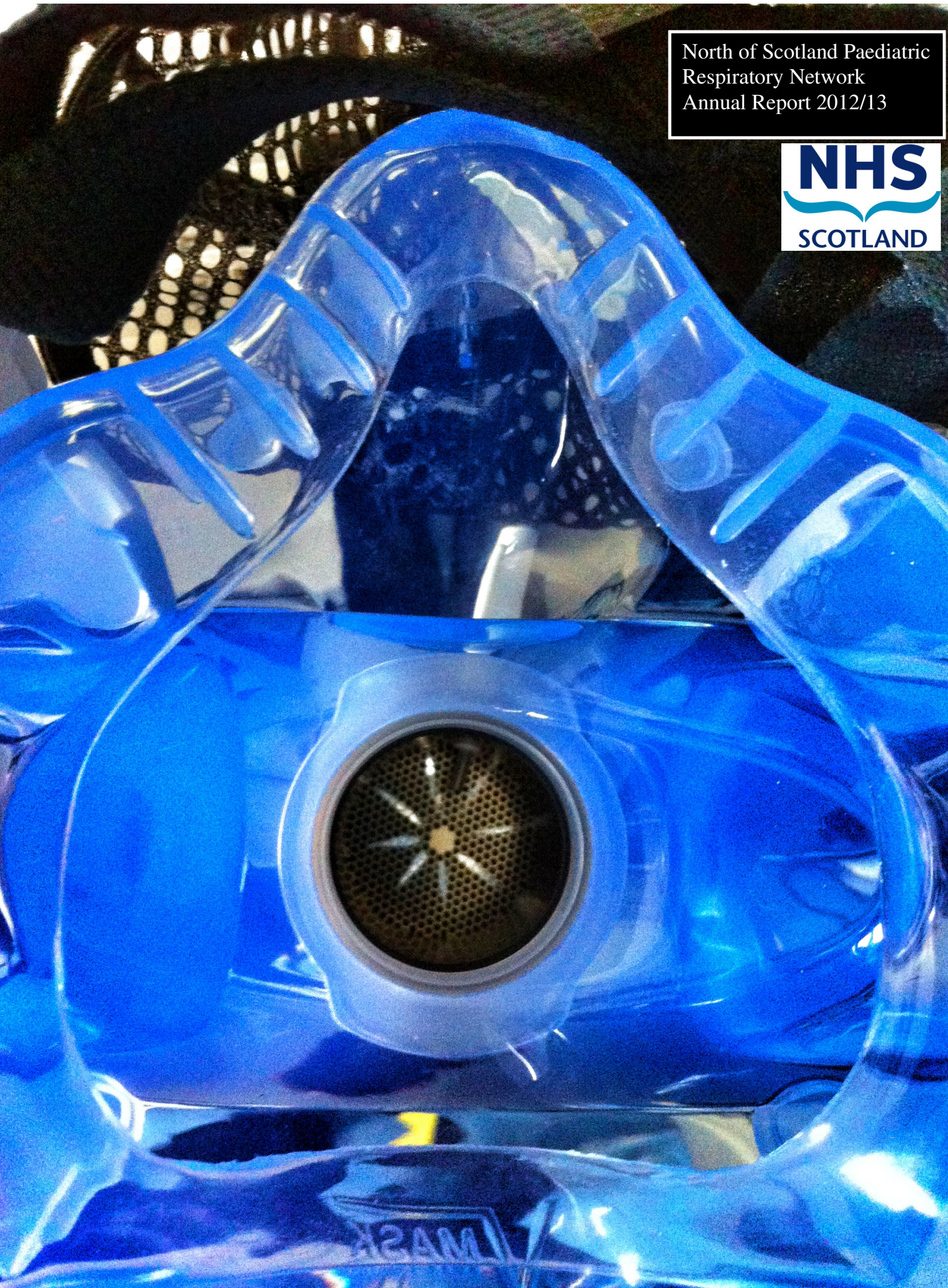
North of Scotland Paediatric Respiratory Network Annual Report 2012/13



Contents

1) Executive Summary

The North of Scotland Paediatric Respiratory Network (NOSPRN) is a North of Scotland Planning Group (NOSPG) Managed Clinical Network which delivers specialist inpatient and outpatient care including the diagnostic testing and monitoring of respiratory patients across the NHS boards in the North of Scotland.

The network has had significant staffing pressures in the last year with the loss of a number of key individuals from central roles.

The number of outpatient clinics delivered by the network was up 8.8% with 2176 appointments met. The network delivered 186 paediatric respiratory clinics, 74 paediatric CF clinics and 112 nurse-led clinics.

The number of flexible bronchoscopies performed rose by 18%.

The use of inpatient beds for CF care fell by 30% whilst the size of the network paediatric CF population fell by 14%.

The number of patients requiring Long-Term Oxygen Therapy, Non-Invasive Ventilation and Long-Term Ventilation was stable.

The Respiratory team at Ninewells Hospital was successful in their application for £120,000 for new pulmonary function laboratory equipment.

2) Introduction: Delivering More With Less

Welcome to the second annual network report from the North of Scotland Paediatric Respiratory Network (NOSPRN). Over the past 12 months, we have enhanced and maintained service delivery in the face of significant staffing pressures.

Specialist services are highly dependent on the expertise of the multi-disciplinary team and paediatric respiratory services are no different. The NOSPRN has helped link the teams delivering these services with the aim of providing mutual support and further professional development for the benefit of our patients. We are critically dependent on a handful of very experienced individuals and by the end of 2012, our endeavour was to maintain services in the face of the loss of several key members of staff. These specialised roles are difficult positions to fill, even where alternative cover is provided, and the recruitment process can seem unfathomably slow at times.

Working side by side with local teams, NOSPRN enhanced the provision of the network's complex respiratory clinics with a 50% increase in the number of visits to Raigmore, supporting the CF clinic in Portree and progressing plans to launch network clinics in Shetland based on the successful model of the Orkney clinics. Additional clinical consultations have taken place by video-conferencing between network clinicians and patients out with clinic visits.

The physiological measurement of pulmonary function is integral to the monitoring of CF and complex respiratory patients. Negotiations have been progressing regarding updating pulmonary function equipment in the lung function laboratories in Aberdeen and Dundee. The Dundee lab will be substantially upgraded after winning a £120,000 medical equipment grant in 2012 which will enable cardiopulmonary exercise testing amongst other improvements to be available within the network. This is countered with the news that at the time of writing, Aberdeen has been without a pulmonary function technician for more than 12 months and the Dundee post has been vacant for over 3 months.

Therefore, this report presents a mixed picture of services under pressure under the unintended adage "Delivering More with Less".

Dr Jonathan McCormick
Clinical Lead for Paediatric Respiratory for the North of Scotland

3) Purpose of the Network

- The NOSPRN is a regional MCN managerially accountable to the NoS Regional Planning Group (NOSPG) covering a quarter of the Scottish population based in half the land mass of Scotland and includes 50% of Scotland's Children's Hospitals
- Our goal is to sustain services for children with respiratory conditions as locally as possible, support remote and rural services and work collaboratively across the region.
- CF is recognised as a national priority for investment and Complex Respiratory was highlighted as suitable for a MCN in a series of Scottish Government documents published during 2008-9.
- The network endeavours to promote greater communication, professional support, training opportunities and cross boundary working between professionals.
- The NOSPRN aims to improve access to specialist respiratory advice and management through frontline specialist respiratory nurses and AHPs.
- To grow the NOSPRN clinical footprint by providing more clinics in more locations, shortening the potential time to a definitive diagnosis.
- To establishing the sharing of best practice, advocate for improved availability and access of diagnostic services including physiological measurement, ciliary diagnostics, flexible bronchoscopy and sleep monitoring.

4) Plans for the Year Ahead

- Replacing the missing key roles in the multidisciplinary teams is the most urgent objective for 2013. Critically, this will allow the network's pulmonary function laboratories to reopen normally as this is having a direct effect on the network's effectiveness and efficiency. Emergency cover is being provided in both Aberdeen and Dundee. In Aberdeen, this utilizes the time of the NDP funded Asthma Specialist Nurse holding back the development of improvements in services and nurse-led clinics for patients in NHS Grampian. In Dundee, cover from the adult pulmonary function technicians has been provided for paediatric clinics and other outpatient investigations, meaning that on occasion, children have to share waiting areas and facilities with adult respiratory patients away from a familiar child-friendly environment.
- CF nursing care has been under significant pressure with the resignation of the CF Specialist Nurse in Aberdeen in October 2012. This post is always central to the CF team's activities and anchors the team. The Specialist Nurse forms the first point of contact for our families. The role is not one easily filled by secondment as it relies on continuity and significant experience but those nurses who have stepped into these positions have risen to the challenge. Acting cover for the Tayside's CF Specialist nurse has been provided since September 2012 to cover for long-term sick leave, for the CF Dietitian post, emergency cover has been provided for long-term sick leave and acting cover for Maternity leave has been provided for the Tayside CF Psychologist. NHS Highland do not currently receive cover for the loss of their CF Dietitian. Returning the CF teams to full strength in 2013 must be a priority as this has the potential to adversely affect CF patients' long-term outcomes.
- Service developments in 2013 include the commencement of specialist paediatric respiratory clinics on Shetland to add to the clinics already running in Orkney, Raigmore and Skye.

- Lay involvement in the monthly PRISM group will be addressed with the invitation of Elaine Carnegie from Asthma UK.
- Difficult Asthma meetings will be introduced. These will be bimonthly videoconference meetings of the respiratory teams open to members of NOSPRN. Attendance is expected to include the respiratory consultants, respiratory specialist nurses, physiotherapists, psychologists, pulmonary function technicians and students from all disciplines. Each centre will present one case for discussion within the hour and attempt to draw up fresh patient management strategies based on the discussions.

5) Network Governance

The advantages of the NOSPRN include enhanced training opportunities for staff, more efficient use of resources and an increased capacity for service delivery and the management of complex patients resulting in improved services for children with respiratory conditions.

One of the recognised factors in our success has been a strategic design in network functioning of non-hierarchical partnerships between staff in similar roles which has helped shape the network's distinct identity, rather than a centralist model of specialists providing an outreach service. The integration of teams through shared working in clinics, or through collaborative educational initiatives via videoconference such as the CF annual review meetings or network respiratory teaching has helped to negate barriers and promote professional support amongst all grades of staff who might previously have worked in isolation. This demonstrates the effectiveness of the network as a cooperative entity as well as delivering benefits at an organizational level through shared governance.

Monitoring network activity has been implemented through the collection of quarterly activity reporting that forms the measurement of progress reported in the annual report. The National Services Division Clinical Audit Tool has been presented as a method of recording activity for managerial and audit purposes, however, the model to date has been cumbersome and unsuitable for NOSPRN's activities. Plainly, the quarterly data reporting system appears to have greater scope without incurring

the costs involved of designing software for the Clinical Audit Tool so this option was rejected.

Cross boundary working comes with its own challenges with regards to accountability and continuity with visiting clinicians sometimes reliant on other members of staff for access to results and IT systems in other centres. NOSPG devised a useful draft document (North of Scotland Framework for tertiary paediatric clinics) on the administration of tertiary clinics within an MCN in line with the Paediatric Sustainability Review prepared by Dr Zoë Dunhill. This recommends that a named local paediatrician being the named lead for the child and acting as a link between the visiting consultant and responsible for arranging investigations and acting on and disseminating results.

6) Network Activities

i) Specialist Clinics

Specialist respiratory and CF outpatient clinics occur across the network bringing specialist advice close to patients by delivering services in their local hospitals. This can shorten the time to a diagnosis by offering quicker access to specialist investigations such as flexible bronchoscopy. In 2012, the network delivered 357 clinics (up 8.8%) and 2176 appointments were met (up 3.1%). Disappointingly, there were 410 appointments recorded where patients did not attend, which was the equivalent of 15.9% (a rise of 22.8% on the absolute number of missed appointments in 2011). However, for comparison with another specialist service, the Paediatric Cardiology Clinic at Ninewells reported a DNA rate of 17.3% over the year September 2011 – September 2012.

Team Skye: Dr David Goudie, Dr Jonathan McCormick and Sheila Gibson at the Portree CF Clinic, Isle of Skye in April 2012

Specialist clinics facilitate access to the many disciplines that support the care of children with respiratory disorders including respiratory physiotherapy, dietetics, clinical psychology, pulmonary physiology and specialist nursing. Joint clinics for Highland increased by 50% in 2012, including undertaking a CF clinic on the Isle of Skye and Respiratory Clinics will commence in Shetland in early 2013. Nurse-led asthma clinics are delivering additional opportunities to reinforce inhaler technique, written asthma plans and emergency advice as well as offering further opportunities for clinic review.

Paediatric Respiratory Clinics in 2012

Attendance data were recorded from the following Paediatric Respiratory Clinics:

- RACH Nurse-led Respiratory Clinic
- RACH Respiratory Clinic
- RACH CF Clinic
- Orkney Respiratory Clinic
- Raigmore Complex Respiratory Clinic
- Raigmore CF Clinic
- Raigmore Allergy Clinic
- Raigmore Nurse-led Respiratory Clinic
- Ninewells General Respiratory Clinic
- Ninewells Chronic Respiratory Clinic
- Ninewells Nurse-led Asthma Clinic
- Ninewells Neuromuscular Respiratory Clinic
- Ninewells Respiratory Transition Clinic
- Ninewells CF Clinic
- Ninewells CF Transition Clinic
- Perth Royal Infirmary Respiratory Clinic
- Perth Nurse-led Asthma Clinic

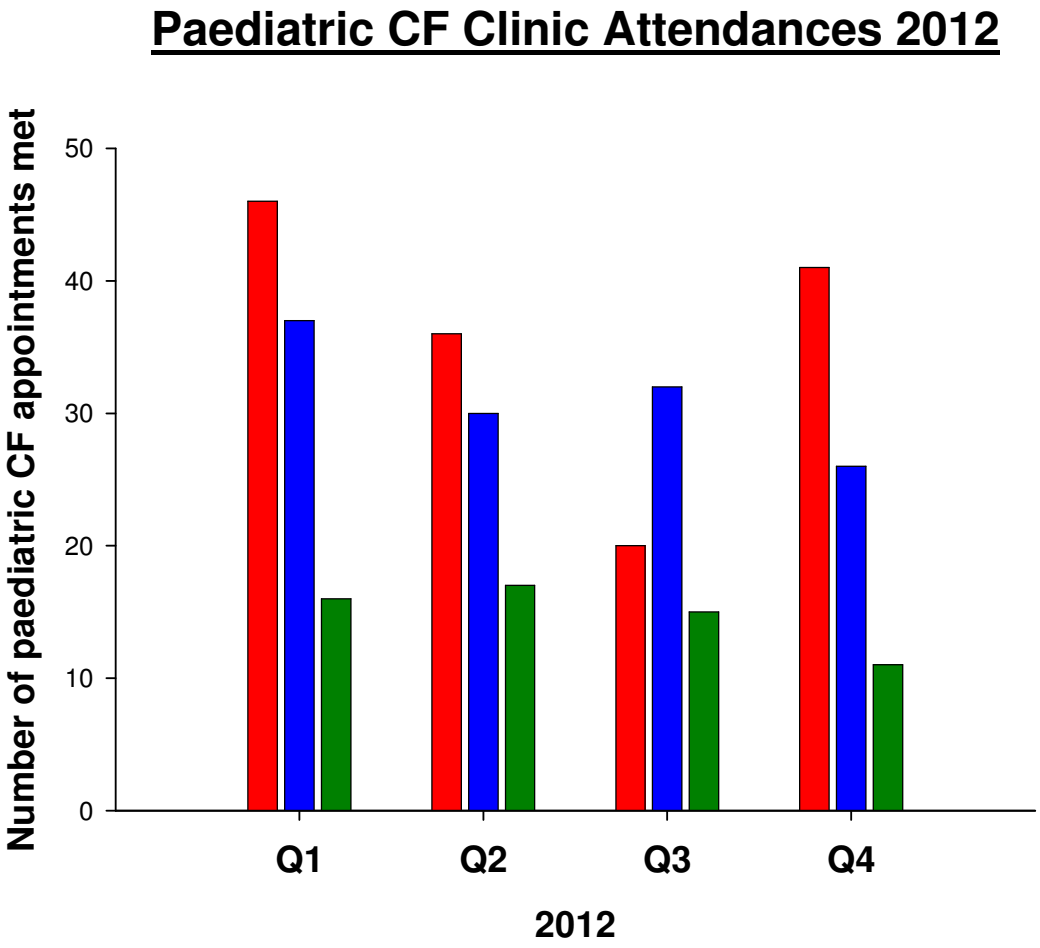


Figure 1 There were 74 paediatric CF clinics and 327 CF appointments were met. Attendance was excellent with only 13 appointments where the patient did not attend (3.8%) (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

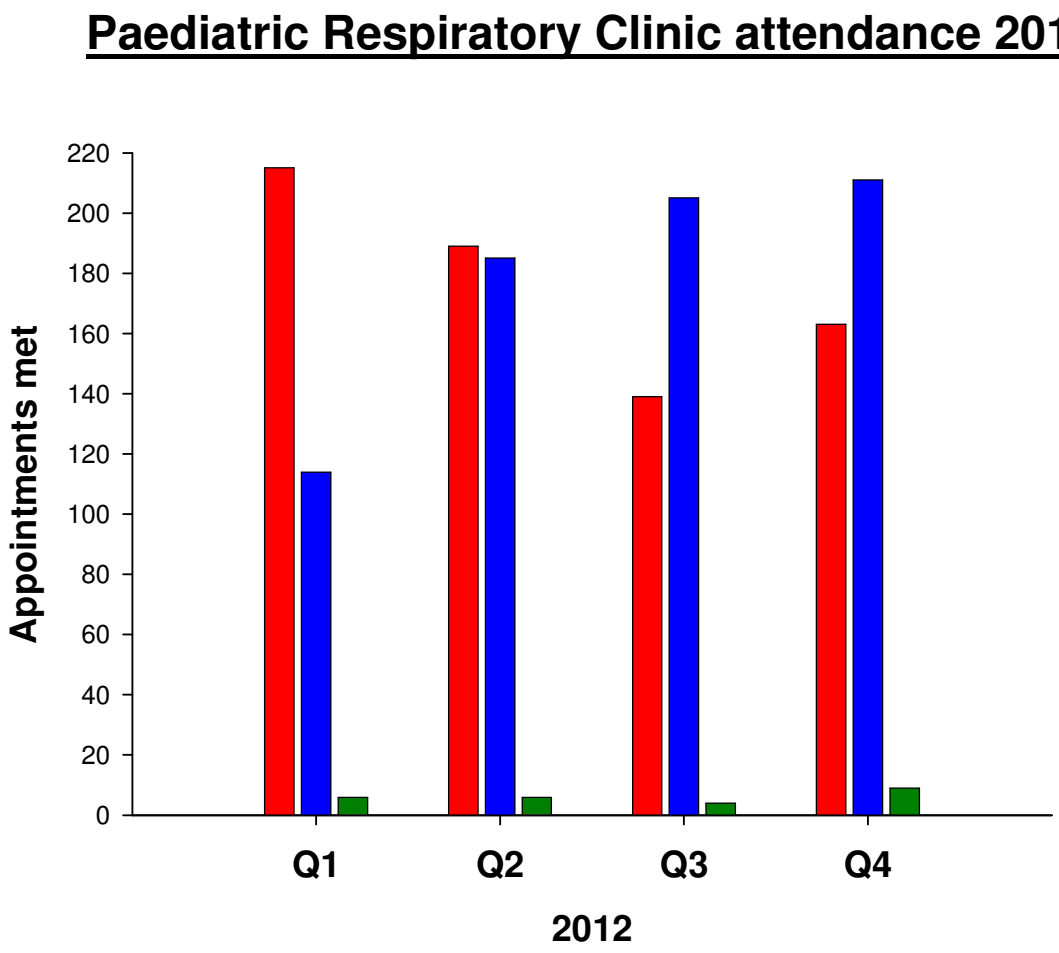


Figure 2 There were 186 paediatric respiratory clinics (up 31%) and 112 nurse-led clinics across the network (up 29.3%) and 1907 appointments were met (up 17.1%). Overall, there were 318 missed appointments in the respiratory clinics (19.5% up from 16.1% last year) and 106 missed appointments in the nurse-led clinics (18.7% down from 21.8% in 2011). (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

ii) Transition Clinics

Transition of CF patients to adult services is widely seen as an exemplar of how transition should be approached. Joint working with the adult multi-disciplinary team exists for patients seen in Raigmore, RACH and Ninewells. Each centre has a slightly different method of accomplishing transition and therefore there is no commonly agreed age for transition (usually this is tailored to the individual young person's situation, maturity and readiness for transition), nor is there a specified duration of the transition process. However, this is understandable for these services have developed in isolation rather than as a result of network activity and each service has built the service that works best for their locality, staffing and patient population. The Raigmore CF team is joined by the outreach service of adult CF physicians from Edinburgh, although there is good continuity with specialist nurses and other allied health professionals caring for both the paediatric and adult CF populations in Highland. RACH patients transfer to the adult service during a cluster of summer school holiday clinics at Foresterhill. The Ninewells adult CF team has a full team based in the hospital as part of a shared care arrangement with Edinburgh and Dr Helen Rodgers travels up to Dundee on a weekly basis and joins the transition clinic with the paediatric team.

With greater networking, additional transition services are developing. In Ninewells, the Respiratory transition clinics took place throughout 2012, predominantly for young asthmatic patients and for a number of patients with chronic

respiratory problems. These were in response to the recognition that many adolescent patients were being referred back to the adult respiratory physicians after discharge from the paediatric team and often only required a single visit. Additionally, complex patients that clearly required follow-up in the adult clinic had previously been transferred by a single referral letter, and a new transition clinic offered the prospect of a detailed handover of medical and nursing information. Members of the NoSPRN attend twice yearly neuromuscular/respiratory clinics in Dundee and have attended the neuromuscular/respiratory transition clinic held jointly with the adult team led by Dr Bateman from Edinburgh.

iii) Bed Occupancy by Cystic Fibrosis patients

Cystic Fibrosis (CF) patients are most commonly admitted for intravenous (IV) antibiotics for acute exacerbations or for elective courses of IV antibiotics. Courses usually last two weeks and elective patients may receive this treatment four times per

year. Many families are willing to be taught the technique and can deliver IV antibiotics at home which can be less disruptive to family life but places the onus of this additional aspect of delivery of care on the parents. CF inpatient care fell 30% from 2011 (722 nights) to 2012 (505 nights), measured by the number of nights a hospital bed was occupied by a child with CF. Ninewells had the highest rate of admission per patient population across most of the year.

Due to factors including a higher than usual number of adolescents transferring to the adult clinic, a low number of new patients and some migration from the region, the number of paediatric CF patients fell by 14% in 2012 from a peak of 78 in Q1 to 67 in Q4. There was one paediatric CF death in Aberdeen. In addition to the staffing pressures on the CF nurse roles, provision of physiotherapy services in CF (and respiratory) remains inadequate resulting in fewer home visits, outpatient assessments and a lack of time to attend NOSPRN meetings and training opportunities. Each night a child with cystic fibrosis spent in hospital was determined and plotted over a denominator of the known paediatric CF population for that service, giving a value for bed occupancy nights per patient. In reality there are many paediatric CF patients who seldom need hospital admission, so this does not provide a useful clinical score, nor a means of interpreting differences, merely a means of comparing admission rates between centres. Comparison rates of IV antibiotics delivered at hospital and home for CF are shown.

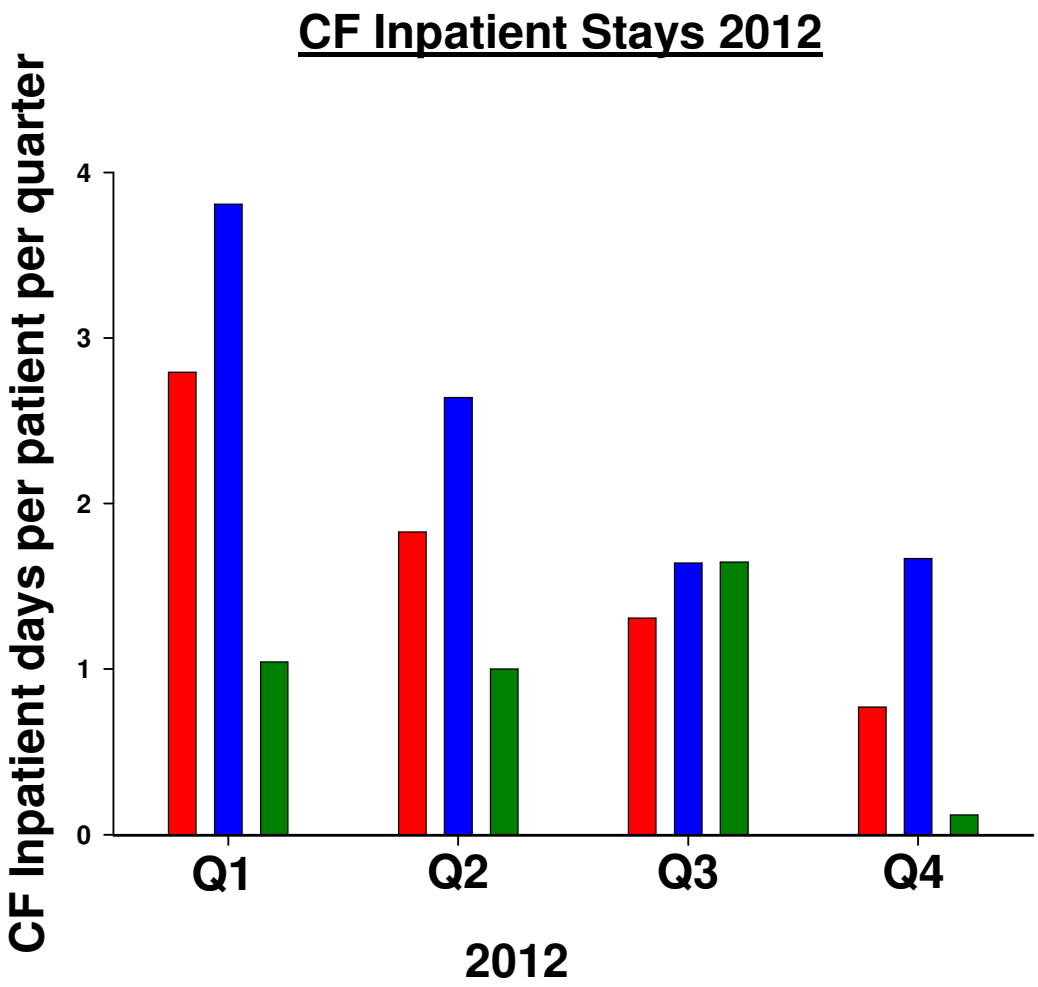


Figure 3 Clinical activity requiring inpatient facilities can vary when new patients are diagnosed or older patients require hospitalization for acute exacerbations. Total number of inpatient nights = 505. Totals for each unit: RACH 188 nights (6.8 nights/patient/year - a rise of 0.8 nights/patient/year), Ninewells = 246 (9.8 nights/patient/year – a fall of 0.5 nights per patient per year), Raigmore = 71 (3.8 nights/patient/year - a fall of 9.2 nights/patient/year). (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

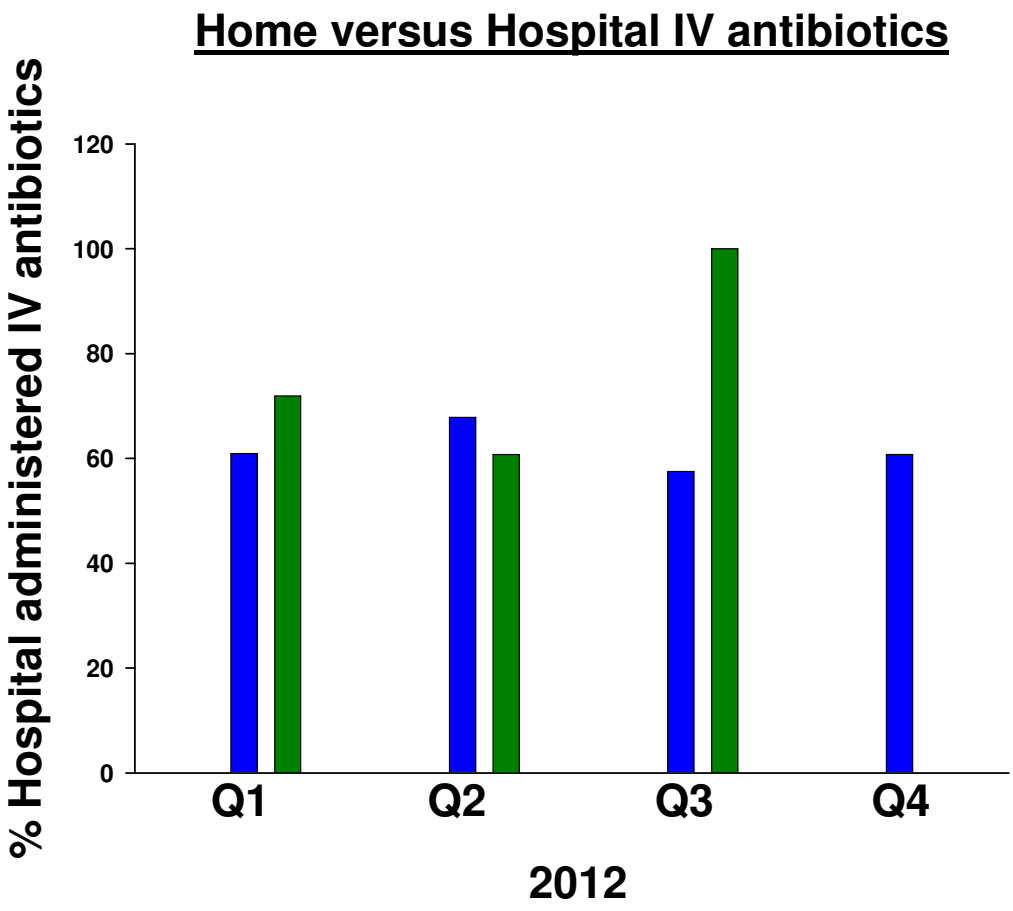


Figure 4 Certain patients will only receive IV antibiotics in hospital as home IVs are not an option. Individual centres results can vary due to acute exacerbations and patients entering or leaving the paediatric service with different clinical needs. Total number of days on IV antibiotics = 429 (excluding RACH data which was not available due to staff shortages). 2012 totals per centre: RACH = unknown, Ninewells = 341 days (13.64 days on IVs/patient/year) which was down 22.3% on 2011, Raigmore = 88 days (5.18 days on IVs/patient/year) which was 62.1% down on 2011. (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

iv) Sweat Testing 2012

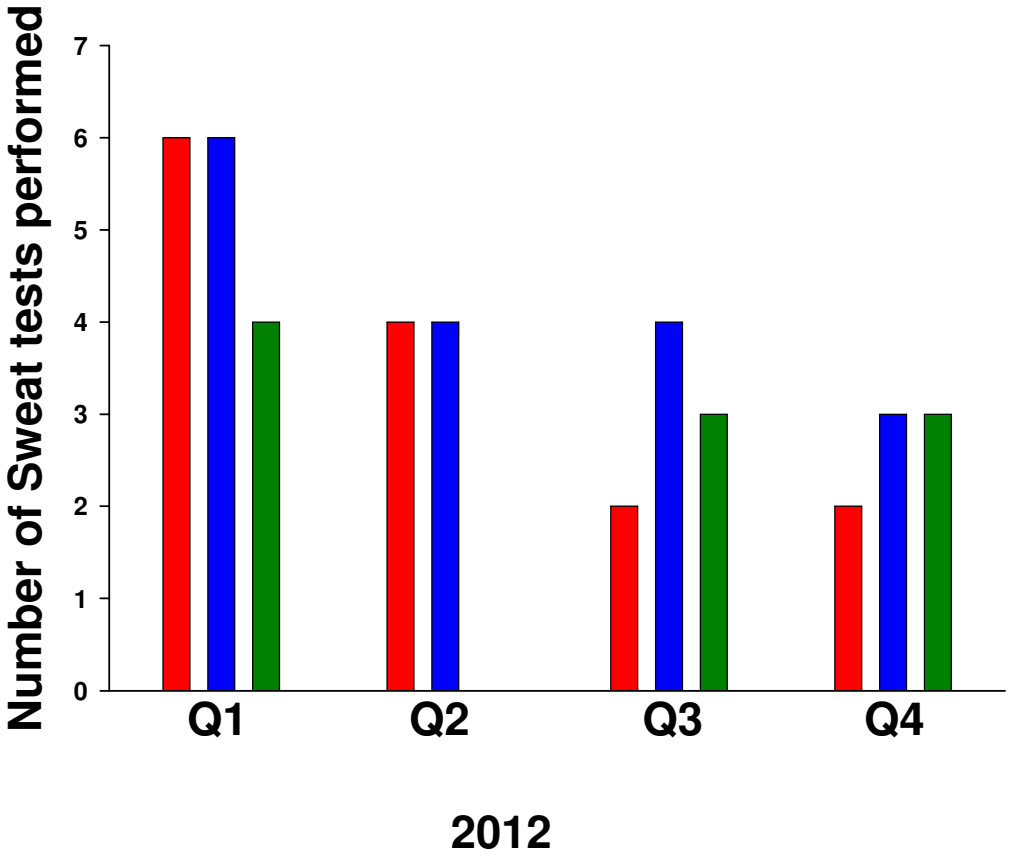


Figure 5 – In 2012, there were 41 sweat tests performed across the region which was down 42.3% on the year before; RACH 14 (down 48.1% yoy), Raigmore 10 (down 16.7% yoy), Ninewells 17 (down 46.9% yoy). Regular performance of sweat tests are important to maintain technical skills especially in light of changes to the national newborn screening programme and for quality control purposes and the drop in new patient numbers may account for fewer sweat tests being performed (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

v) Flexible Bronchoscopy

RACH theatres are the only location where flexible bronchoscopy services are provided within the NoSPRN. A monthly elective theatre list was established in 2009 (on the first Thursday of every month) and patients have been referred for bronchoscopy and broncheoalveolar lavage from clinics in Perth, Dundee, Elgin, Inverness, Orkney and Shetland. Colleagues from Perth, Elgin and Inverness have travelled to Aberdeen to attend the list for experience. There were 26 flexible bronchoscopies undertaken during 2012, and increase in the number of procedures of 18% (Q1 - 5, Q2 - 7, Q3 – 11, Q4 – 3).

March 2013 - Delivery of the new treadmill to the Ninewells Paediatric Pulmonary Function Laboratory as part of the successful MEG bid.

vi) Patients requiring Long Term Oxygen 2012

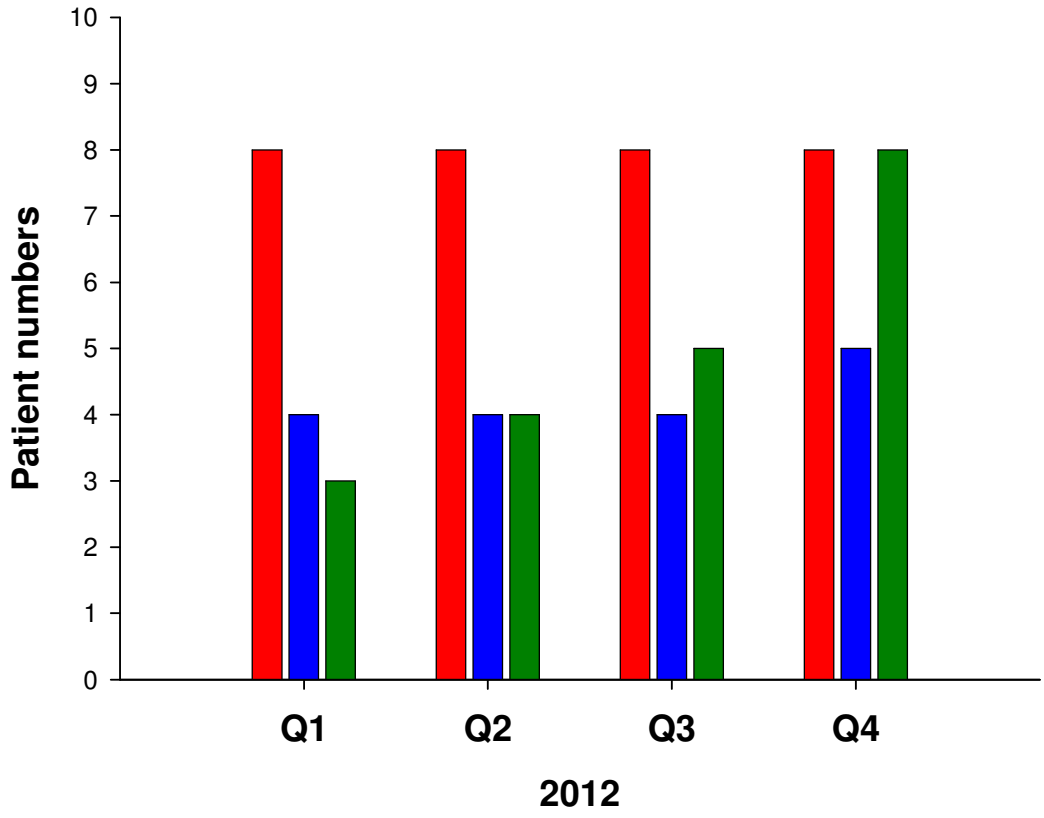


Figure 6 The numbers of children prescribed long-term supplementary oxygen were fewer than in 2011 though the number of children requiring long term oxygen in Highland increased throughout the year. Initiation of long term oxygen is usually the decision of a paediatric respiratory consultant or consultant neonatologist. (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

vii) Non-Invasive Ventilation 2012

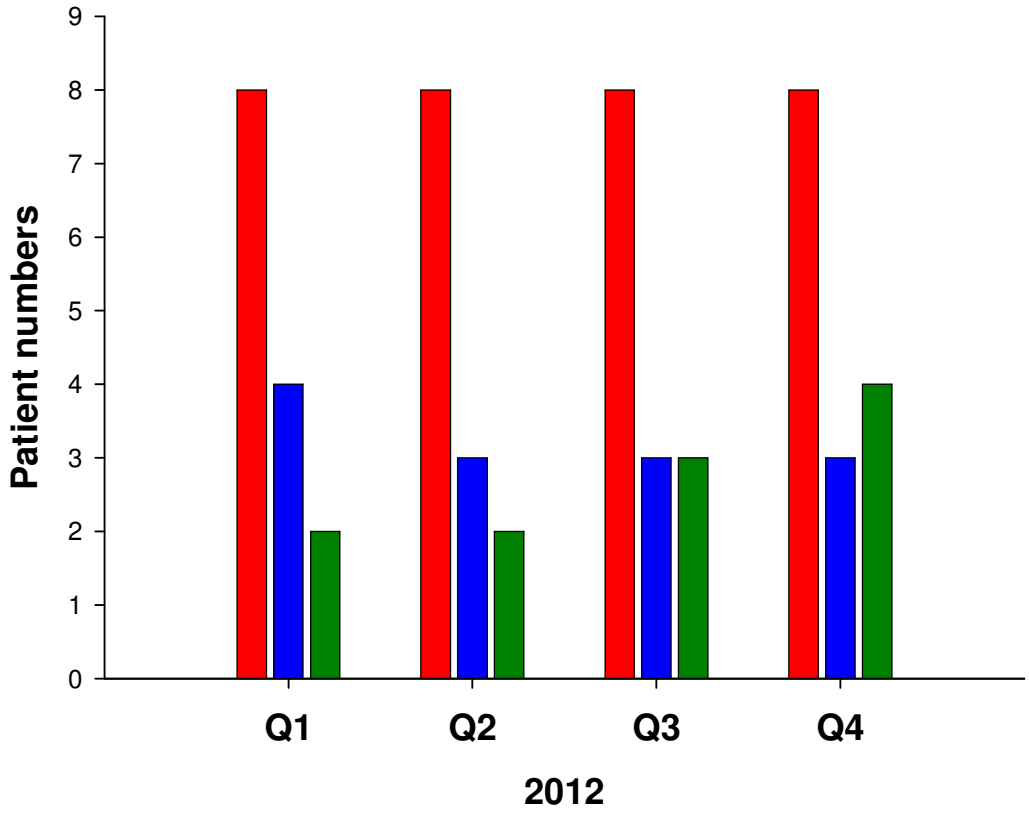


Figure 7 The number of children receiving non-invasive ventilation remained stable with up to 15 patients, slightly lower than 2011 figures (where the maximum was 18 patients). This method of respiratory support is becoming more widespread and has cost implications due to equipment purchase, maintenance and training and support of parents, staff and carers. (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

viii) Invasive Ventilation 2012

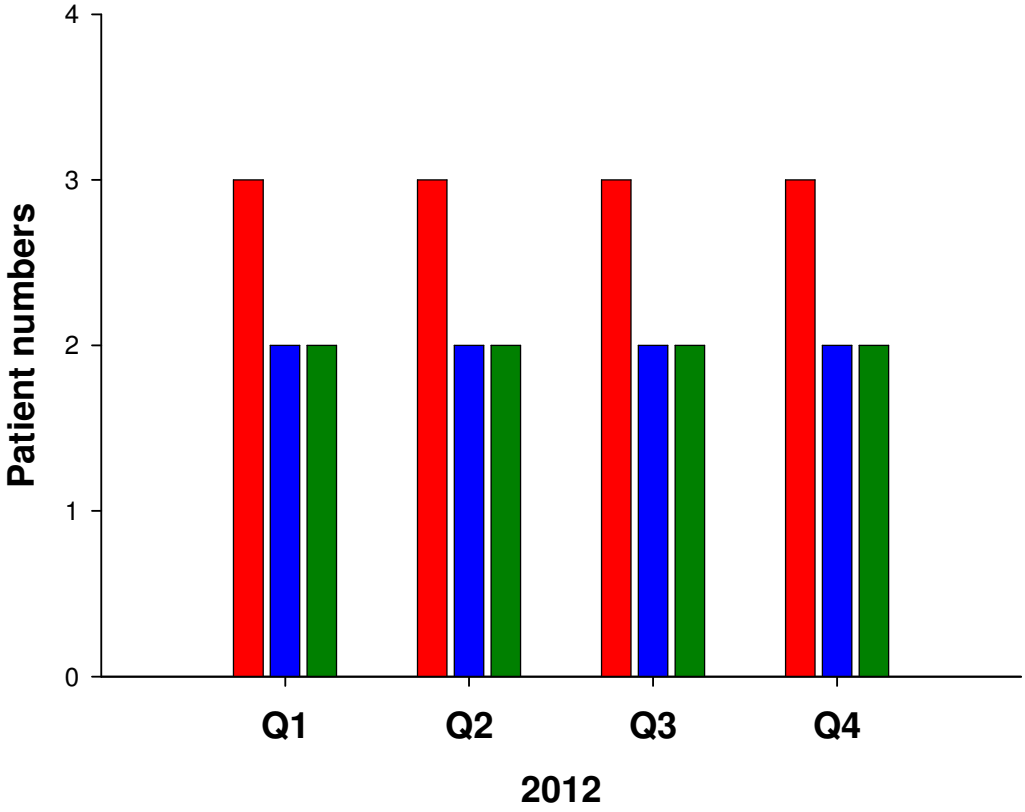


Figure 8 The number of children receiving invasive ventilation remained stable over the year. Many of these patients have shared care arrangements with Scotland's two ventilation centres in Edinburgh and Glasgow. (Key: Red = RACH, Blue = Ninewells, Green = Raigmore).

ix) Teaching Sessions

NOSPRN has mapped the teaching and training opportunities available within the network for all members of staff. This is intended to be a resource for new and existing members of the network. The fortnightly paediatric respiratory network teaching session has been established across the network and sessions have been led by various disciplines from medical students, trainee paediatricians, specialist nurses and consultants. The following training opportunities are brought to the attention for the professional development of members of the network.

NETWORK		
PRISM (Paediatric Respiratory Inter-region Service Meeting) by VC	2nd Tuesday of the month – 11-12.30 pm	Aberdeen – OPD Meeting Room Inverness – Children's Ward Ninewells – OPD Quiet Room Elgin – Ward 3 Day Room, Dr Gray's
North & East Respiratory Educational Meetings by VC	2nd & 4th Thursday of the month – 12.45-2 pm	Aberdeen – OPD Meeting Room Inverness – Children's Ward Ninewells – OPD Quiet Room
Difficult to treat asthma meeting by VC	1st Wednesday of month - 6 per year – February/April/June/August/ October/December – 10-11 am	Aberdeen – OPD Meeting Room Inverness – Children's Ward Ninewells – OPD Quiet Room
CF Annual Review meeting by VC	2nd Wednesday of month – 10-11am	Aberdeen – OPD Meeting Room Inverness – Children's Ward Ninewells – OPD Quiet Room

TAYSIDE	
Nursing	
PLT sessions with Primary Care (adults/paediatrics)	Organised with Tayside Respiratory MCN (yearly)

SCOTLAND	
SPARCNS – Scottish Paediatric Asthma & Respiratory Clinical Nurse Specialist Group (2 per year by VC)	Twice per year
SPRING	Three times per year
Children's and Young People's Allergy Network (CYANS) Study day	April 2013

(Spring/Summer)	
Scottish CF Group Annual Meeting	May 2013
Scottish Paediatric Society Summer Meeting	May 2013
CF Exchanges	November 2013
Scottish Paediatric Society St Andrew's Day Symposium	November 2013

UK	
Northern Paediatric Respiratory Forum	Twice yearly, next meeting April 2013
CF Medical Conference	May 2013
BPRS Summer Symposium	June 2013
RCPCH Spring meeting	June 2013
BTS Summer meeting	June 2013
Respiratory Study day (annual/Solihull)	June 2013
Practical Paediatric Allergy, Leicester	July 2013
NPRNG – National Paediatric Respiratory Nurse Group	October 2013
RSM Cystic Fibrosis Meeting	November 2013
BTS Winter meeting	December 2013

International	
American Thoracic Society conference	May 2013
European Cystic Fibrosis meeting	June 2013
International congress on paediatric pulmonology	June 2013
ERS Paediatric Assembly	September 2013
North American Cystic Fibrosis Conference	October 2013
Specific ERS courses (including online)	Throughout the year

x) Research & Audit

The network continues to be successful in collaborating in a number of multi-centre studies. Only Dr Turner has any permanent academic sessions for research in their job plan. The following activities have been undertaken during the last year:

Audit of Pseudomonas aeruginosa eradication – Dr Brooker, RACH

Audit on oxygen dependent neonates - Dr Nath, RACH

Audit of CF Psychology service use – Dr Cockburn, Ninewells

BIDS – Ninewells and RACH teams participated in year two of this HTA-funded Scottish multi-centre study which aims to assess whether therapeutic oxygen makes any difference to how quickly infants recover from bronchiolitis. The local Principal Investigators are Dr Jonathan McCormick (Ninewells) and Dr Steve Turner (RACH).

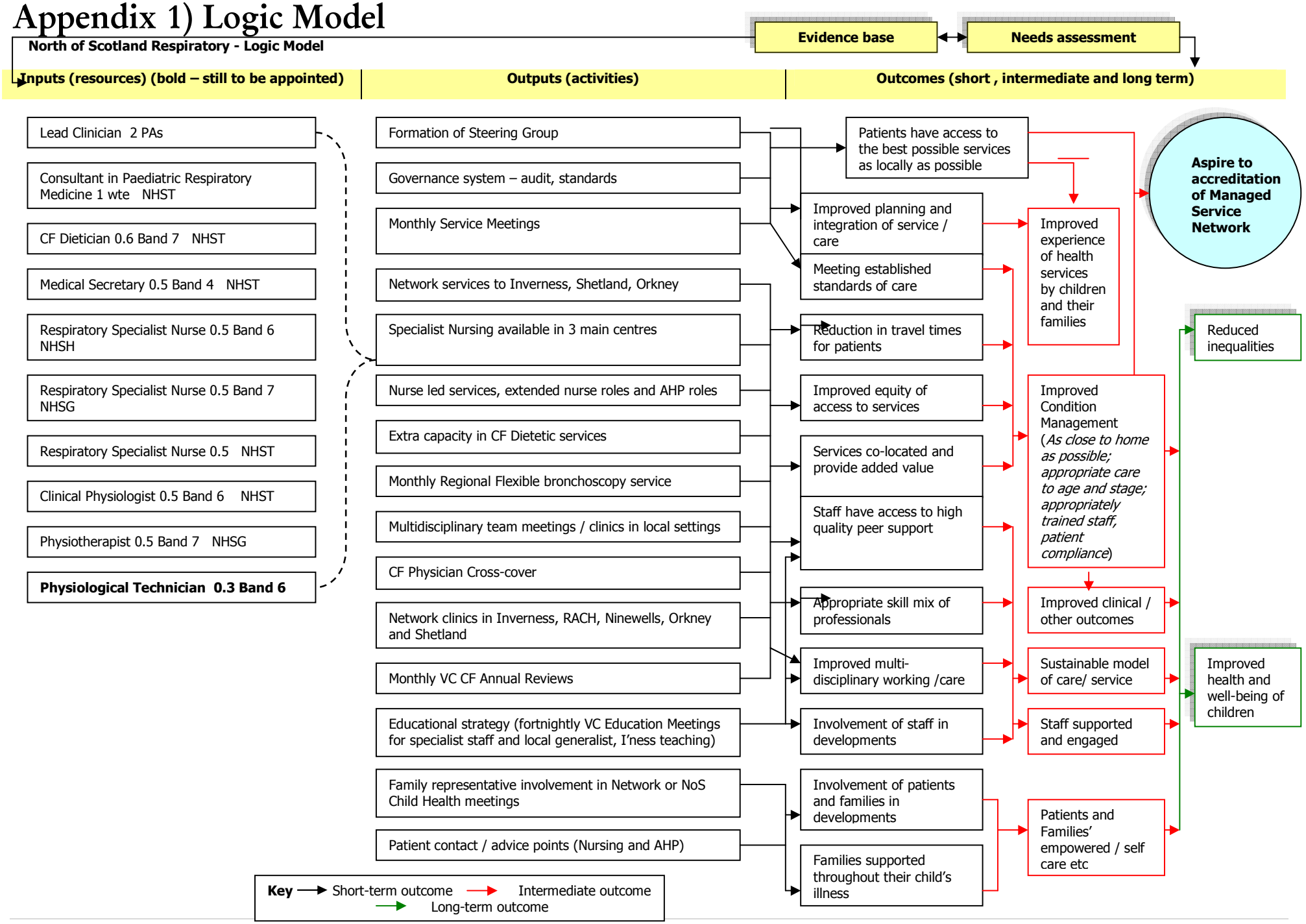
An observational study of matrix metalloproteinase (MMP)-9 in Cystic Fibrosis – Prof Devereux completed the longitudinal data on these patients and a paper is being prepared for submission to the ERJ.

CF Trials – All three centres reviewed their patient populations and invited appropriate patients to consider recruitment to the following trials: i) Recruitment to gene therapy run-in trial ii) Ivacaftor use in 2-5 year olds with G551D gene mutation iii) Ivacaftor use in 6 years and upwards with R117H gene mutation.

ERS Symposium - Dr Turner presented work on fetal origins of respiratory disease and an ENT poster related to breathing and trends in obesity and asthma over the past 50 years.

Appendix 1) Logic Model

North of Scotland Respiratory - Logic Model



Appendix 2) NOSPRN Staffing Jan 1st 2013

INVERNESS					
	Medical Secretary				
	Consultant Paediatrician				
	Respiratory Nurse Specialist	22.5	6	√ 0.5	
	CF Nurse Specialist				
	CF Nurse Specialist				
	CF Physiotherapist				
	Senior Paediatric Physiotherapist				
	Paediatric Dietician				

DUNDEE					
	Medical Secretary			√ 0.5	
	Consultant Paediatric Respiratory Medicine – Clinical Lead	f/t		√	NoSPG Clinical Lead
	Consultant Paediatrician	f/t			Responsibilities in Dundee and Perth
	Respiratory/Research Nurse – Asthma	21.5		√ 0.5	Perth based
	Acting Clinical Nurse Specialist – Cystic Fibrosis	f/t			Acting cover for long-term sick leave
	Respiratory Nurse – Asthma	f/t			
	CF Psychologist	4			Trainee Psychologist providing maternity cover for CF Psychologist
	Dietitian (CF)	21	7	√ 0.6	Long term sick leave
	Pulmonary Function Technician	f/t		√ 0.5	Cover for clinics from adult lab
	Physiotherapist	0.6 WTE			
	CF Data Clerk				
	Community Children's Nurse				

ABERDEEN					
STATUS	*POST*	*HRS*	*Band*	*NDP*	
	Medical Secretary	p/t			
	Consultant Paediatric Respiratory Medicine	f/t		√ 0.2	Clinical Lead for CF National MCN
	Consultant Paediatrician	f/t			Clinical Lead for Elgin

	Consultant & Senior Lecturer in Child Health	f/t			
	Clinical Nurse Specialist – Cystic Fibrosis	f/t	7		
	Clinical Nurse Specialist – Complex Respiratory	f/t	7		
	Clinical Nurse Specialist – Community Children's Nurse	28	7		
	Cleft Lip & Palate/Complex Respiratory Nurse	37.5	6	√	0.5 for each
	Physiotherapist	18.75	7	√ 0.5	
	Pharmacist – CF	0.1 WTE			
	Pulmonary Function Technician				

Empty Posts:

	Location	Post	Vacant from	Expected recruitment date
	RACH	Pulmonary Function Technician	March 2012	Awaiting advertisement
	RACH	Clinical Nurse Specialist – Cystic Fibrosis	October 2012	Appointed March 2013
	Raigmore	Paediatric Dietician	December 2012	Awaiting advertisement
	Ninewells	Pulmonary Function Technician	December 2012	Awaiting advertisement

Appendix 3) Work Plan

RAG status	Description
RED (R)	Little/no progress been made to date to achieving network objective/standard
AMBER (A)	Significant progress been made to date to achieving network objective/standard, however further work is required to fully achieve the network objective
GREEN (G)	The network has been successful in achieving the network objective/standard

Objectives	Outcome	Tasks	Time-scales	RAG Status
PATIENT CENTRED, EQUITABLE, SAFE, EFFICIENT Formalise a Paediatric Respiratory Network Group	Identify membership across all North of Scotland Health Boards and ensure regional priorities for the network	• Develop role and remit of group • Agree upon annual work plan • Develop a performance monitoring framework to monitor the implementation of the work plan • Collate twice yearly Exception Reporting for Scottish Government Health Department	2011-2013	J McCormick R Brooker C Duncan/
EFFICIENT: Produce a network Annual Report	Description of network improvements and progress using data collected	• Agree data to be collected – network staff to record on an ongoing basis • Draft annual report by end of March 2013	2012-2013	J McCormick
PATIENT CENTRED, EQUITABLE: Implement planned outreach out-patient clinics across the North	Ensure patients have access to a local, safe sustainable, high quality service	• Increase tertiary Inverness clinics from 4 to 6 per year • Discuss development of Islands' specialist respiratory clinics • Introduce RACH Asthma education clinics • Develop monthly VC Cystic Fibrosis annual reviews	2011-2013	J McCormick R Brooker M Osman A Webb R Leece J Hughes L Blaikie

EQUITABLE, TIMELY, PATIENT CENTRED: Map, develop and agree care pathways/ protocols/guidelines	Develop care pathways, protocols and guidelines to ensure consistency across the network, enhancing links to national/other regional networks	• Compile care pathways and flow charts of patients through the network • Work in progress on Sleep studies and Flexible Bronchoscopy • Link with national/regional groups to inform existing or new network protocols, guidelines, etc	2011-2013	J McCormick R Brooker
PATIENT CENTRED, **EQUITABLE**: Develop information for patients and families	Enhance patient/families' knowledge of service and of disease information	• Develop patient information and written asthma information • Investigate Web possibilities to develop network website	2011-2014	J Hughes R Leece G Milne E Carnegie
EFFECTIVE: Continue to develop education framework	Scope current training provided, training needs of network staff and develop a planned curriculum of Continuing Professional Development	• Build on fortnightly network teaching sessions by VC • Identify service and staff needs • Map educational opportunities – local/regional/national	2011-2013	J McCormick C Duncan
EQUITABLE: Set up VC consultations with patients in remote locations	Increase tertiary support to improve local access and to reduce staff/patient/family travel time and reduce costs	• Where appropriate, use VC to review network patients between centres	2011-2013	R Brooker A Webb J Hughes
SAFE, EFFECTIVE, EQUITABLE: Audit clinical care	Measure performance indicators in children's care and review parents' and carers' experiences of service provided	• Increase audit into aspects of care and encourage collaborative audit within the network	2011-2013	All

NOSPRN 2013