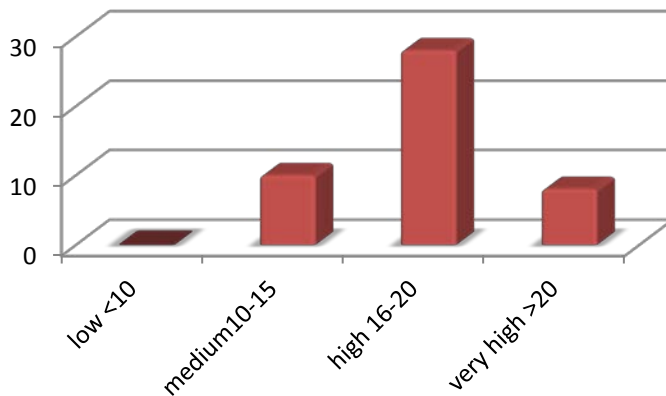
Pressure ulcers

A pressure ulcer is damage to the skin leading to tissue death usually over a bony prominence. They are caused by external forces including:

- ✚ Pressure - soft tissue is compressed between a bony prominence and a hard surface, blood supply is reduced leading to tissue damage and death
- ✚ Shearing - usually occurs when patient slides down the bed the skeleton and tissues move but the skin on the buttocks stays; it can lead to extensive damage
- ✚ Friction - occurs when 2 surfaces move or rub across each other and leads to superficial skin loss; when combined with pressure it can lead to serious damage

All patients are assessed using the Waterlow Scale (2005). During 2011 there were no patients assessed as low risk of developing a pressure ulcer with 34 patients assessed as high or very high risk.

Pressure ulcer risk using Waterlow Scale



Pressure ulcers are graded to identify the degree of damage and to assist in determining the most appropriate interventions. We use the European Pressure Ulcer Advisory Panel (EPUAP 2002) which grades ulcers 1-4 as follows:

Grade 1 - discolouration of skin not affected by finger pressure (non-blanchable erythema)

Grade 2 – partial thickness skin loss, presents as an abrasion or blister

Grade 3 - full thickness skin loss involving damage to subcutaneous tissues

Grade 4 - full thickness skin loss with extensive destruction of tissues and damage to muscle and possibly bone

We had 10 reported pressure ulcers (5 grade 1 and 5 grade 2) during 2011. All healed well with minimal intervention. Given the very high level of risk this is regarded as a good outcome.

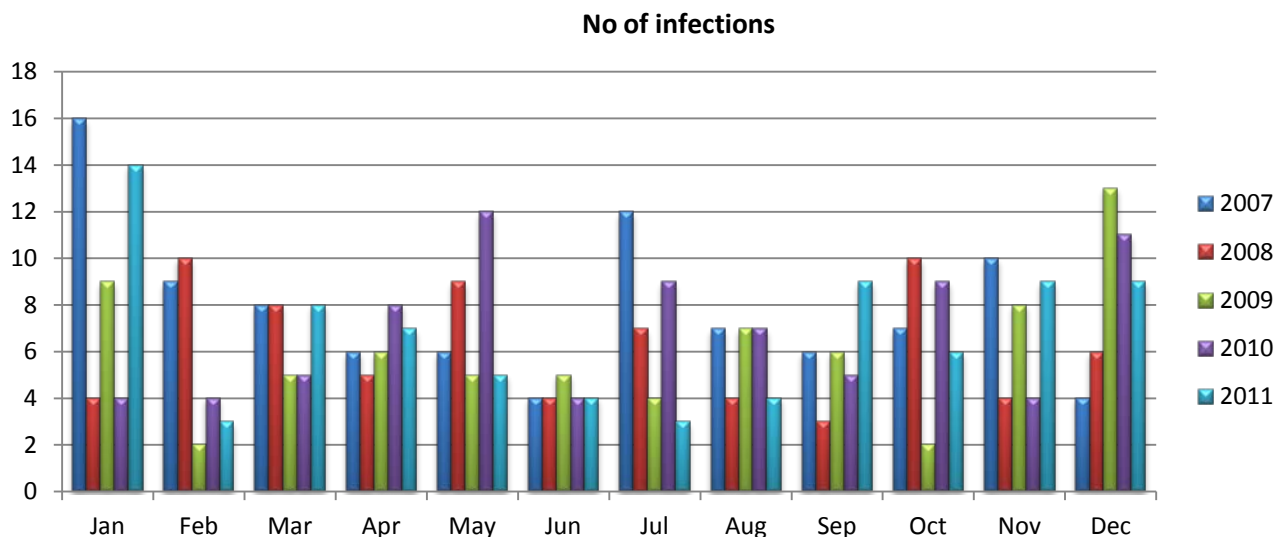
Contractures

Contractures are described as shortening of a muscle, usually permanently, caused by spasticity or immobility. With the exception of 2 all patients treated during the year were assessed as being at high risk. Much of the physiotherapy treatment provided was related to prevention; no patient developed a contracture during the year.

Infection rates

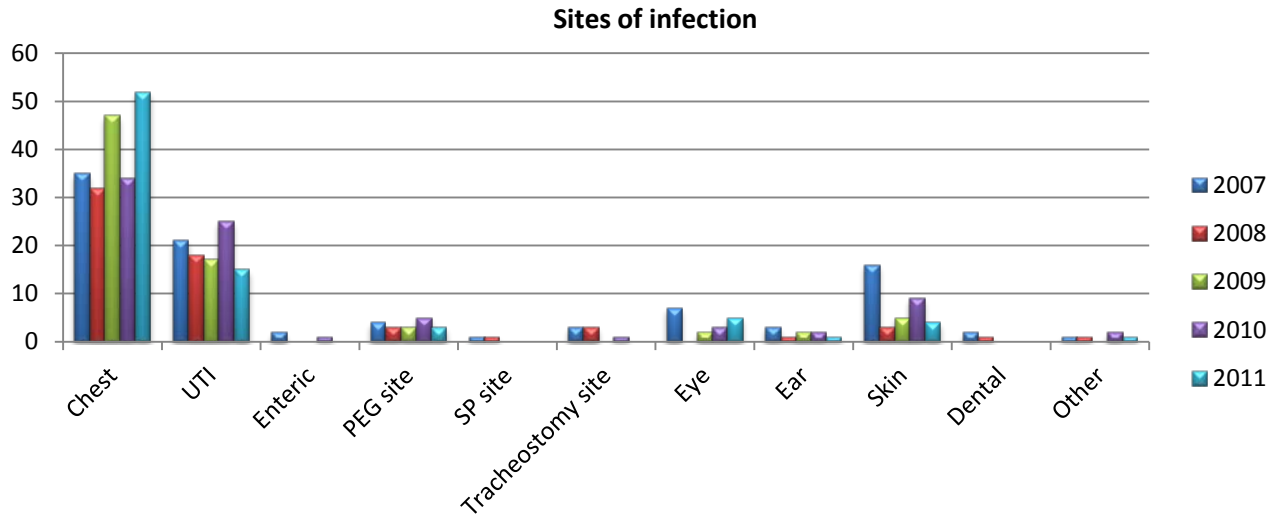
Number of infections

The results in 2011 were very similar to 2010 with 81 reported infections affecting 34 patients. 12 patients had no infections and 9 had only 1. Antibiotic treatment was prescribed in 63 cases. The following chart shows number of infections month by month compared with previous years.



Sites of infections

As in previous years the most common site of infection was the chest followed by urinary tract infection. The highest number of chest infections since we began keeping records was recorded 2011.



URGENT ADMISSIONS TO ACUTE HOSPITAL

There were 6 admissions to an acute hospital in the year with one patient needing admission on 2 occasions. All were ventilated so were admitted to intensive care. One patient died in hospital; the remainder returned once they recovered.

ACTIVITIES PROGRAMME

Patients enjoyed a full range of activities both in and outside of the hospital. The newly formed gardening group was a great success with patients involved in planning, sowing and reaping a variety of salad vegetables and herbs throughout the summer months. The woodland wheelchair trail was opened by Pippa Greenwood in June and offers a pleasant walk and relaxing venue to enjoy a new vista of the beautiful grounds surrounding the hospital. Outings including visits to the seaside, theatre, cinemas, restaurants and many other venues have continued to be enjoyed by patients. Where necessary access visits were undertaken to ensure a successful trip. A major highlight was a trip to Twickenham to see the England Rugby Team training prior to going to the World Cup in New Zealand. The players were very happy to mingle with fans and stopped to talk and share their excitement at being considered to play for their country. There were lots of 'photo opportunities' with both players and the training staff including well known faces such as Jonny Wilkinson and Martin Johnson.

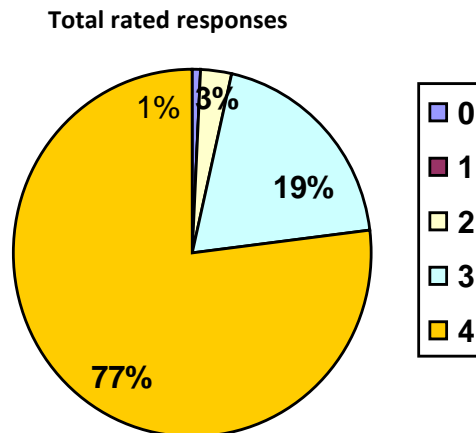
SATISFACTION SURVEY RESULTS

An annual patient survey is undertaken at Holy Cross Hospital to measure our levels of service as perceived by patients and their families. The NHS survey was used and the response rate in 2011 was the highest since records began in 2005. Rated responses on the NHS survey are rated on a 5-point scale from 0 to 4. The results are once again overwhelmingly positive with 77% of rated responses scored at 4, at the very top of the scale, 19% rated as 3; 3% were rated as 2, in the middle of the scale, and 1% (1 response) rated as 0.

The responses to the survey display a continuing high level of confidence in the capabilities of the nurses and therapists and notable improvements to already high ratings.

Sample comments included:

- Very satisfied with the quality of service and care our relative receives.
- We are very satisfied with the care given to my son & although he cannot ask questions we always find the staff very helpful when we ask about his care. ALL staff are very pleasant.
- My respite care in Holy Cross has improved my physical and emotional wellbeing. Therefore I can continue to live a reasonable independent at home.
- The service my son receives is of an excellent standard and I am extremely grateful for the care the staff and Holy Cross provide for him.



CLINICAL AUDIT

One of the ways the quality of service provision at Holy Cross is measured is through a planned programme of clinical audit, which provides a systematic method for reflection and review of practice. Changes to practice and organisation of patient care is based on evidence including collection of data and an open and honest reporting structure. Audit reports are shared with management and staff for implementation of appropriate recommendations. The audit programme in 2011 demonstrated a high level of compliance with standards and all recommended actions were implemented.

LOOKING FORWARD to 2012

2012 will see us continuing to work to achieve further improvements in the service provided to our patients and their families. Specific areas of work planned include:

- ✚ Development of special interest groups on various aspects of our work e.g. respiratory, posture and positioning comprising of groups of experienced staff with a special interest in the subject to act in an advisory capacity and promote best practice
- ✚ Review and revise the current competency framework and checklists to ensure we have robust evidence of staff competencies
- ✚ Undertake a comprehensive evaluation of a range of outcome measurement tools with a view to using the most appropriate ones initially on a trial basis
- ✚ Undertake a research project to identify the pattern of limb and spinal deformities in people in low awareness state with a view to publication and presentation at an appropriate conference

CONCLUDING REMARKS AND ACKNOWLEDGEMENTS

2011 has once again seen us delivering a very high quality service that has been appreciated by patients, families, referrers and funders. I am confident our patients are in safe hands and being cared for by people who value and respect the essential humanity of each patient and recognise them as individuals in their own right.

We are privileged to have the opportunity to continue the Sisters' work in healthcare with their support, guidance and enthusiasm.

Our strength is our hospital wide staff team who are willing to go that extra mile and remain professional, good humoured and enthusiastic whatever challenges they encounter. Our team of volunteers and the Friends of Holy Cross deserve a special mention as they give up their time week in week out to help us in patients' activities, driving, shopping for patients and raising funds for the added extras. We would not be able to provide such a wide range of services or social activities without them.

I look forward to working with this very special team in 2012 as Holy Cross continues to provide excellent service to people with extremely complex needs.

Carol Fowlie
Director of Clinical Services
December 2011