SCOTTISH NATIONAL OBSTETRIC BRACHIAL PLEXUS INJURY SERVICE

ANNUAL REPORT 2015-16

Greater Glasgow & Clyde
Health Board

CONTENTS

The completed Annual Report should be sent electronically by 31 May to:

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Section A: Service/Programme

A2 Aim / Purpose / Mission Statement / Date of Designation

The Paediatric Brachial Plexus Injury Service, based at the Royal Hospital for Children, Glasgow and became a designated National Service in April 2006.

It provides an integrated multidisciplinary service for obstetric brachial plexus injury, traumatic brachial plexus injury and tumours involving the brachial plexus including:

- **Diagnosis:** Clinical, MRI, Ultrasound, Neurophysiology.
- **Surgery:** Early surgical exploration and nerve repair
  Secondary reconstruction for shoulder and other deformities
- **Physiotherapy**
- **Occupational Therapy**

A3 Description of Patient Pathway

A3 a) Target Group for Service or Programme

Children with obstetric brachial plexus injury are the main group managed by the service. When necessary, children with traumatic brachial plexus injury or tumours involving the brachial plexus are seen.

A3 b) Abbreviated Care Pathway for Service or Programme

This integrated multidisciplinary service receives referrals nationally from maternity units, paediatricians, orthopaedic and plastic surgery services. Along with their parents, children with obstetric brachial plexus injury (OBPI) are assessed in the outpatient clinic by medical staff and therapists to confirm the diagnosis, exclude immediate complications (e.g. shoulder dislocation), counsel parents, ensure optimal parent-child bonding, address parental perceptions of injury mechanism (and any related blame attribution), and to establish a likely prognosis. Some children are seen prior to this first clinical review by the specialist therapists, and receive instruction on therapeutic exercises.

A management plan is formulated that includes parental counselling, physiotherapy (initial passive stretching to mitigate shoulder deformity, later active range exercises, post-operative therapy as required), occupational therapy (safe positioning & optimal handling, age-specific sensorimotor developmental assessments, activity based interventions, provision of aids, fit-for-schooling assessment, school visits & educational liaison role), investigations when necessary (neurophysiology, imaging studies), and monitoring of progress (developmental milestones, school progression, body-image development, pain, psychosocial welfare, fit-for-life). Surgical decisions on nerve surgery and prophylactic shoulder interventions are made around 3 months of age, and on secondary surgery (shoulder procedures, hand reanimation, functional muscle transfers) as necessary during growth into adulthood.

Interventions are carried out by the surgical team to:

- Optimise recovery from nerve injury: In a small percentage of children (more severe lesions with inadequate motor recovery at 3-6 months of age), exploration and microsurgical reconstruction of the brachial plexus nerves may benefit recovery and enable prognostic stratification.
- Optimise growth trajectory: Early nerve surgery may reduce growth disturbance in more severe nerve injuries (detailed above). In these, and in other children with early shoulder subluxation/instability, conservative interventions (e.g. casting, botox injections) can forestall more severe shoulder abnormalities.
- Correct functionally significant secondary deformity/functional impairment: Joint releases, tendon transfers, bony procedures and free functional muscle transfers for upper limb deformities resulting from OBPI. These most commonly affect the shoulder.Children with persisting deficit are followed up in outpatients at least until skeletal maturity.

Children with persisting deficit are followed up in outpatients at least until skeletal maturity.

B1 Efficient

B1 a) Report of Actual v Planned activity

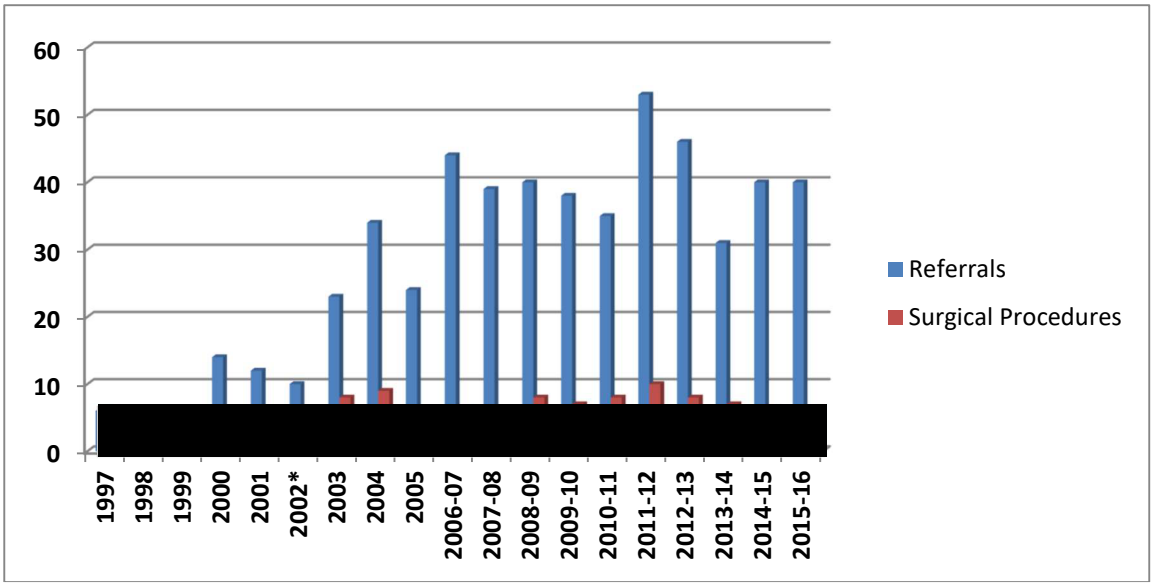
Statement of Activity 2015-16

Number of patients assessed:				Agreed
	Based on Dates First Seen	40		
	Total:		**40**	**35**
Admissions for surgery:				
	Nerve	[redacted]		
	Other (Shoulder, elbow)	[redacted]		
		6		
	Total:		**6**	[redacted]
Ward Bed Days:				
	HDU/ITU	0		
	Nerve Surgery	7		
	Other Surgery	12		
		19		
	Total:		**19**	
Outpatient follow-up appointments:		154		
			154	
NHS Board for Admission:				
	GGHB&Clyde	[redacted]		
	Lothian	[redacted]		
	Northern Ireland	[redacted]		
	Tayside	[redacted]		
		6		
	Total:		**6**	
NHS Board for Referrals:				
	Ayrshire & Arran	[redacted]		
	England	[redacted]		
	Fife	[redacted]		
	Forth Valley	[redacted]		
	GGHB&Clyde	20		
	Grampian	[redacted]		
	Highland	[redacted]		
	Lanarkshire	6		
	Lothian	[redacted]		
	Northern Ireland	[redacted]		
	Shetland	[redacted]		
		40		
	Total:		**40**	

Referrals and Operation Numbers since 1997:

Year	Referrals	Surgical Procedures
1997	6	[redacted]
1998	[redacted]	[redacted]
1999	[redacted]	0
2000	14	[redacted]
2001	12	[redacted]
2002*	10	[redacted]
2003	23	8
2004	34	9
2005	24	[redacted]
2006 - 07	44	6
2007- 08	39	[redacted]
2008 - 09	40	8
2009 - 10	38	7
2010 - 11	35	8
11-12	53	10
12-13	46	8
13-14	31	**7**
14-15	40	6
15-16	40	6
Total	**537**	**102**

Activity Graph



B1 b) Resource use

Covered in other parts of the report.

B1 c) Finance and Workforce

NHS Greater Glasgow & Clyde
Women & Children's Directorate

Obstetric Brachial Plexus Twelve Month Report: 15/16

	Full Year Funded Value Of Agreement £	Twelve Month Funded Value Of Agreement £	Actual Outturn As At 31st March 2016 £	Variance £	Projected Full Year Outturn £
FIXED					
Nursing/PAM	68,309	68,309	68,309	0	68,309
Medical	10,277	10,277	10,277	0	10,277
Other direct	31,113	31,113	31,113	0	31,113
Indirect	15,501	15,501	15,719	-218	15,719
Capital charges	58	58	58	0	58
Total Fixed	125,258	125,258	125,476	-218	125,476
VARIABLE					
Pharmacy	5,221	5,221	3,200	2,021	3,200
Travel & Training	2,187	2,187	1,340	847	1,340
Total Variable	7,408	7,408	4,540	2,868	4,540
TOTAL	**132,666**	**132,666**	**130,017**	**2,649**	**130,017**

B1 d) Key Performance Indicators (KPIs) and HEAT targets

1. Time from referral to first physio assessment / intervention <2weeks.

   All babies referred to physio at RHC were seen within 2 weeks of referral and all before they were 4 weeks of age.

2. Time from referral to first clinic appointment being offered <6 weeks.

   The mean wait between referral and the first outpatient appointment was 3.8 weeks and the median was 2.6 weeks (Range 1 – 15, see below).

Time from Referral to Clinic (Monthly breakdown)

2015-16	Total Wait	Patients Seen	Ave. Wait (Weeks)	Max Wait (Weeks)	
April	4.7	1.0	4.7	5.0	
May	8.6	2.0	4.3	6.6	
June	16.6	5.0	3.3	4.4	
July	0.0	0.0	0.0	0.0	
August	13.1	3.0	4.4	7.1	
Sept.	1.0	1.0	1.0	1.0	
Oct.	21.7	6.0	3.6	8.9	
Nov.	15.3	6.0	2.5	4.4	
Dec.	5.0	3.0	1.7	2.4	
Jan.	6.0	1.0	6.0	6.0	
Feb.	59.9	12.0	5.0	15.0	*
March	0.0	0.0	0.0	0.0	
Total	151.9	40.0	3.8		

*[redacted] referred from Aberdeen Nov 2015, unable to arrange transport for January, rescheduled [redacted].

3. Age at first review: physiotherapy 4weeks, clinic 8 weeks.

Age at First Review (Years)

2015-16	Minimum	Maximum	Average	Median
	0.0	12.9	1.6	0.2

The results above are affected by a few children who are referred for the first time at an older age. Most cases are seen before the age of 8 weeks.

4. Assessment and stratification for nerve surgery benefit by 4 months; nerve surgery by 6 months.

5. Clinic letters issued within 2 weeks.

   All clinic letters and operation notes are typed and checked within a few days .

6. OT review before commence schooling.

   Pre-school visits to children in GG&C are carried out by the specialist OT, who also liaises with nursery / primary schools outwith GG&C, prior to the children attending primary school.

7. Service audit completion, including satisfaction survey, once every 3 years.

   See section B2a.

8. Educational talks with referring specialties, care providers, and professional groups within and out with NHS GG&C.

   During the 2015-16 Brachial Plexus Injury (adult & obstetric) has been taught to medical students, occupational therapy students, general plastic and orthopaedic surgeons, and neurophysiology trainees. Also see Appendix.

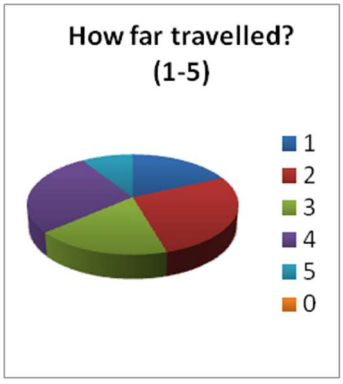
9. Review of surgical outcomes every 3 years, including Mallet shoulder scores.

   A review of outcomes from nerve repair surgery was included in the 2014-15 report.
   A study was also last completed in 2014-15 by an elective student Andrew McKean, under supervision of the consultant team. Results were presented at national and international meetings (See section on research).

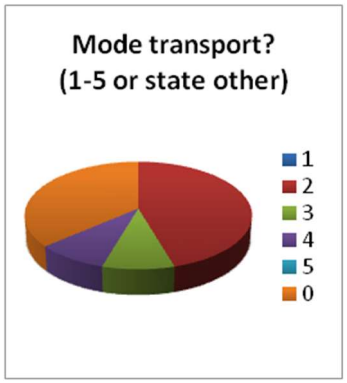
B2 Effective

B2 a) Clinical Audit Programme

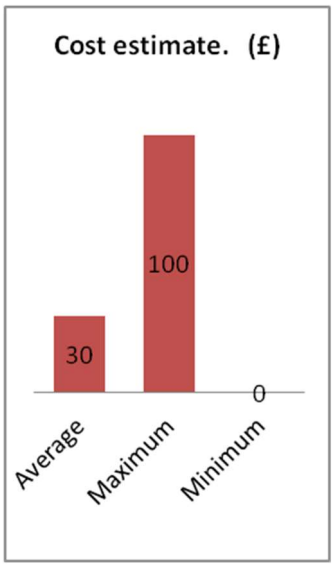
A postal survey of the parents of children who had attended the clinic was carried out in June 2015, which was shortly before the move to the new Children's Hospital. Eleven parents returned the forms. The results are outlined in the graphs below. Overall the responses indicate a high level of satisfaction with the outpatient clinics. It is hoped to carry out another survey in the future once the service has settled fully in the new hospital.

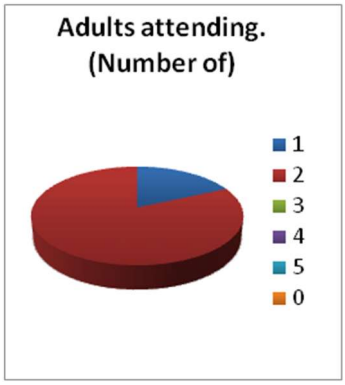


1=	1-10 miles (one way)
2=	10-25 miles (one way)
3=	25-50 miles (one way)
4=	50-100 miles (one way)
5=	100+ miles (one way)
0=	no response

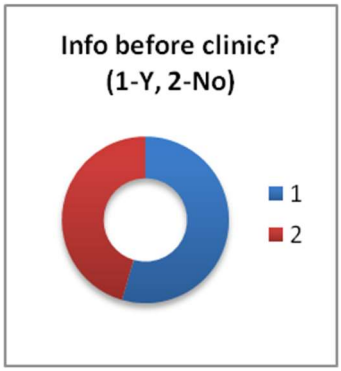


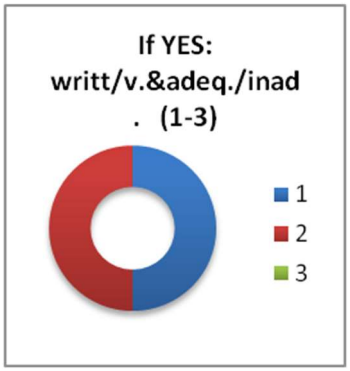
1=	Ambulance	
2=	Car	
3=	Taxi	
4=	Bus	
5=	Train	
0=	other/multiple methods**	

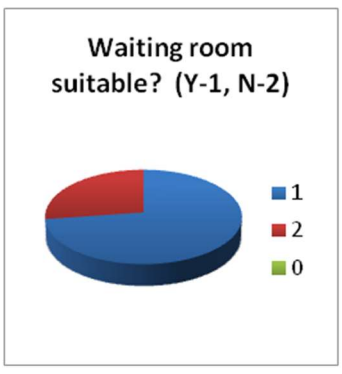


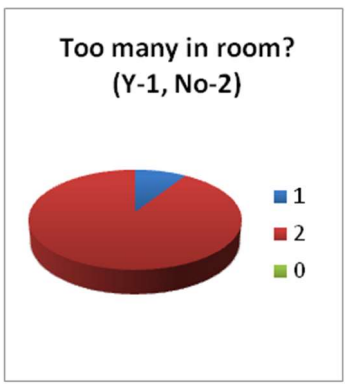


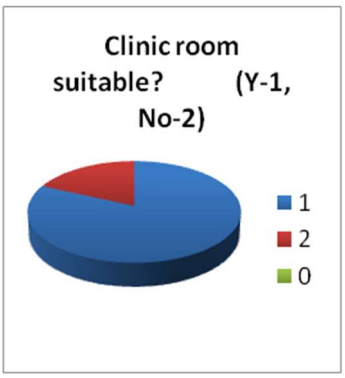
1=	Morning
2=	Lunchtime
3=	Early Evening
0=	no response

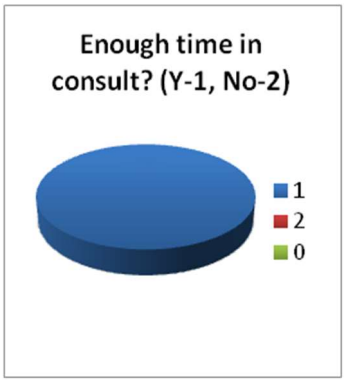




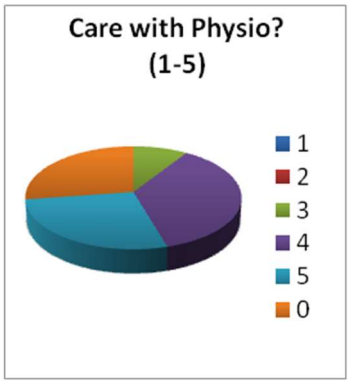




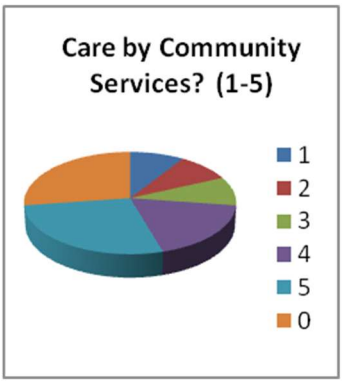




1=	Poor
2=	Average
3=	Good
4=	Very Good
5=	Excellent
0=	no response



1=	Poor
2=	Average
3=	Good
4=	Very Good
5=	Excellent
0=	no response



1=	Poor
2=	Average
3=	Good
4=	Very Good
5=	Excellent
0=	no response

B2 b) Clinical Outcomes/ complication rates / external benchmarking

Covered in other parts of the report.

B2 c) Service Improvement

New Children's Hospital

The service moved the new Royal Hospital for Children co-located with the Queen Elizabeth University Hospital site in June 2015.
The team has adapted well to the changes and the outpatient clinic facilities represent an improvement on those in the old hospital. Co-location with the adult service administration has helped with organisation.

Physiotherapy

Role of Physiotherapy in the OBPI Service

- Receive and triage new referrals for OBPI into the physiotherapy service.
- Re-direct non Greater Glasgow referrals to most local paediatric physiotherapy service.
- Aim to assess patients residing in Greater Glasgow in physiotherapy 7-10 days after birth and normally prior to their 1st clinic appointment.
- Usually 1st point of contact for parents on discharge from the maternity hospital – require to give explanation of OBPI, advice on prognosis and alleviate anxieties without giving false expectations.
- Assess and treat patients in line with the Association of Paediatric Chartered Physiotherapy guidelines for the physiotherapy management of OBPI. Ensuring we minimise secondary complications while recovery is taking place.
- Refer into the specialist OBPI clinic as required.
- Attend the specialist OBPI clinics and offer specialist physiotherapy assessment, advice and treatment to all patients attending the clinic as indicated.
- Liaise with the Specialist OBPI team regarding patients progress.
- Liaise with local paediatric physiotherapists across Scotland and Ireland regarding clinic updates, patients progress and offer advice on management when required.
- Specialist physiotherapy contact on the website – offer advice/assistance to other physiotherapists/maternity staff/patients/parents who contact me.
- Teaching and education for other physiotherapists and medical staff at maternity sites to promote early physiotherapy intervention and ensure an early referral is made for all babies born with OBPI.
- Education for the MSK physiotherapists at the Royal Hospital for Children to ensure children with OBPI and their parents receive the same high standard of care in my absence.
- Responsible for the physiotherapy referral guidance contained in the medical staff induction packs at the maternity sites and update as required.
- Working together with Occupational Therapy to offer joint appointments when required.
- Assess and advise patients/parents who have undergone surgery following removal of their cast and liaise with their local physiotherapist accordingly.

Patient Numbers for the year 2015.

	At Clinic	In Physiotherapy
New Patients	39	[redacted]
Return Patients	69	14

During 2015 the physiotherapy service along with the rest of Yorkhill Hospital moved to the new Royal Hospital for Children in Glasgow which has presented challenges and new ways of working for staff. During this time we have continued to provide the same level of service to patients with OBPI who require physiotherapy.

Occupational Therapy

The specialist Occupational Therapist for the OBPP service, Nicola Hart, continues to provide a specific role for these patients within Greater Glasgow and Clyde and throughout Scotland.

- Evaluating how a child functions in daily activities.
- This helps the team to provide appropriate recommendations for rehabilitation and surgical planning if any secondary reconstructive procedures are necessary.
- Work with the child and family to evaluate their functional concerns by observing the child performing functional tasks: shoulder, elbow and hand functional ROM: fine motor skills; ADL; School work and leisure activities.
- Role as facilitator between the clinic and professional in the community, and education settings.

Continuing Professional Development

- Evaluating standardised assessments – such as Assisted Hand Assessment – to establish uniform measure of child's ability at certain age groups (pre-school, primary and secondary schooling).
- E-link – devising age specific and routine measurement protocols.
- Super splint – liaising with Orthotic service re viability of making of splint.
- Continued liaison with Erb's palsy group and provision of OT advice when required.
- Continued liaison with OT in adolescent and adult service and transfer of cases.
- Continued liaison with OT's worldwide to benchmark and look at best practise.

Education

The OT department has a steady stream of OT students, nursing, and physiotherapy students. Tutorials are provided on the role of the OT for children with brachial plexus injury.

Website

The service website was re-designed early in 2014 in order to present clear referral guidelines and includes information on brachial plexus injury for parents. It is regularly updated.

www.brachialplexus.scot.nhs.uk

Administration

At the end of 2015 the head office of the SNBPIS was finally relocated to the office block at the newly named Queen Elizabeth University Hospital, Glasgow (on the site of the former Southern General Hospital). Children's clinics have moved to the new Royal Hospital for Children adjacent to the QEUH.

The final transition from a paper records system to a fully electronic records system took place in 2015 and with this in mind all correspondence to the service is either scanned or uploaded upon receipt to Clinical Portal - a service-wide patients' records system which can be accessed by clinicians, administration staff and GPs. A small number of paper case notes are retained and/or requested from Medical Records for clinical research or follow-up of long-term patients.

Referrals are increasingly received by email via the generic brachial plexus email address available on our website. The administrator then oversees a process involving adding the patient to the TrakCare system where necessary, recording the referral electronically (as above), creating an outpatient episode on TrakCare, booking a clinic appointment where appropriate, and liaising with patients and/or other departments regarding diagnostics.

The administrator takes responsibility for ensuring future clinic dates are agreed and available on TrakCare for future clinic appointments. The administrator also ensures all activity data is collected and recorded electronically on the service database for future use and yearly activity reports.

Management

During the transition from the old site at Yorkhill Hospital to the new Royal Hospital for Children at Govan, there has been a change in management structure and therefore our previous managerial contact person (Lynne Robertson) has been allocated to other services and so the General Manager, Mr Jamie Redfern, has taken over responsibility for the Children's Brachial Plexus Service. He attended the NSD annual review in Autumn 2015.

Young Adult Clinic

Some patients who are still followed up in the children's brachial plexus clinic are now age 16 or over. In addition some referrals are received for adults who have ongoing problems resulting from OBPI. It was felt inappropriate to continue to see these patients in the children's clinic. Therefore a new clinic for young adults has been started, the first being held in April 2011. The clinic is at the New Victoria Hospital, Glasgow, the same location as the adult brachial plexus clinics. The clinical nurse specialist, occupational therapist, and physiotherapist who work with the adult service are contributing. The clinic is continuing on a twice-yearly basis.

2 d) Research

Tim Hems

Tim Hems with Terence Savaridas (Specialist registrar in Orthopaedics) have completed a project to quantify elbow flexion strength in children who have had obstetric brachial plexus injury (OBPI). Although it is known that elbow flexion usually recovers to a functionally useful level after OBPI this has not be formally quantified.
The study involved measuring elbow flexion strength in children over the age of 5 attending the outpatient clinic using a hand held dynamometer. Ethical approval was obtained.

Thirty-nine patients were recruited with a mean age of 12.6 years. Initial results show that the mean isometric force of elbow flexion was 63% of the unaffected side at the first measurement. A mean force of 8.7Kg suggests that patients have a sufficient strength of elbow flexion for most activities. Analysis of the results has continued, including correlation of elbow flexion strength with the severity of the OBPI. A paper presentation was made at a recent meeting in Barcelona. Work will continue on this project.

25/2/16 - 27/2/16 **The Natural History of Elbow Flexion Strength Following Obstetric Brachial Plexus Injury**
Narakas Symposium, Brachial plexus.
Barcelona.

Andy Hart

During the year 2015-16 Prof. Hart has continued to be engaged in laboratory based research work relevant to brachial plexus and peripheral nerve injury. Details have been included in the report on the adult brachial plexus service.

During summer 2013 a medical student, Andrew McKean, undertook an elective period working on a project to look at the long-term functional outcome in children with obstetric brachial plexus injury in Scotland. He was supervised by Professor Andrew Hart and received an elective bursary from the Healing Foundation. The work analysed information collected on the service database, which was started in 2001 by David Sherlock and Tim Hems. A number of presentations of the results have been made, the most recent at the Narakas Symposium in Barcelona:

"**Incidence, shoulder outcome and surgical intervention of unilateral obstetric brachial plexus injury in Scottish population**" McKean A, Gorman M, Hems T, Hart A.

B3 Safe

B3 a) Risk Register

All healthcare professionals funded within the structure of the Obstetric Brachial Plexus Palsy Service meet Greater Glasgow & Clyde Trust requirements for vetting by Disclosure Scotland, and registration with the Information Commissioner's Office.
Miss Claire Murnaghan has certified level 3 Child Protection training.

B3 b) Clinical Governance

Patients reviewed, or treated at the RHC site fall under the hospital's own governance system, reinforced by internal audit within the Orthopaedic, and the Plastic Surgery Services. No significant governance issues have been identified through these mechanisms during 2015-2016.

B3 c) Healthcare Associated Infection (HAI) and Scottish Patient Safety Programme (SPSP)

The outpatient clinic has fully adopted recommendations on hand hygiene, dress code, and cleaning of equipment as recommended nationally. These measures are also in full implementation within the inpatient ward, and theatre complex used. Regular monitoring of compliance within the hospital is performed by assessors independent to the Plexus Service. No peri-operative bacterial infections occurred during the period 2015-2016.

B 3 d) Adverse Events

The service uses existing Greater Glasgow & Clyde thresholds for instigation of adverse event reporting and investigation, plus online reporting systems. No adverse events have been reported to occur during the period 2015-2016.

B 3 e) Complaints / Compliments

Complaints are handled by the Complaints Liaison Officer, as per the NHS Complaints Procedure. Information leaflets regarding the complaints policy are available from any member of staff at RHC. There have been no formal complaints submitted during this time period.

B4 Timely (Access)

B4a) Waiting / Response Times

The mean time between referral and first clinic consultation offered was 3.8 weeks (Range 1 to 15 weeks). See also section B1d.

Most referrals are sent centrally to Miss Murnaghan at RHSC by letter using the proforma available on the website, by email, or via the electronic vetting system for those who are not directly referred by the maternity units, but instead via their General Practitioner

Neonatal referrals from the maternity units are duplicated and sent to Heather Farish. Therefore, during periods of staff leave there is a system in place to ensure that new babies do not wait a longer time for their first appointment with a member of the team.
The urgency of the referral is graded when it is received. The response times have been appropriate to the condition of the patients.

B4b) Review of Clinical Pathway

(i) Review and Changes to Clinical Pathway

Insert text here

(ii) Improvements to Local Delivery of Care

Early in 2014 the referral guidelines were revised so that these are consistent for cases occurring throughout Scotland. Over recent years earlier referral to the service has been encouraged in the belief that earlier intervention with physiotherapy, provision of information to parents, and selection of cases requiring surgery is beneficial.
The new guidelines are on the service website and appear to have been functioning well. In the future it is hoped that an on-line referral system can be developed.

B5 Person Centred

B5 a) Patient Carer/Public Involvement

New and return patients are actively informed about the UK based Erbs Palsy Group, which is a parent-run charity that provides a source of support and practical information for families dealing with Neonatal Brachial Plexus Injury.

B5 b) Better Together Programme Involvement

Patients and their families benefit from early review by a multidisciplinary team at the Paediatric brachial plexus clinic and are given contact details for our named therapists in order to maintain a close relationship during their treatment. They are given the opportunity to ask questions and find out more information about their diagnosis and are actively involved in the care of the child, particularly through sharing of information and responsibility for exercises and therapy.

B5 c) User Surveys

See section B2a

B6 Equitable

B6 a) Fair for all: Equality & Diversity

The Plexus service complies with NHS rules on equality & diversity in the appointment of staff. Similar care is taken in providing equal care standards to patients and relatives. Appropriate use of interpreters and awareness of cultural, ethnic and religious practices in regard to examination and interaction with parents is facilitated.

B6 b) Geographical access

Outreach Clinics: In order to assess and follow-up patients from the North East of Scotland a clinics was held at Woodend Hospital, Aberdeen in April 2015, November 2015, and March 2016. Clinics are held approximately every 6 months, depending on demand, and seem well received by the patients. Adult brachial plexus patients and children are seen in the same clinic.
The need for clinics in other locations is kept under review.

Section C : Looking Ahead/Expected Change/Developments

Psychological Support

Meetings have been held with the Clinical Psychology Service to develop outline remits for how a Psychologist could be incorporated into the service, without compromising equity of service provision across Scotland. Increased referrals within GG&C have made clear the need for service provision, and the enthusiastic engagement of the psychology service is clearly evident.
Over the last year work was carried out to quantify need, and what service support would be required for an equitable access national service provision, following the model of the successful physiotherapy and occupational therapy developments.
A needs analysis and service proposal was presented and submitted to NSD in October 2014. A final response is awaited.

Patient Information

Information on OBPI for parents has been included in the new website. Availability of this information seems to have been well-received by the parents and we have decided to direct patients towards this valuable source of information rather than trying to produce a leaflet which could be distributed in the outpatient department. Revision of a paper version for carers proved to be impossible due to dissolution of the children's FILES committee.

Electronic Patient Record (EPR)

Introduction of an electronic patient record in NHS Greater Glasgow & Clyde has presented a challenge to the service. The EPR currently doesn't provide an equivalent method of recording information, including consecutive measurements, on brachial plexus patients to replace the paper records. The methods of documenting patient information, monitoring activity, assessing function, and recording outcomes for the brachial plexus service are under review.
We have met with the EPR development team and requested that specific E-forms for the service can be developed for inclusion in the EPR.

International Collaboration

Following the recent Narakas meeting in Barcelona, we plan to collaborate with other centres worldwide , for the iPLUTO project, (international PLexus oUtcome sTudy grOup.)

The goal of the iPLUTO study group is to define a universal dataset to evaluate upper limb function of children with a neonatal brachial plexus palsy, pooling results to enable multicenter studies. This study should help to create an international standard on how to evaluate the condition and express results of treatment. We have already contributed details of our evaluation system, which is regarded as very comprehensive, to the study the group designing the study.

Section D : Summary of Highlights (Celebration and Risk)

During 2015-16 the service has relocated into Scotland's newest purpose built children's hospital, and been provided with outpatients facilities that have been warmly received by our patients and their families. Theatre provision remains tight, but theatre facilities are excellent.
The move to electronic records has been challenging, but positive for long-term quality of care. Therapy provision has bedded in, with clearer lines of responsibility, and opportunities for shared care. The commitment of all the team members continues to ensure the success of the service. As well as those mentioned in the report the service also relies on the outpatient nursing and administration staff, operating theatre staff, and many other groups.

Attendance at the Narakas meeting (Europe's leading major nerve injury meeting) enabled cross-comparison with services throughout Europe and Northern America, and reflected well upon the Scottish service, with the exception of psychology provision and therapist-driven research on holistic outcomes. Plans to address these deficits are developing with the benefit of international collaborative and mentorship relations developed at the Narakas and other meetings (Canada, USA, Netherlands).

The service hosted a visit from the therapy team for the newly convened Swedish (Northern region) National Brachial Plexus Injury service, and received warm feedback on the quality of the service, and the education provided. Collaborative links have been developed and invitation to future joints meetings and service development cross-talk received.

Strongly positive feedback has been received regarding the Scottish Service from the Erb's Palsy Association.

Appendix

Teaching and Training Activity

25/2/16 - 27/2/16 Narakas Symposium, Brachial plexus. Barcelona.

Claire Murnaghan, Andy Hart, Tim Hems, and Nicky Hart (OT) attended this international symposium, which provided useful update and liaison with colleagues.

Tim Hems

10th July 2015 "What's getting on my nerves?"
TIPS & TRICKS IN HAND SURGERY COURSE,
WRIGHTINGTON HOSPITAL.
Included a session on OBPI.

22nd March 2016 Edinburgh Hand Surgery Course. Lectures on:
"Principles of management of peripheral nerve injury".
"Management of Brachial Plexus Injuries".
"Principles of tendon transfer".
Small group teaching on clinical examination of upper limb neurology.

Andy Hart

10th July 2015 "What's getting on my nerves?"
TIPS & TRICKS IN HAND SURGERY COURSE,
WRIGHTINGTON HOSPITAL.
Included a session on OBPI.

17-19th September 2015 Austrian Plastic Surgery Society Annual Meeting, invited lecture on the neurobiology of peripheral nerve injury.

16th October 2015 "Anatomy & Physiology of Nerve Injury" British Society for Surgery of the Hand Autumn Meeting.

20th October 2015 Pan-Scotland Teaching on Brachial Plexus Injury. A whole day programme covering all aspects of brachial plexus injury including a half day on OBPI.

1st March 2016 BSSH delegation to the Sudanese Plastic Surgery Society, included lectures on peripheral nerve injury (including OBPI), symposia and clinic based teaching (including on OBPI) to medical students and senior plastic surgeons.

Claire Murnaghan

11th Dec 2015	Teaching session Neonatologists Princess Royal Maternity Hospital
13th May 2016	CPD Connect: Cradle to Grave. Teaching to Primary Care Practitioners, including OBPI