

Consultant Delivered Care

An evaluation of new ways of working in Paediatrics

April 2012



Royal College of
Paediatrics and Child Health

Leading the way in Children's Health

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List of abbreviations

AOMRC	Academy of Medical Royal Colleges
CDC	Consultant Delivered Care
CESR	Certificate of Eligibility for the Specialist Register
CPD	Continued Professional Development
DH	Department of Health
EWTD	European Working Time Directive
EWTR	European Working Time Regulations
GMC	General Medical Council
O&A	Observation and Assessment
OOH	Out of hours
PA	Programmed Activity
PANDA	Paediatric Assessment and Decision Area
PbR	Payment by Results
PICU	Paediatric Intensive Care Unit
POAU	Paediatric Observation Assessment Unit
RCPCH	Royal College of Paediatrics and Child Health
RSWC	Resident Shift Working Consultant
SHO	Senior House Officer
SPA	Supporting Professional Activity
SSASG	Staff, Specialty and Associate Specialist Grade
SSPAOU	Short Stay Paediatric Assessment and Observation Unit
SUI	Serious Untoward Incident

Foreword

Paediatrics is a hands-on specialty and this was one of the reasons I made this career choice. This hands-on nature manifests itself in many ways, not least through the presence of paediatricians and their ready availability to the children and young people they care for and the parents and carers who look after them. For example, paediatricians have led the way in 7/7 hospital working, which all acute services should aspire to - all patients deserve the same expertise and quality of care on Sunday as on Monday. Outside hospital in the community, carers similarly have access to highly trained paediatricians around the clock for problems as diverse as palliative care and safeguarding.

At the same time the profile of the paediatric workforce is changing. Consultant numbers have increased slowly in recent years and it may be that fewer trainees will be required once we have met our target consultant workforce which still requires considerable expansion. Working time regulations have impacted on the balance between service provision and training in trainee careers and, in common with many other specialties, there will be more emphasis on consultant delivered care models and increased consultant presence.

If we are to continue to attract high calibre doctors to the specialty, and if we want those doctors to have enjoyable and fulfilling working lives, we must do our best to understand and share the reality of these new arrangements. The College has undertaken an initial six month project to evaluate these new working practices, in particular consultant delivered care, and this report, which I commend to you, summarises that project.

Professor Terence Stephenson
President
Royal College of Paediatrics and Child Health

Executive Summary

I.I Context

Paediatrics is, by its nature a 24/7 service. As every paediatrician, parent or carer knows the nature of childhood illnesses is that very often there is rapid progression of symptoms and increasing severity of illness in a very short space of time. This can be coupled with an inability of the child or young person to articulate their symptoms. Additionally, parents and carers expect, quite appropriately, to be able to speak to the consultant when a child or young person is unwell and admitted to hospital. The Royal College of Paediatrics and Child Health (RCPCH) has published a set of 10 acute service standards which highlight the need for every child and their family to have a senior and timely opinion¹. Although paediatrics has always been a senior 'hands on' service, many units are changing their service and workforce models of care to ensure that these standards are attained. Whilst this has always meant that consultants are visible and available on the wards during normal working hours, it is increasingly becoming the case that they are on site during the evenings and weekends. In some cases consultants are available and present in hospitals throughout the 24 hour period.

Paediatrics is delivered by trained doctors who are consultants or equivalent i.e. staff, specialty or associate specialist grade (SSASG) doctors, who are trained and assessed as competent in paediatric care as defined in *Facing the Future*¹. This project has focussed on the evaluation of consultant care. The career development of SSASG doctors is part of the College's future work programme.

I.II Service models

In a consultant led service model the consultant has responsibility for the management and care of the patient and can delegate clinical or administrative responsibility at his or her discretion². The consultant is the advocate of the patient in relation to their treatment and well-being. In a consultant led service the consultant undertakes scheduled sessional commitments during the normal working week and is available, with consultant colleagues, on a rota system 'on-call' outside those hours.

In a consultant delivered service the consultant is clinically responsible for the care the patient receives and will either provide hands-on care or closely supervise in the clinical setting all aspects of the care received by the patient. Care may be delivered by other members of the team but only under the supervision of the consultant. This model of care requires a consultant to be present in the hospital outside normal working hours and hence the term 'resident shift-working consultant' (RSWC) indicates someone working in this way.

I.III Evidence

This project builds on evidence which the RCPCH has already provided for Academy of Medical Royal College's (AOMRC) review of consultant delivered care (CDC) across all specialties³. In its response to AOMRC's call for evidence in respect of the 'benefits of consultant delivered healthcare'⁴ the RCPCH supported the principles in the Temple Report⁵ in respect of the provision of:

- Better day-time training
- Improved quality of care for patients
- Good quality handovers
- Better communication with patients

The RCPCH had stated that further research would be required to evaluate the benefits of such a service model as the evidence to support CDC models of care was sparse. As a result, using a mixture of quantitative and qualitative methods, site visits and interviews, the RCPCH

has undertaken a 6 month project to evaluate the impact of these new ways of working. The project has shown, at the sites visited, that consultant delivered care in a range of forms:

- Is a popular and well supported model
- Is believed by consultants and trainees to provide good quality training and access to teaching
- Is popular with nurses
- Improves team working
- Improves the quality of care
- Ensures good handovers
- Ensures continuity of care
- Can provide a good work/life balance

The key findings of the project are:

a. Amongst the trusts visited, compliance with four *Facing the Future* standards was high:

- 90.9% of trusts meet Standard 2
- 100% of trusts meet Standard 5
- 81.8% of trusts meet Standard 6
- 100% of trusts meet Standard 7

b. Clinical directors in 96.4% (134) of units reported that they operate a form of CDC;

c. 90.3% of the 139 units included in the survey have at least one consultant led handover per day;

d. Out of 53 people interviewed in the site visits, 79.2% (42) believe CDC is a good service model;

e. 14 of 17 RSWCs interviewed believe CDC is a good service model. Better decision making, reduced admissions, good teaching and on-the-job training were mentioned most frequently in the responses;

f. Fractionally under half, 48.3%, of clinical directors and RSWCs interviewed thought the service model was sustainable and 37.9% were not sure;

g. 83.3% of trainees interviewed think that their teaching is good or excellent in CDC models, and 75% rated their hands-on experience working with RSWCs as either excellent, very good or good;

h. The majority of responses from trainees indicated that the model has improved training, although there was concern that it may disempower trainees because consultants make the decisions;

i. Senior nurses most frequently mentioned that this way of working led to better team working, better decision making and better communication;

j. 61.5% of trainees believed that the presence of RSWCs had reduced the need to call in the second-on-call consultant;

k. Only 1 in 17 RSWCs stated that other members of staff treated them as junior to non shift-working consultants;

l. The proportion of vacancies on rotas in the sites we visited is far lower than the national average, 7.6% for Tier 2 compared with 20.4% recorded in the RCPCH national compliance survey conducted in 2010⁶

The project noted that 81.8% of trusts visited had Community Children's Nursing Teams (CCNTs) caring for children and young people with acute and chronic illnesses. This enables quicker discharge and care closer to home and facilitates achievement of the *Facing the Future* standards.

The scope of this project was limited by the time period and the number of sites visited. All visited sites operated a form of consultant resident working pattern. Sites which did not have a form of consultant resident working were invited to take part but did not respond within the timeframe of the project.

Outcomes from the project also raised a number of questions which will require resolution if the resident shift working consultant delivered care model is going to be sustainable in the long term. These are developed in the 'Discussion' section of this document and include:

- Should all consultants, regardless of age, work resident shifts throughout their career?
- If there should be an age cut-off, what should this be and how could a resident system and non-resident system co-exist?
- Can the model flex to accommodate a range of working styles and 'hands-on' working requirements?
- Can this model be part of a portfolio career?⁷
- How to ensure there are sufficient trainees to fill vacant consultant posts in the future?
- How is such a service to be funded?

I.IV Recommendations

1. The RSWC model is central to the achievement of the recommendations in *Facing the Future* and RCPCH data show that the number of resident shift working consultants is increasing. The RCPCH needs to ensure that medical students and trainees are kept fully informed of the CDC model and the shape of paediatric services in the future.
2. The RCPCH believes that the outcomes of the project could be applicable to other 24/7 specialties where the use of cross cover to provide the out-of-hours service is not appropriate, and believe that working on a collaborative project which includes, for example, the Royal College of Obstetricians and Gynaecologists, the Royal College of Anaesthetists and The College of Emergency Medicine would be productive. From stakeholder involvement work, there have already been strong indications from the other Colleges of their willingness to co-operate in such a project.
3. Robust and continuous workforce data collection and planning, such as the RCPCH biennial census, is the cornerstone of achieving the correct balance of trainees and consultants.
4. Short Stay Paediatric Assessment and Observation Units (SSPAOUs) are a cornerstone in the provision of "care closer to home". Work needs to be undertaken in conjunction with commissioners in England, the Health Boards in Scotland and Wales, the Health and Social Care Board in Northern Ireland, and the Department of Health to ensure this form of care is not compromised by perverse financial incentives.
5. Team job planning is essential to determine how best to meet the needs of the service and individuals. Organisations should be supported by a paediatric clinical network model so that paediatricians can work in bigger teams across organisational boundaries. This will allow them to collectively quality assure their clinical services against required guidelines, obtain advice from and work collaboratively with specialist colleagues, and use or develop consistent clinical pathways.⁸
6. The consultant delivered care model should be considered as a means of addressing rota vacancies, reducing locum costs and ensuring EWTR compliance in practice.
7. The application of a consultant delivered service and resident consultant model can be adapted to suit each organisation's needs and is not a "one size fits all" solution.
8. Birmingham Children's Hospital PICU has developed a model which utilises a sliding scale of on-call commitment proportional to the experience of the consultant as a means of reducing the on-call intensity for older consultants. RCPCH believes there is potential for this model to be adapted to fit other paediatric service configurations.

1. Introduction

In July 2011 the College commenced a project to study the impact of new ways of working, particularly the RSWC and other models of CDC.

The project aims were to:

- a. Assess the impact of consultant delivered services on:
 - i. Training of junior doctors
 - ii. Support for nursing and other health professionals
 - iii. Outcomes in children's health
 - iv. The number of admissions, length of stay, and other cost indicators, e.g. any reduction in locum costs
 - v. Adherence to standards
 - vi. Consultants' work/life balance
 - vii. The development and retention of consultant skills
- b. Develop models of effective service delivery using RSWCs
- c. Identify service configurations where the models are most appropriate
- d. Make recommendations on best practice, and how to implement the changes effectively to members of the RCPCH, the public, NHS workforce planners, educational leads, service commissioners and providers.

1.1. Context

Paediatricians care for the 11.78 million children and young people that comprise over 22% of the total UK population⁹. Paediatrics is one of the largest specialties in the NHS with its consultant workforce representing approximately 7% of England's entire consultant workforce¹⁰. Within the specialty there are 17 sub-specialties, the largest of which are neonatology and community paediatrics. All of these factors contribute to the need to have a clear vision for the service and those who work within it^{11 12 13}. To shape the services for the future, and identify the numbers and best training opportunities for the doctors of the future, there needs to be robust evidence of what works.

1.2. Facing the Future – a national review of Paediatric Services¹

The RCPCH's *Facing the Future* was published in 2011 and is a significant step towards implementing the RCPCH vision for paediatric services originally outlined in the three *Modelling the Future* publications. *Facing the Future*'s five proposals were developed to resolve the three major dichotomies facing the service, namely that it is impossible to:

- Staff in a safe and sustainable way all of the in-patient paediatric rotas that currently exist;
- Comply with the European Working Time Regulations
- Continue with the present numbers of consultants and trainees.

Its five proposals are designed for linked implementation and are:

- Reduce the number of in-patient sites
- Increase the number of consultants
- Expand significantly the number of registered children's nurses
- Expand the number of GPs trained in paediatrics
- Decrease the number of paediatric trainees.

The RCPCH's ten *Facing the Future* service standards and the service and workforce models to support their implementation provide potential solutions, particularly for acute general paediatric and neonatal services. The RCPCH plans to audit the standards in 2012. The RCPCH has also published *Guidance on the role of the consultant paediatrician in providing acute care in the hospital*¹⁴ which identified how consultant roles could become more 'hands-on' through the delivery of resident shifts.

1.3. Workforce Issues in Acute Paediatrics and Neonatology

The current UK paediatric workforce (both consultants and trainees) is facing huge pressures. There are:

- not enough doctors to support Tier 1 and Tier 2 rotas in paediatrics and neonatology; but
- potentially too many trainees for sustainable services in the future if consultant expansion does not occur
- issues relating to the development and maintenance of skills

Tier 1 can typically comprise a combination of Specialty Trainees from Years 1 to 3, GP trainees, and Foundation Year 1 and Foundation Year 2 doctors and nurses. Tier 2 can typically comprise Specialty Trainees from Years 4 to 8, and they are sometimes supplemented with SSASG (Staff, Specialty and Associate Specialist Grade) doctors and consultants carrying out resident shifts. Advanced Paediatric Nurse Practitioners (APNPs) and Advanced Neonatal Nurse Practitioners (ANAPs) and Paediatric Nurse Consultants can also contribute to these rotas.

The highly trained and skilled professional staff who are experienced in caring for women, babies, children and young people are a valuable asset. Children and babies are special and the staff who work with them have special skills and training. However, to retain these skills healthcare staff have to be able to look after a large enough number of patients as it is recognised that the more one undertakes a task the better skilled one becomes¹⁵. This requires either fewer, larger units¹⁶; or innovative working practices such as rotation through a number of service locations (and service types) to ensure maintenance of skills and job satisfaction. This is not a case of 'bigger is better' but recognition that the more you practise and undertake particular tasks the more competent you become.

Paediatrics is a 24/7 specialty; patients require and paediatricians expect to give a senior opinion, assessment and management throughout the 24 hour period. The presence of senior doctors in hospitals has been associated with lower mortality and morbidity in all specialties¹⁷. For this reason, staffing paediatric units cannot be planned on the basis of 'x' doctors per 'y' number of children in the population but on the basis of full coverage of a 24/7 rota. A study of neonatal deaths has found that babies born outside the hours of 9am to 5pm Monday to Friday were more at risk of dying¹⁸ and suggests that lack of immediate access to senior staff at weekends and overnight contributes to this situation.

The legal obligation to meet EWTR by 1st August 2009 has compounded the problems which arose out of Modernising Medical Careers¹⁹. It is perfectly possible to have EWTR compliant rotas with as few as six doctors on the middle tier; however, those doctors are then not available for day-time work and their access to training is reduced to 1.68 days every working week. Before the introduction of the New Deal (56 hour week) and the EWTR, middle tier doctors would have received 3.85 days of training in the working week. The RCPCH endorsed work done during the Greater Manchester Women's and Children's reconfiguration¹⁶ which proposed that all rotas should comprise 11 cells, (11 whole time equivalent doctors (wte)) on the middle tier to ensure EWTR compliance and satisfactory levels of training at pre New Deal levels of 3.2 days per week²⁰. It is possible to run Tier 1 and Tier 3 EWTR compliant rotas with fewer than 11 wte doctors. However, due to the compensatory rest requirements for overnight working access to training is drastically reduced and it is impossible to guarantee satisfactory training for junior doctors in the restricted time available.

The latest RCPCH workforce standards¹ support the pragmatic reduction of this number to 10 on Tier 2²¹ and advise that this can be implemented nationally by a reconfiguration of services to have fewer acute in-patient units and an expansion of SSPAOUs. This number of doctors can be further reduced, without necessarily reducing the access to training, if consultant paediatricians carry out shifts on the Tier 2 rota. In light of the workforce pressures previously described the CDC model, or RSWC model has been introduced in a number of organisations. Thus, consultants have a resident shift working component as part of their job plan, and at other times carry out the conventional range of duties of a consultant. This can allow the 11 cell model to be reduced to a cell of 9 doctors when there are two RSWCs on the 24/7 rota, i.e. seven trainees and 2 consultants. These rota patterns have been commended in the Temple Report⁵ as an exemplar of how to increase the available training time for junior medical staff. The Temple Report supported the principles of a CDC model as a means of providing good quality care and good training and AOMRC in its *Medical Workforce Project*²² referred to the mounting evidence that improved patient outcomes result from care directly supervised by consultants.

However, there remain questions with regard to the sustainability of the model and the willingness or appropriateness of consultants (newly appointed and existing) to work in this way, and these questions have been explored in the current work.

The RCPCH 2009 Workforce Census²³ further identified that 104.4 RSWCs were providing resident shifts on Tier 2 rotas and this CDC project identified that 134 trusts have CDC provided in a variety of ways, including 'consultant of the week', consultant led handovers, consultants working twilight shifts, or consultants on the Tier 2 rota.

1.4. Definitions of Consultant Led Care versus Consultant Delivered Care²⁴

Throughout the research that underpins this report and within the report itself, the following definitions were applied:

1.4.1. Consultant Led Care

When care is led by consultants the consultant has responsibility for the management and care of the patient and can delegate clinical or administrative responsibility at his or her discretion. The consultant is the advocate of the patient in relation to their treatment and well-being. In a consultant led service the consultant undertakes scheduled sessional commitments during the normal working week (09:00 to 17:00, Monday to Friday) and is available, with consultant colleagues, on a rota system 'on-call' outside those hours. Thus the Tier 1 or Tier 2 doctors can telephone the on-call consultant for advice, and if required the consultant will attend the hospital.

1.4.2. Consultant Delivered Care

In a consultant delivered service the consultant is clinically responsible for the care the patient receives during the course of treatment. The consultant will either provide hands-on care or closely supervise in the clinical setting all aspects of the care received by the patient. Care may be delivered by other members of the team but only under the supervision of the consultant who is alert to the needs of the patient at all times².

The term 'consultant delivered care' (CDC) implies planned care, e.g. consultant resident shifts as against consultants being called in or having to cover rota gaps. Whilst it may seem obvious that care is enhanced by having trained doctors seeing children when they arrive in hospital the RCPCH believes it is appropriate to evidence this view, as indicated in its response to AOMRC in May 2011³

This model of care requires a consultant to be present in the hospital outside normal working hours and hence the term RSWC indicates someone working in this way. RSWCs can have job plans that comprise overnight shifts, or evenings (sometimes called 'twilight') shifts, and/or include shifts on Saturday or Sunday. Job plans for RSWCs have to be agreed with the post-holder and cannot be imposed²⁵.

1.5. Models of effective service delivery using resident consultants

In order to implement the models described in this document (see following) it is important that:

- Annual consultant job planning is undertaken in line with the requirements of the 2003 Consultant Contract^{26 14}, and
- A team approach to consultant job planning¹⁴ is essential to ensure that both supporting professional activities and direct clinical care programmed activities are aligned with the needs and requirements of both the service and individual consultants.

1.6. Types of Resident Working

Resident shift working cannot be imposed on existing consultants, although many are choosing to work in this way in support of patient care and the needs of the service. The more consultants undertaking resident shifts (either twilight or overnight) the less onerous the resident commitment will be for everyone, and the less likely it will be that there is a perception of senior/junior consultants.

Four types of resident working are:

Type 1: Consultant resident working overnight shift

Consultants are employed on a contract that includes resident shifts overnight in the hospital. Normally this will be a mixed contract in that the consultant undertakes the full range of consultant tasks; day-time working, out-patient clinics, consultant of the week, etc., but the on-call commitment is undertaken through residency. It is usual to do 1 resident night a week, and compensatory rest is given. This type of working is usually introduced in a planned way to cover gaps in the middle grade rota and to ensure middle grade compliance with EWTR. This means that the consultant has to undertake the duties of the middle grade in addition to their own. These include procedures such as lumbar punctures and cannulation. One of the reasons often cited by existing consultants not wishing to undertake resident working is that they feel they no longer have the skills to undertake these procedures, or that these are inappropriate tasks for their level of seniority. Under these circumstances it would be appropriate for organisations to offer skills refresher training. This would be a factor to address within the annual appraisal process. Some units have introduced innovative ways of working, e.g. the Physician's Assistant although this workforce model is currently operating in a very small number of organisations. Consultant resident working can be isolating and it is recommended that there should be at least two people working in this way to ensure consultants have colleagues who share similar working patterns²⁷.

Type 2: Resident shift working consultant working 'twilight' shift

This form of CDC involves a contract which rosters the consultant for twilight (evening) shifts. If these shifts extend past the 'normal working day' then the appropriate amount of compensatory rest is built into the job plan. Like Type 1, the full range of consultant duties is undertaken. Twilight shifts can aid the discharge of patients, and improve the management of patients overnight.

Type 3: Combination of Type 1 and Type 2

This form of CDC combines Type 1 and Type 2 so that there are some consultants working resident overnight shifts, and some working twilight shifts. Consultants may move between each type of resident shift as part of the planned rota.

The sample rota in Figure 1 gives an indication of how a Type 3 rota could work.

Type 4: Hybrid rota

There is a further option known as a hybrid resident consultant model. This is a rotation between the non-resident on-call and resident shift working slots. This gives the opportunity to maintain a number of exclusively non-resident slots for consultants who are unable to take part in a resident on-call system due to locally agreed factors (such as age, etc) and this is described in 'Delivering Safe Services'²⁸. The consultants in the paediatric intensive care unit (PICU) at Birmingham Children's Hospital have developed a model which provides an equitable solution to this problem – this is expanded on in section 6.5.

		Mon am	Mon pm	Tues am	Tues pm	Wed am	Wed pm	Thur am	Thurs pm	Fri am	Fri pm	Sat	Sun	Total
Consultant 1 Week 1	Duty		Night								Evening	W/E + Evening	W/E + Evening	
	Hours		20:00 - 08:00								15:00 - 20:30	08:00 - 20:30	08:00 - 20:30	
	PAs		4								1.4	4.2	4.2	13.8
Consultant 2 Week 1	Duty		Clinic		Night			Admin	Clinic	SPA	SPA			
	Hours		13:00 - 17:00		20:00 - 08:00			09:00 - 13:00	13:00 - 17:00	09:00 - 13:00	13:00 - 17:00			
	PAs		1		4			1	1	1	1			9
Consultant 3 Week 1	Duty		Evening	Clinic	SPA		Night			Admin	SPA			
	Hours		15:00 - 20:30	09:00 - 13:00	13:00 - 17:00		20:00 - 08:00			09:00 - 13:00	13:00 - 17:00			
	PAs		1.4	1	1		4			1	1			9.4
Consultant 4 Week 1	Duty	Admin	SPA		Evening	Clinic	SPA		Night					
	Hours	09:00 - 13:00	13:00 - 17:00		15:00 - 20:30	09:00 - 13:00	13:00 - 17:00		20:00 - 08:00					
	PAs	1	1		1.4	1	1		4					9.4
Consultant 5 Week 1	Duty	SPA	Admin		Clinic		Evening		SPA		Night	Night	Night	
	Hours	09:00 - 13:00	13:00 - 17:00		13:00 - 17:00		15:00 - 20:30		13:00 - 17:00		20:00 - 08:00	20:00 - 08:00	20:00 - 08:00	
	PAs	1	1		1		1.4		1		4	4	4	17.4
Consultant 6 Week 1	Duty				SPA	SPA	Clinic	Clinic	Evening	SPA	Admin			
	Hours				13:00 - 17:00	09:00 - 13:00	13:00 - 17:00	09:00 - 13:00	15:00 - 20:30	09:00 - 13:00	13:00 - 17:00			
	PAs				1	1	1	1	1.4	1	1			7.4
Consultant 7 Week 1	Duty	Clinic	SPA	SPA	Admin	Leave	Leave	Leave	Leave	Leave	Leave			
	Hours	09:00 - 13:00	09:00 - 13:00	09:00 - 13:00	13:00 - 17:00									
	PAs	1	1	1	1	1	1	1	1	1	1			10
Consultant 8 Week 1	Duty	Leave	Leave	Leave	Leave	Leave	Leave	Leave	Leave	Leave	Leave			
	Hours													
	PAs	1	1	1	1	1	1	1	1	1	1			10

(a)

Duty		Description
Clinic	Clinic	Clinics provided for the local population
09:00 - 13:00	13:00 - 17:00	
1	1	
SPA	SPA	May be CPD or sub-specialty clinic/or General Paediatrics at partner organisation
09:00 - 13:00	13:00 - 17:00	
1	1	
Admin	Admin	Clinical Administration
09:00 - 13:00	13:00 - 17:00	
1	1	
Evening		Evening Resident Duty
15:00 - 20:30		
1.4		
W/E + Evening		Weekend Resident Duty
15:00 - 20:30		
1.4		
Night		Resident Night Duty
20:00 - 08:00		
4		

(b)

Figure 1: (a) Sample type 3 rota developed by Kendall Bluck Consulting, and (b) key to sample rota.

2. Methodology

2.1. Summary

The methodology for this project has involved a mixture of quantitative, mainly through surveys and questionnaires, and qualitative approaches from structured interviews. These included:

1. An initial survey to establish the extent of consultant delivered models of care in paediatrics and neonatology throughout the UK.
2. Site visits to hospitals which had developed consultant delivered care models at which a series of structured interviews were undertaken.
3. Analysis of the resultant qualitative data from interviews.
4. A survey of the members of the RCPCH Trainees' Committee.
5. Collecting from visited sites any quantitative data available relating to activity and outcomes.
6. An online questionnaire for the sub-set of acute sites with no resident shift working consultants, seeking to identify the barriers to introducing this model of care.
7. A comparison of the sites visited by the RCPCH and the national averages reported in the outcome measures of GMC National Training Survey 2011.
8. A comparison of the outcomes in the National Neonatal Audit 2010 by sites visited in our survey and national averages.
9. Analysis from feedback by stakeholders, particularly attendees at a stakeholder day (27th October 2011) and the Emerging Leaders Workshop (22nd November 2011) input.
10. A search for relevant and related literature and research.

2.2. Detailed methodology

2.2.1. Initial Survey

A questionnaire to establish the extent of consultant delivered care was sent to all UK hospitals providing paediatric inpatient and/or neonatal care. The questionnaire used a mixture of 'yes/no', 'how many' and 'how much' questions, with a number of opportunities for comment using free text boxes.

The purpose of the initial survey was to identify all units where there already existed a form of consultant delivered service and the level of service being undertaken i.e. resident shift working consultants, "twilight shifts", consultant of the week systems and consultant led handover.

All those responding were asked whether they had undertaken any evaluation of the impact of introducing consultant delivered care and if they would be willing to take part in a further, in-depth process involving a site visit.

A copy of the questionnaire can be found in Appendix A.

2.2.2. Site visits

From those indicating they would be willing to take part in a site visit, 12 sites were chosen; reflecting as wide a geography as possible, and as wide a range of size (using the Facing the Future bandings). Due to time pressures and clinical availability 10 visits were undertaken (a list of the sites visited can be found in Table 3, section 6.1).

Site visits comprised face to face interviews with: the clinical director; a resident shift-working consultant, a trainee; the lead children's nurse; a representative from HR and a representative from Finance and a SSASG doctor where possible. In some instances, more than one trainee, RSWC or nurse was interviewed, and at some locations the input from

Human Resources and Finance was delivered by one person such as the departmental manager.

Details of the questions to be asked were sent to each site prior to the date of the interview in order that respondents could consider their answers prior to the interviews. The questionnaire templates used for site visit interviews can be found in Appendix B.

To ensure that SSASG roles were covered during the site visits the questions were expanded to include 'consultants or equivalents' where relevant. Certificate of Eligibility for the Specialist Register (CESR) status was noted, as was the Tier on which they were working. The summarised output from these questions can be seen in Table 1, Section 5.

The sample size of 10 units for the in-depth interviews is not large due to constraints on time and the availability of clinical staff. Notwithstanding the small sample size there is a sufficient range of size and type of paediatric and neonatal units to have confidence in the information gathered, and its applicability to the full cohort of UK units. Similarly, it can be argued that there may be an element of bias in the responses in that those responding may tend to be more enthusiastic about the model as they work within a consultant delivered care environment. It is assumed that this also gives them insight into the less favourable aspects of the working pattern. Similar work had already been undertaken in the North West²⁷ (O&G, Paediatrics and Neonatology) and where the information is relevant examples are included from that study.

2.2.3. Analysis of the resultant qualitative data

The survey data and interview evidence was assessed against the agreed domains. Some of the data, e.g. questions which provided yes/no answers or assessment of a domain in a range from good to poor lent itself to straightforward analysis. The majority of responses however required word searches of the text of respondents' interviews to bring out common themes which could be classified and counted. The majority of the material gathered from the interviews was analysed in this way.

A large number of these qualitative findings were reported at two meetings held at the RCPCH at which the conclusions were assessed by the participants:-

- A project stakeholder day on 27th October 2011
- Emerging leaders' workshop on 22nd November 2011

2.2.4. RCPCH Trainees' Committee survey

A questionnaire was used for members of the RCPCH Trainees Committee to determine trainee attitudes to resident shift working, results of which were reported to a meeting of the committee on 6th October. The results of this survey, which were not part of the original project plan are shown in Appendix C.

2.2.5. Activity and indicators data

All trusts visited were asked to provide supporting information such as admissions data, length of stay, number of serious untoward incidents (SUIs), complaints, locum costs, medical staff vacancy data and information from Postgraduate Deanery visits, etc.

2.2.6. Survey of non resident shift working sites

A questionnaire for a sub-set of acute sites with no resident shift working consultants, seeking to identify the barriers to introducing this model of care and detailed questionnaires was sent to hospitals without models of consultant delivered care. The response rate on this survey was not high enough to make analysis valuable so it has not been included in this report.

2.2.7. General Medical Council (GMC) National Training Survey

The GMC conducts a National Training Survey²⁹ each year (formerly PMETB Survey) which provides a comprehensive picture of all trainee doctors working in the UK in all specialties. The dataset provides data at the level of individual hospital and individual specialty. A comparison was carried out of the responses and this can be found in Appendix D.

2.2.8. National Neonatal Audit 2010

The National Neonatal Audit³⁰ undertaken by the NNAP Project Board provides data on the compliance of each unit in England with a selection of national neonatal standards. The performance of hospitals visited in our project was compared to national averages.

2.2.9. Stakeholders

Stakeholders from the following organisations attended the project stakeholder day on 27th October 2011 and provided feedback on project findings and suggestions for further analysis and project development.

- NHS Medical Education England
- Centre for Workforce Intelligence
- British Medical Association
- NHS Employers
- Patient Carers Advisory Group
- RCPCH Officers, Staff and Members
- Royal College of Anaesthetists
- Royal College of Obstetricians and Gynaecology
- Royal College of Nursing
- Trust representatives
- Trainees and Running Horse group

A further group of stakeholders listed below was contacted by email and asked to provide similar feedback:

- Academy of Medical Royal Colleges
- Association of Paediatric Anaesthetists of Great Britain and Ireland
- College of Emergency Medicine
- Department of Health
- NHS Confederation
- Royal College of Physicians

The Emerging Leaders Workshop of 22nd November was attended by senior trainee paediatricians, new consultants, representatives from the Department of Health and the RCPCH President Elect. This group provided feedback on project findings and suggestions for further analysis and project development.

2.2.10. Literature search

A literature search for evidence of the benefits of consultant delivered care was carried out using Ovid and Google. The following key words/phrases were used in the searches:

- Consultant delivered care
- Resident consultant
- Resident on call
- Consultant resident
- Middle grade rota
- Resident shift working
- Consultant delivered service
- Resident 24 hour consultant
- Work life balance
- Role of the consultant
- New ways of working
- Consultant based service
- Consultant presence

2.2.11. Project review

A review was undertaken after the completion of this project, which can be found in Appendix E.

3. Initial Survey

3.1. Background

The RCPCH Workforce Census 2009²³ established that 104.4 consultants were working on middle grade rotas. The RCPCH Rota Compliance and Vacancies Survey carried out in December 2010⁶ indicated that this figure may have risen to an estimated 200. The project team thought it important to assess whether this had risen again in August 2011, and to establish the extent of other consultant delivered care models.

3.2. Response rate

The survey was sent to clinical directors/leads at all UK units providing paediatric in-patient care or neonatal services. In all, 222 units were contacted and 139 units (62.6%) responded to the questionnaire, with the following results.

- 24.6% of units have consultants on the Tier 2 rota
- 48.5% of units have consultants doing resident twilight shifts
- 96.3% of units operate consultant of the week systems and
- 90.3% of units have at least one consultant led handover per day

3.3. Responses to Individual Questions

(a) Do you currently operate a form of consultant delivered care?

Of those responding, 96.4% (134) stated that they operated some form of consultant delivered care.

(b) How often do you have consultant led handovers?

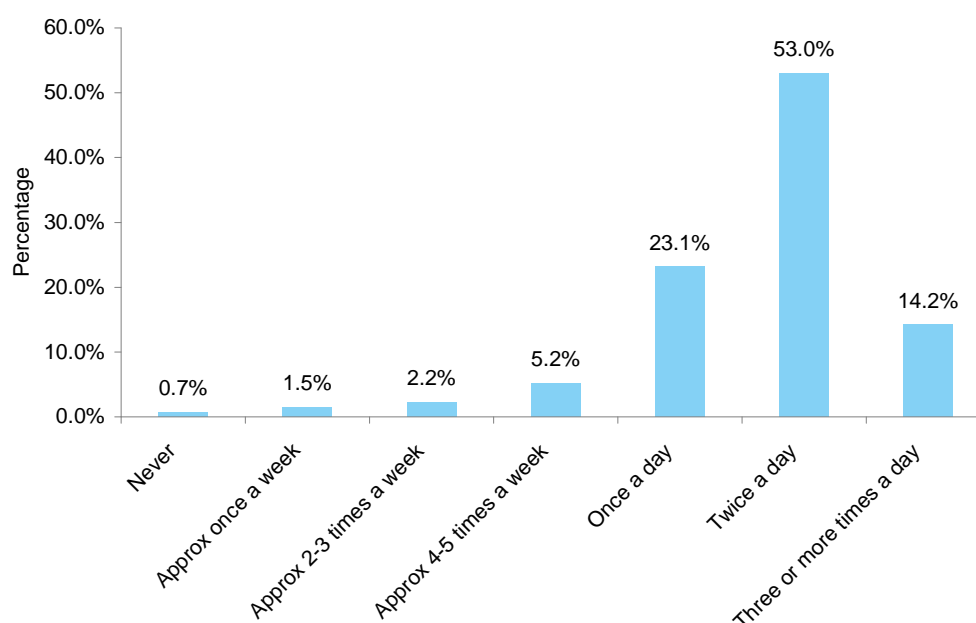


Figure 2: Frequency of consultant led handovers

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Of those responding, 106 (79.1%) have consultant led handovers at the weekend, 28 (20.9%) do not.

(d) How many of your consultants work resident twilight shifts?

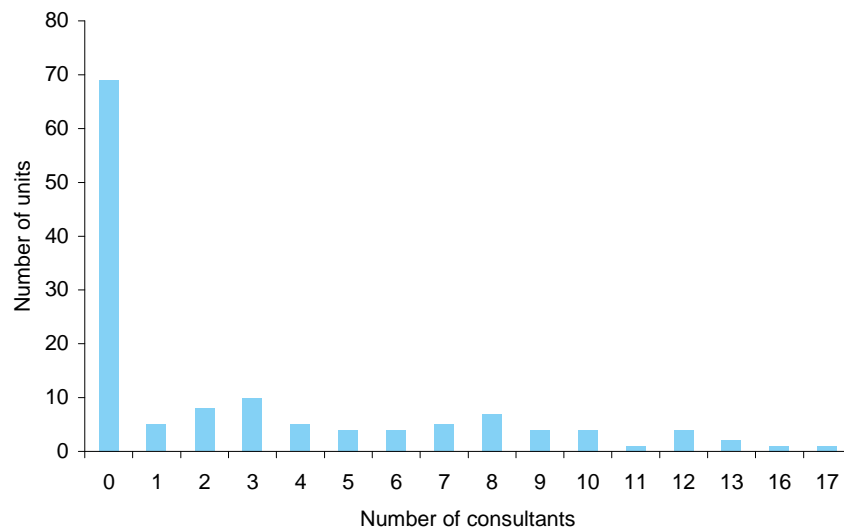


Figure 3: Frequency of number of consultants working resident twilight shifts

Of the responding units, 69 had no consultants working resident twilight shifts. Those with twilight shift working consultants had between 1 and 17 working in this way; 3 being the most frequent number.

(e) How many whole time equivalents on the middle grade (Tier 2) rota are consultants?

Of the 134 responding units, 34 reported having consultants on their Tier 2 rota. The total WTE of consultants on Tier 2 rotas at all responding units was 93.

We can extrapolate from this figure. If all units had the same proportion of WTE consultants on the Tier 2 rota as responding units, it would suggest that approximately 148.6 WTE consultants are working on Tier 2 rotas.

(f) Please select the option which reflects your current “consultant of the week” or “hot week” arrangements.

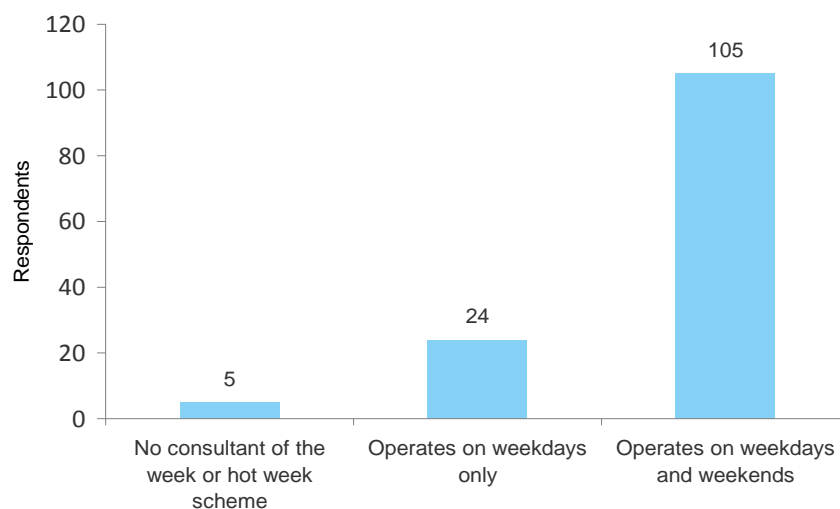


Figure 4: Type of consultant of the week scheme in place

(g) Have you undertaken any evaluation of the impact of introducing consultant delivered care in your service?

When respondents were asked whether they had undertaken an evaluation of the impact of introducing consultant delivered care, 30 (21.6%) answered yes, 79 (56.8%) answered no, 24 (17.3%) were not sure and 6 (4.3%) didn't answer.

4. Staff, Specialty and Associate Specialist Grade (SSASG) Doctors

SSASG doctors include specialty doctors. In 2008, specialty doctors replaced staff grades and the associate specialist grade was closed to new applicants. Specialty doctor is a recognised career grade with BMA terms and conditions. Minimum entry requirements are full registration with the GMC and four years postgraduate training, with 2 in the relevant specialty.

The RCPCH Medical Workforce Census 2009²³ highlighted that 18.5% of community lead roles were occupied by SSASG doctors.

Throughout the interviews the questions relating to consultants and resident shift-working consultants were phrased to include SSASG doctors, e.g. 'are resident shift-working consultants (or equivalents) included in consultant of the week?' We also enquired about their qualifications, and access to training and development, with the following results.

Table 1: In-depth interview responses to questions about SSASG doctors

Do you have any SSASG doctors on Tier 2 or Tier 3 ?		Do they have:		
		CESR	APPRAISAL	CPD
Trust 1	1 Clinical Fellow - Junior Registrar level - on the Tier 2 rota	X	don't know	don't know
Trust 2	2 x Associate Specialists on Tier 2	✓	✓	✓
Trust 3	There is one locum Clinical Fellow who is undertaking Article 14 and is mainly on the retrieval team but does some consultant shifts.	not yet	✓	don't know
Trust 4	One SSASG doctor who undertakes shifts in the ED	don't know	✓	✓
Trust 5	Yes. One Associate Specialist who does not have named consultant responsibility, and works within the consultant rota. The MD had to agree before she could work in this way. She is always on with a consultant. To have an equitable approach all consultants take it in turn to be the named consultant and are always around for telephone advice or as 1st or 2nd on call.	X	✓	✓
Trust 6	None on tier 3. 1 permanent Clinical Fellow on Tier 2 who works part time	X	✓	✓
Trust 7a	No	n/a	n/a	n/a
Trust 7b	Associate Specialist on Tier 2. Will be on resident consultant rota but not as a full participant.	✓	✓	✓
Trust 8	No	n/a	n/a	n/a
Trust 9	No	n/a	n/a	n/a
Trust 10	No	n/a	n/a	n/a
Trust 11	No	n/a	n/a	n/a

5. Site visits

Using the *Facing the Future*¹ size classifications (see table 2) to ensure a full range of types of acute hospital were visited, and taking into account the time constraints of the research, the sites chosen are listed in table 3. Ten acute hospitals were chosen for visits and one further hospital contributed to the work by completing the interview question templates and returning them electronically. Visits were undertaken in September and October 2011. The ten sites are listed alphabetically; however, in the analysis of the responses received each trust has been allocated a number. The numbers are consistent across all the tables, but they do not relate to the order in the alphabetical list. This is to ensure anonymity as far as possible.

Table 2: Classification of UK hospitals with paediatric services by size, taken from *Facing the Future*

Facing the Future' unit size definitions		Number of hospitals [% of total]
Very small hospitals	Fewer than 1,500 admissions per year	30 (14%)
Small hospitals	1,501 - 2,500 admissions per year	75 (34%)
Medium hospitals	2,501 - 5,000 admissions per year	103 (47%)
Large hospitals	More than 5,000 admissions per year	10 (5%)

5.1. Trusts visited

Table 3: Trust and units visited, with indication of size, type, and services provided

Organisation	Hospital	Type	Unit Size [Facing the Future classification]	In Patients	Out Patients	Neonatal Level	Paediatric Emergency Department	Short Stay Paediatric Assessment & Observation Unit	Consultant of the Week
Airedale NHS FT	Airedale General Hospital	Acute & Community	Medium	✓	✓	2	No	No	Yes
Basingstoke and North Hampshire NHS Trust	Basingstoke and North Hampshire Hospital	Acute	Medium	✓	✓	2	No	Yes	Yes
Birmingham Children's Hospital NHS FT	Birmingham Children's Hospital [PICU]	Tertiary Acute	Medium	✓	✓	n/a	Yes	No	Yes [in General Paeds]
Central Manchester University Hospitals NHS FT	Royal Manchester Children's Hospital	Tertiary Acute	Large	✓	✓	3 [on site, separate Division]	Yes	Yes	Yes
Derby Hospitals NHS FT	Derbyshire Children's Hospital	Acute	Medium	✓	✓	3	Yes	No	Yes [neonatal]
Luton & Dunstable Hospital NHS FT - Neonates	Luton & Dunstable Hospital	Acute	Medium	✓	✓	3	No	No	Yes
Luton & Dunstable Hospital NHS FT - Paediatrics	Luton & Dunstable Hospital	Acute	Medium	✓	✓	3	No	Yes	Yes
NHS Tayside *	Ninewells Hospital	Tertiary Acute & Community	Large	✓	✓	3	No	Yes	Yes
Royal Free Hampstead NHS Trust	Royal Free Hospital	Acute	Very Small	✓	✓	1	Yes	No	Yes
Salisbury NHS FT	Salisbury District Hospital	Acute	Very Small	✓	✓	2	No	Yes	Yes
Surrey & Sussex Healthcare NHS Trust	East Surrey Hospital	Acute	Medium	✓	✓	2	No	Yes	Yes
West Suffolk Hospital NHS Trust	West Suffolk Hospital	Acute	Medium	✓	✓	1	No	Yes	Yes

*NHS Tayside was not visited but returned questionnaires completed by the Clinical Director, 2 Resident Shift-Working Consultants, Tier 2 doctor, the HR Director, Finance Director, and Lead Paediatric Nurse. Note that future reference to visited sites includes NHS Tayside.

6. Findings from site visits

6.1. Service Model

Before questions were asked about the specifics of CDC in each of the trusts visited the four main clinical groups were asked whether they supported the service model. Out of the 53 people interviewed 79.2% (42 people) believe that it is a good service model.

Table 4: Responses of all interviewees asked whether they believed the model of care was a good service model

Do you believe this is a good service model?					
	YES	NO	NOT SURE	NOT ANSWERED	TOTAL
Clinical Directors	9	1	2	0	12
Resident Shift Working Consultants	14	0	3	0	17
Middle Grades	10	1	1	1	13
Lead Children's Nurses	9	0	2	0	11
TOTAL	42	2	8	1	53
	79.2%	3.8%	15.1%	1.9%	100.0%

Doctors were asked whether they felt the service model would be sustainable. Although there is considerable support for the model there is less confidence about its sustainability, with 48.3% believing it is sustainable, and another 48.3% either believing it is not sustainable or not being sure. The specific concerns will be addressed in section 6.8.2.

Table 5: Responses of all interviewees asked whether they believed it is a sustainable service model

Do you believe this is a sustainable service model?					
	YES	NO	NOT SURE	NOT ANSWERED	TOTAL
Clinical Directors	6	2	4	0	12
Resident Shift Working Consultants	8	1	7	1	17
TOTAL	14	3	11	1	29
	48.3%	10.4%	37.9%	3.4%	100.0%

6.2. Training of junior doctors

The terms ‘teaching’ and ‘training’ were used to mean any type of exposure to learning opportunities and we found that often the responses we received grouped the two together and used them interchangeably. When Tier 2 doctors were interviewed and asked about the teaching and training they received, the following responses were given.

6.2.1. The trainee perspective

Of the trainees surveyed, 84.3% rated their teaching as either good or excellent.

Table 6: Responses given by trainee doctors on access to teaching

How would you rate your access to teaching?	
Number of interviews conducted	13
Excellent	2
Good	9
Indifferent	1
Did not answer	1

Of those responding, 76.9% rated their hands-on experience when working with resident consultants as either excellent, very good, or good.

Table 7: Responses given by trainees about hands on experience when working with RSWCs

Tier 2	
How would you rate your hands on experience when working WITH resident consultants [or equivalents]?	
Number of interviews conducted	13
Excellent	4
Very good	1
Good	5
Average	1
No different	1
Not answered	1

The most common theme in which the consultant delivered care model is felt to improve training is ‘good teaching’, with ‘always supported’ also ranking highly.

Table 8: Themes emerging from trainees' answers about improvements to training

In what ways do you think this has improved your training?	
Themes	number of times themes mentioned
Good teaching	6
Always supported	4
Not noticed any differences	4
Continuity better	2
Handovers better	2
Better communication	1
Better planned care	1
Good team working	1

When the 13 Tier 2 doctors were asked how consultant delivered care models might have harmed training two groups of themes emerged. The first is that CDC has not harmed training, and the second related to ways in which the trainee doctor might be disempowered.

Table 9: Themes emerging from trainees' answers about harm to training

In what ways do you think this has harmed your training?	
Themes	number of times themes mentioned
It hasn't harmed training	5
EWTR is what has harmed training	1
Might disempower doctors [i.e. don't make the decisions as the consultant does this]	4
Causes delays having to check with the consultant all the time	1
Nurses bypass you	1

6.2.2. The trainer perspective

When Clinical Directors and RSWCs were asked about the effects of CDC on the teaching and training of junior doctors (Tiers 1 and 2) the following responses were received. Of the 17 RSWCs interviewed 41.2% reported that they noted an increase in trainee satisfaction, with 17.6% reporting that they had not noticed any change.

Table 10: Responses from clinical directors and RSWC about perceived increase in trainee satisfaction

Have you noticed any increase in trainee satisfaction?	
Number of interviews conducted	17
YES	7
NO	3
Can't say	5
No response	2

Clinical Directors were asked if they had noticed any increase in trainee satisfaction

As can be seen from the table below the emerging themes were:

- support for trainees; and
- consultants on the shop floor for more of the time

Table 11: Responses to "Have you noticed any increase in trainee satisfaction?"

Have you noticed any increase in trainee satisfaction?	
Trust 1	No
Trust 2	Trainees feel very supported with consultants resident. Not had any criticism in terms of that. No negative comments. Get through their competencies and get support with procedures. ST3 on middle grade rota needs quite a lot of support. I think it makes a difference. We are not standing over them all the time. They get exposure. Trainees have a 48 hour compliant rota. If any child is sick we will come in. Consultant here with trainee if there is an emergency.
Trust 3	From an anaesthetic perspective trainees feel more supported with consultant presence as before they felt vulnerable because of the intensity of workload and they are here for a short period of 2 months.
Trust 4	Rota will only become operational on 24th October 2011 so we are not able to tell
Trust 5	Good reports from Deanery. Popular attachment for trainees.
Trust 6	Juniors and nurses really appreciate it. Nurses love it. Like to have someone senior around at night. Might get one ST6, 7, if lucky. Other registrars are more junior. Having ROC makes a massive difference to juniors.
Trust 7a	Assessment of this system may be to patient and trainee satisfaction. More availability of consultants than 4 years ago. Gone from 4 to 13 since I started. Consultants on the shop floor. I think trainees will have benefited. Because more of us around, easy for us to tell trainees what to do all the time, stops them from doing some of the thinking - looking at how to solve that. Are we affecting calibre of trainees, could affect decision making?
Trust 7b	They have always been very satisfied
Trust 8	Better than they were in terms of trainee feedback - PMETB feedback
Trust 9	Subjectively, yes. Objectively, no feedback data. PMETB surveys on trainee satisfaction might show this. There are issues with getting to clinics. Consultant handovers are good for training. 4/5 consultants present.
Trust 10	Can't say as new hospital. SHOs [ST1-3] enjoy working with resident consultants as they have direct access to a consultant.
Trust 11	No

When this information is viewed alongside the outcomes from the GMC National Training Survey in Appendix D we can see how the specific trusts visited compared to the national mean scores for paediatrics nationally.

6.2.3. Summary of analysis of GMC National Training Survey 2011²⁹

It can be seen from the following table 12 that the trusts providing CDC score highly on educational supervision, feedback to trainees, compliance with EWTR, the amount of experience trainees are gaining, and that they are well supported by their consultants. Although good handovers were mentioned a number of times in the CDC project interview responses, this is not reflected in the GMC training survey responses for the same trusts. This may be because different cohorts of trainees completed each survey.

Table 12: Comparison of measures from GMC National Training Survey between visit sites and national mean

Measure	11 Trusts in CDC project	
	Number on or above the national mean	Number below the national mean
Overall satisfaction: reported as a score from 0 - 100, calculated by combining satisfaction with each of the key elements of a training post	8	3
Workload: a low score indicates high work intensity and/or long hours	7	4
Handover: higher scores reflect more formally organised handovers	5	6
Compliance with EWTD:	7	4
Hours of education per week: this looks at hours of weekly education on top of on-the-job training	6	5
Adequate experience: combination of hands-on experience and confidence in acquiring competencies in the post	7	4
Education supervision	11	0
Feedback: score relates to the availability of day-to-day feedback, appraisal and assessment	8	3
Redistribution of tasks: a high score in this indicates that trainees may not be getting enough experience from the post as they should - <u>a low score is considered positive for this measure</u>	2	9
Undermining by consultants: <u>a high score</u> indicates that trainees <u>are</u> experiencing undermining behaviour from consultants. Only one trust was above the mean, by 1.5 points	1	10
Undermining by other staff: <u>a high score</u> indicates that trainees <u>are</u> experiencing undermining behaviour from staff other than consultants	8	3

A further larger piece of work would be required to determine whether these results are replicated in all units with CDC and RSWCs.

6.3. Lead Children's Nurses' views

The structured interviews contained five questions which sought to identify whether nursing staff liked the clinical model, whether it assisted the nursing staff and whether it improved care for patients and their families (using measures such as the number of complaints).

6.3.1. Support for Nurses

With regard to whether nurses felt the way of working assisted the nursing staff the most frequently mentioned views were that there was better team working, better decision making and better communication, all of which have a positive impact on nurses.

Table 13: Themes emerging when nurses were asked how the model assists nursing staff

Do you feel that this way of working assists the nursing staff [give examples]	
Number of interviews conducted	11*
Themes	number of times themes mentioned
Better team working	5
Better decision making	3
Better communication	3
Better planned care	2
Handovers better	2
Not noticed any difference	1
Good teaching	1

6.3.2. Service Model

The same themes cropped up again when lead children's nurses were asked about differences in the way the service runs; with better decision making, better handovers, and better team working being quoted most frequently and representing 45.4% of the responses.

Table 14: Themes emerging when nurses were asked about differences in the way the service runs

Do you notice any differences in the way the service runs, e.g. handover, or decision making?	
Number of interviews conducted	11
Themes	number of times themes mentioned
Better decision making	4
Handovers better	3
Better team working	3
Patients reassured and happier	2
Better communication	2
Not noticed any differences	2
Better planned care	1
Good teaching	1
Reduced admissions	1
Continuity worse	1
Middle grades don't get to practice as consultants	1
Handovers more difficult because nurse and doctor shifts don't synchronise	1

6.3.3. Complaints

When lead children's nurses were asked about the number of complaints since the introduction of CDC, 45.4% felt there has been no change, 13.3% thought there had been a decrease in the number, and 36.4% believed that complaints were better resolved as the consultants were on the wards and available for discussions with the parents and patients.

Table 15: Responses when nurses were asked about number and type of complaints

Have you noticed any increase or decrease in the number or type of complaints?	
Number of interviews conducted	11
NO [not noticed and/or no change]	5
Consultants being around resolves them better	4
Don't get many complaints	4
YES [Decrease]	2
Number of comments and number of interviews do not match as interviewees sometimes mentioned more than one thing	

6.3.4. Improved care of patients

Lead children's nurses were asked if CDC improves the care of patients and to give examples. As can be seen from the table below the responses related to patients being reassured and happier; there being better communication; and better team working.

Table 16: Responses when nurses were asked if they thought the model improves patient care

Do you feel this way of working improves the care of patients? [give examples]	
Number of interviews conducted	11
Themes	number of times themes mentioned
Patients reassured and happier	2
Better communication	2
Better team working	2
Improved quality	1
Better planned care	1
Faster review	1
Faster discharge	1
Safer	1
Continuity better	1

6.4. Resident Shift Working Consultants' views

When RSWCs were asked if they believe CDC is a good service model 82.4% thought that it was and the remaining 17.6% were 'not sure'. Better decision making, reduced admissions, and good teaching and on-the-job training were mentioned most frequently in the responses.

Table 17: Themes emerging when RSWCs were asked if CDC is a good service model

Do you believe this is a good service model?	
Number of interviews conducted	17
YES	14
NO	0
NOT SURE	3
Themes	number of times themes mentioned
Results in better decision making and better access to senior opinions	7
Results in reduced admissions	5
Gives good teaching and on the job training	5
Don't think I can work like this forever'	3
Have to do 'hands on work' [disadvantage]	3
Patients are reassured and happier	2
Results in faster discharge	2
Twilight shifts 'good model'	2
Viewed as registrar - even if consultant	2
Possible to develop special interest	2
Felt to be safer	1
Felt to contribute to better team working	1
Overnight shifts not necessary / not willing to do them	1
Hard to fit in all other work [admin, Ops, etc]	1
Have to do 'hands on work' [advantage - keeping practical skills]	1

The breakdown of responses by unit size is shown below.

Do you believe this is a good service model?					
Size of Unit	Type of Unit RSWC interviewees from		Responses		
	Paediatrics	Neonates	Yes	Not Sure	No
Very Small	3		3		
Medium	9	2	9	2	
Large	3		2	1	

6.4.1. Views of RSWCs in the North West SHA

The comments below are a sample from the 'Evaluation of the introduction of 'Resident Shift Working Consultants' across the North West Strategic Health Authority'²⁷, when 12 paediatric RSWCs and nine neonatal RSWCs were interviewed. These correspond with comments made in the RCPCH project.

Table 18: Comments made by RSWCs in the report 'Evaluation of Evaluation of the introduction of 'Resident Shift Working Consultants' across the North West Strategic Health Authority'

What are the impacts for patient safety and quality of service; what are the impacts for training; what are the impacts for your personal development/CPD; is there resident accommodation available?
Comment
Patient safety and quality of service will be better - the twilight shift has a registrar and a RSWC, i.e. there are more people on the floor. Training should be good as you can watch things more closely - spot weaknesses and areas to work for improvement, together with hands-on skills teaching. It is too soon to know if there will be any impact on my CPD. There is a bedroom and bathroom available.
I believe it will improve patient safety and service quality because there will be a senior presence on the ground at night. There will be a junior [probably ST1] alongside at nights. There is a room with a bed available. My main concern is that I do not want to be treated like a registrar. I feel I have earned the respect due to any consultant and I have chosen to be a RSWC as I believe it will improve patient care.
Fantastic effects on patient safety and quality as the service is tailored to patient flow. It provides opportunities for training GP trainees OoHs. The financial impact is definitely worth the cost - as there are decision makers on the floor it means that only 4% of patients are transferred for in-patient care [there is no in-patient service on site] - this is down from 12% [before there was a PAOU]. Of the 18,000 patients p.a. only 10% are admitted for O&A. It has been suggested that there will be reduced medico-legal costs.
RSWC is really helpful, adds to the team, can refer to them to advice thus reducing the need to future out-patient referrals. I don't believe it makes a great difference in terms of safety, although they are more cautious when the consultant isn't there so kids are kept in more often. There are more teaching opportunities for the ANPs from the consultants as it allows for ad hoc teaching of interesting cases as and when they present. I believe the skills mix of ANPs and RSWCs provides a wealth of knowledge for junior doctors. ANPs also teach junior doctors things like life support and recognising the critically ill patient. One by-product of the system is that there is inappropriate self-referrals to the unit by families who wish to get a paediatrician's opinion rather than that of the GP.
I feel that there are definitely quality and safety benefits for the patients, but these are offset somewhat by the diminution of development of strategic and management skills for the consultant. It is excellent for training SHOs OoHs.
It is good for care but it doesn't utilise a consultant's time well. Long days would be better. Trainees lose out as they will not develop the confidence to make autonomous decisions. The fixed night does not affect my CPD. There is a resident room available but it is nowhere near the clinical area. I have been able to develop my sub-specialty interest [diabetes] but this is made more difficult by having 2 days off.
I imagine quality and safety will improve and also that registrars will be freed up to undertake daytime training; although, as mentioned previously there will possibly be fewer opportunities for registrars to gain confidence through working independently. I have 2.5 SPAs in my job plan so I do not expect CPD to be a problem. There is a registrar's room available at night. I have a diabetes sub-specialty interest.
This is a very effective way of providing safe services although the downside for quality is the decreased continuity of care which the RSWC pattern brings. Training is enhanced. The rota is very tight which has allowed more trainees to be around in-hours. The 1st on-call with the RSWC is an F2/ST2 in paediatrics [or GP training]. The consultant workload has been readjusted so they have more time available in the day. There does not appear to be any impact on CPD. The rota management is much easier as each ROC can only do one night. Overall this has increased morale as there are more consultants. RSWCs do pursue their sub-specialty interests. The appointees would prefer long days rather than fixed nights.

Views on the resident shift working model

"I personally do (like this way of working). Been here 12 years and trying to remember before. I think it works very well, takes a while to get to know 16 consultants. It works because each has their own area of expertise. They lead in that area. More joint working – and nurses work with lead consultant. More confident in admissions and discharges and only admit patients that need to be admitted. When short of beds the consultant ward rounds mean you can move things around. Nurses like having consultant on at night when there are sick children. There is teaching every night and scenario training with Doctors and Nurses – multi-professional training. You can see how professions work together. Patients we have in now are sicker than they used to be, those that are not sick do not come in any more. The ratio 2 years ago was 70% Inpatients/30% ambulatory, it is now 50/50."

(Lead Children's Nurse)

"When you do a night shift after a consultant has done the twilight shift it is lovely because there are plans in place for the patients. Handover is good and you can discuss things with a senior person. Consultants definitely do better decision making and the model gives better continuity of care for the patient. It also means that we are able to inform parents of what is going on as we do not have to wait for the consultant opinion/decision."

(Tier 2 doctor)

"I think it provides a better quality of care than in traditional model. There is more consultant involvement in care. Previously consultants were at arms' length. We are providing more senior advice and input to patients. There is reduced length of stay and we only admit patients that need to be in hospital. We don't admit for decision to be made next day on ward round."

(Clinical Director)

Views on the resident shift working model

"Don't have that many complaints, but when there is one and a senior doctor is on, you can ask them to nip it in the bud, so it doesn't become a problem. We have a good relationship with consultants so happy to approach them about this. Patients want to see consultant, so if they do, the complaint is gone."

(Lead Children's Nurse)

"Nursing staff do (like this way of (working)) because parents find it more reassuring to meet the consultant, discuss the care of the child etc. Everyone knows that if a consultant is on duty the plan of care is put in place quickly and you do not have to wait overnight for it."

(Lead Children's Nurse)

"Clinical judgement is improved. Doctors are less tired, more efficient. Doctor will make good judgements. If called to A&E not totally exhausted. In years past totally exhausted. Grand Round works better".

(Lead Children's Nurse)

6.5. Number of admissions, length of stay and other indicators

Lead children's nurses were asked whether they had noticed any impact on admissions since the introduction of CDC. Whilst 45.5% had not noticed any change, 27.3% felt there had been a reduction, and 27.3% had a perception of an increase in admissions coupled with a reduced length of stay.

Clinical Directors were asked whether there is a Community Children's Nursing Team to support discharge planning and care closer to home and 81.8% confirmed that they did have such teams. The remaining 18.2% also had Community Children's Nursing Teams but they solely looked after the children and young people with chronic conditions.

6.6. Locum costs

It was not possible to obtain locum cost information from most of the trusts visited and therefore information from other sources was used.

The Royal College of Surgeons of England undertook research into locum doctor cost in 2010 via a Freedom of Information request to 164 acute trusts in England. From that work³⁷, the total spend on locums in England in 2009 is given as £758,358,000. This is in the context of a total annual wage bill for doctors in the NHS of £6.2 billion.

Extrapolating locum cost information for 2009/10 from the 'Making it Better' reconfiguration in Greater Manchester¹⁶ (£12m spend on locums in paediatrics, O&G and neonatology across 10 trusts) would indicate that each of the 164 trusts in England spends circa £400,000 on locums in each of the specialties of paediatrics and neonatology every year. At a trust with paediatrics and neonatology, £800,000 would fund 8 new consultant appointments at the bottom of the scale or 6 at the top of the consultant pay scale as shown in the table below.

Table 19: Cost of recruiting a new consultant and one at the top of the pay scale

Post	Salary [10 PAs]	Additional PA	sub-total	Plus 22% on-costs	TOTAL
Consultant - new appointment	74,504	7,450	81,954	18,030	99,984
Consultant - top of the scale	100,406	10,044	110,450	23,347	133,797

At least one of the trusts visited had used this approach in a business case for employing resident shift-working consultants. They had already noticed a significant decrease in their locum costs and identified that the cost of having an RSWC was much lower than that of a locum Tier 2 doctor.

6.7. Adherence to standards

6.7.1. Facing the Future

Clinical Directors were asked whether they met four of the 10 *Facing the Future* standards. The four chosen were Standards 2, 5, 6 and 7 as they were felt to be most relevant to the consultant delivered service model. Table 17 shows that from the 11 trusts we either visited or have information for, 90.9% of trusts meet Standard 2, 100% of trusts meet Standard 5, 81.8% of trusts meet Standard 6, and 100% of trusts meet Standard 7.

Table 20 Adherence to Facing the Future standards at visited sites

Do you meet the standards in Facing the Future, particularly 2, 5, 6, and 7?					
Standard 2	Every child or young person who is admitted to a paediatric department with an acute medical problem is seen by a consultant paediatrician [or equivalent staff, specialty, or associate specialist grade doctor who is trained and assessed as competent in acute paediatric care] within the first 24 hours				
Standard 5	At least one medical handover in every 24 hours is led by a paediatric consultant [or equivalent]				
Standard 6	A paediatric consultant [or equivalent] is present in the hospital during times of peak activity				
Standard 7	All general paediatric inpatient units adopt an attending consultant [or equivalent] system, most often in the form of the 'consultant of the week' system				
	Standard 2	Standard 5	Standard 6	Standard 7	Comments
Trust 1	✓	✓	✓	✓	
Trust 2	✓	✓	✓	✓	
Trust 3	✓	✓	✓	✓	
Trust 4	✓	✓	✓	✓	[6] 3 nights a week
Trust 5	✓	✓	✓	✓	
Trust 6	✓	✓	x	✓	[6] Can't meet this as there are not enough of us
Trust 7 a	✓	✓	✓	✓	[6] 2 days a week
Trust 7 b	✓	✓	✓	✓	
Trust 8	✓	✓	✓	✓	
Trust 9	✓	✓	✓	✓	
Trust 10	x	✓	✓	✓	[2] no, because of workload; [5] Monday to Friday
Trust 11	✓	✓	x	✓	

6.7.2. National Neonatal Audit Programme

Data was extracted from the National Neonatal Audit Programme 2010³⁰ to see if any correlations could be made with the trusts we visited. No particular conclusions were possible, however, it is suggested that this might be useful to pursue in any work undertaken in the future.

6.8. Consultants' work/life balance

In this section a number of factors were included which can relate to work/life balance, e.g. work intensity, number of vacancies on rotas, whether resident working is believed to be possible (or attractive) for consultants over 50 years of age, and preferences for twilight shifts versus overnight working, etc.

6.8.1. Work Intensity

Tier 2 doctors were asked whether RSWCs had reduced the need to call in the 2nd on call consultant, and the answers indicated that 61.5% believed this to be the case.

Table 21: Trainees' responses about the need to call the non-resident consultant

Has the presence of a resident consultant [or equivalent] reduced the need to call in a non-resident consultant [or equivalent]?						
Size of Unit	Type of Unit Tier 2 interviewees from		Responses			
	Paediatrics	Neonates	Yes	Probably	No	No difference
Very Small	3		1		1	1
Medium	6	2	7	1		
Large	2				2	
Total	11	2	8	1	3	1

6.8.2. Age limit for resident shift working

Clinical directors and RSWCs were asked whether they thought there should be an age limit for resident shift working and as illustrated below 78.6% felt that there should be, although 42.8% of all respondents did not specify a particular age. When an age was specified, the most frequent choice was 50–54 with 25% of all those interviewed specifying this.

The AOMRC concluded in 2008 that over the age of 45, people are increasingly prone to greater impairment of work performance and greater sleep disruption from shift work which alters their time of sleep²².

Table 22: Clinical director and RSWC views on imposing an age limit on resident shift working

Do you think there should be an age limit for undertaking resident shift working? And what do you think this age limit should be?		40 - 44	45 - 49	50 - 54	55+	no age given
Number of interviews conducted	28					
YES	22	1	2	7	6	12
NO	3					
Depends on how busy unit is	1					
Not Sure	1					
Did not answer	1					

Views on work/life balance

"It depends on so much more than age. Problem with medicine is that you go through with an aim to having an acceptable work/life balance towards the end. For paediatrics to be attractive there needs to be a route out of resident shift working. I do not think people will choose paediatrics if they have to do this all the time, especially because the majority of the workforce is women. Can't see how it can continue to function, unless there is a limit (i.e. 5 years as consultant)"

(Clinical Director)

If you have a young family, for 10 days out of the month I am there with my children. Quite family friendly if you have a young family. If you are just coming out of a registrar job you want to consolidate clinical skills so this is a good job.

(RSWC)

"People want their career to change as they get older which equates to success, degree of autonomy, ability to influence, and money. Resident consultants are limited in respect of earnings, autonomy, and power to influence the system, this makes paediatrics less popular"

(Clinical Director)

"There needs to be light at the end of the tunnel and need to be able to get involved in other things (i.e. management) and the ability to cope with nights as you get older is limited. Probably a limit of 5-10 years"

(Resident on-call consultant)

6.8.3. Perception of role

RSWCs were also asked if they felt junior to their non-resident consultant colleagues. The answers can be sorted into two groups, which show that 58.8% either do not feel junior, or acknowledge that they are junior in terms of experience; and 35.3% do, or sometimes do, feel junior to non-resident colleagues.

Table 23: RSWC responses when asked if they feel junior to non-resident shift working consultants

Do you feel junior to non-resident shift working consultants [or equivalents]?	
Number of interviews conducted	17
NO	6
I am junior in experience	4
YES	4
Sometimes	2
Not answered	1

"Even as a consultant I am only a year 1 consultant, so I feel junior to other consultants but not because of the job title but because of experience"

(Resident Shift Working Consultant)

"I am junior to the other non-resident consultants; they have all been here for many years. I don't see that as being an issue - we are all colleagues"

(Resident Shift-Working Consultant)

When RSWCs were asked if other staff members treated them as junior to non shift-working consultants only one person (5.9%) said they did; 52.9% said 'not at all'; and 29.4% said that it sometimes happened.

Table 24: RSWC responses when asked if they were treated as junior by other staff members

Do other members of staff treat you as junior to non-shift working consultants [or equivalents]?	
Number of interviews conducted	17
Not at all	9
Yes	1
Sometimes	5
Did not answer	2

"If you are on with a Consultant, it cannot get any better than that" (Tier 2 doctor)

"Feel very well supported the whole time. You know you can call upon them. (It) removes that feeling of being scared to talk to the consultant. You have to do it every day." (Tier 2 doctor)

"It is possible to defer to a consultant when you could have made the decision yourself." (Tier 2 doctor)

"This is a quiet unit overnight and the only reason for overnight shifts is to cover the Tier 2 rota. The twilight shifts is a good model - you get good senior opinion and provide good training." (RSWC)

"It is unrealistic for a paediatric consultant to think that they will not have to work like this." (Tier 2 doctor)

6.9. Recruitment and Retention

6.9.1. Compliance with EWTR

HR Directors were asked about compliance with EWTR³² and there is 100% compliance at those trusts with Tier 1 rotas, and 100% compliance at those trusts with Tier 2 rotas. Out of the 11 Tier 3 rotas, 81.8% are compliant (although one trust commented that doctors may not be getting the appropriate compensatory rest) and 18.2% have signed the waiver which allows them to opt out of the requirements of the Regulations.

Table 25: Compliance with EWTR

	Yes	No	Did not answer	Signed waiver	Total number interviewed	Comments
Is Tier 1 EWTR compliant?	10		1*		11	* No Tier 1 in the unit that did not answer
Is Tier 2 EWTR compliant?	9		2*		11	* No Tier 2 at these hospitals
Is Tier 3 EWTR compliant?	9*			2	11	1 Trust believes it is legal on paper but doctors may not be getting the appropriate compensatory rest

6.9.2. Pay Band Supplements

HR Directors were also asked about the pay banding supplements paid to Tier 1 and Tier 2 doctors in their trusts, which reflects the total number of hours worked and the proportion of those hours which are antisocial. There were 13 rotas in total at the 11 trusts, two trusts did not respond for Tier 2 and therefore percentages are based on the 10 rotas for which we have information. This showed that 80% of Tier 2 doctors receive a 50% pay supplement, and 20% receive a 40% supplement, for Tier 1 doctors the percentages are calculated for the 11 rotas for which we have information, and 90.9% receive a 50% pay supplement and 9.1% receive a 40% pay supplement.

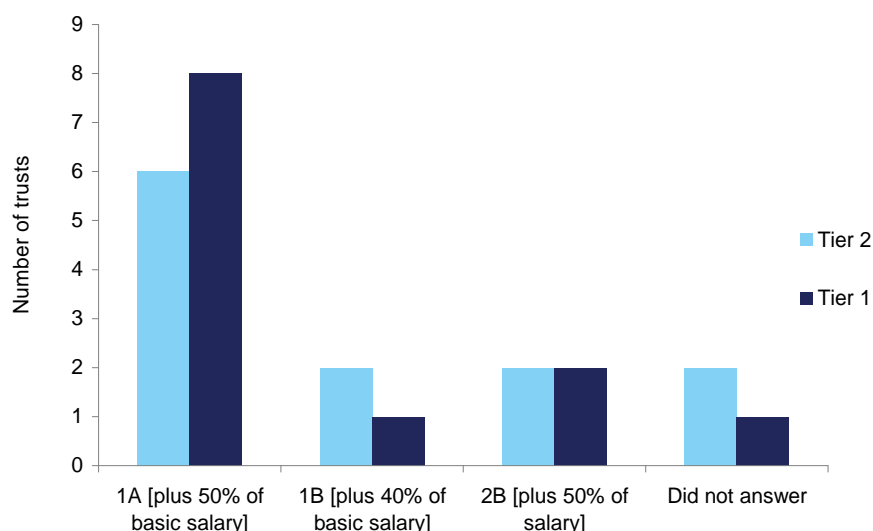


Figure 5: Pay banding of junior doctors at visited sites. Junior Doctors receive a pay banding supplement (a % of basic salary) which relates to the number of hours worked and the antisocial nature of the work.

6.8.3. Vacancies

HR Directors were asked about the number of vacancies on Tier 1, Tier 2, and Tier 3 rotas. According to the RCPCH EWTR rota compliance and vacancy survey⁶ carried out in December 2010, Tier 2 rotas have, on average, a 20.4% vacancy rate resulting from failure to recruit and gaps due to out of programme. Of the trusts visited during the CDC project the vacancy rate for Tier 1 is 1.00%; for Tier 2 it is 7.60%, and for Tier 3 it is 0.80%.

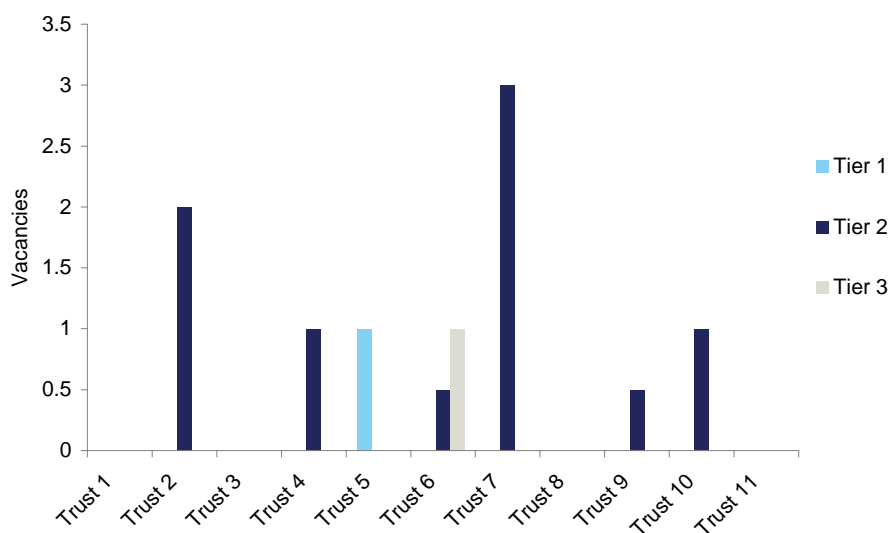


Figure 6: Tier 1, 2 and 3 vacancies by trust

The development and retention of consultant skills

"I think they are an absolute godsend. They provide new ideas - fresh from registrar job, and they have worked in various units. Does not take long before consultants have been in post for a long time and ideas become stale. They even provide rota ideas for the juniors. There is an advantage of 1 year posts, turnover of keen doctors, keen to impress, fresh out of SpR and keen to take on extra bits and pieces."

(Clinical Director)

"It is a sustainable model with young consultants who are fresh out of being an SpR with energy to do procedure or run for a resuscitation call. Can't go back to that model if you've been a consultant who hasn't done a lumbar puncture or taken bloods for 10 years"

(Resident on-call consultant)

"I have done some paediatrics before starting paediatric training where we did have registrar. I find it just as good, if not slightly better. Because you have more room to step up and guidance from someone more experienced than a registrar i.e. Lumbar puncture. Consultants are very involved in practical procedures."

(Middle Grade)

7. Discussion

7.1. The future role of the consultant paediatrician

The project raised a number of questions which will require resolution so that 24/7 consultant delivered care (CDC) can be a sustainable model in the long term. These include the following:

7.1.1. Styles of working and 'hands-on' working requirements

Consideration needs to be given to the type of CDC implemented in organisations and the personal style of those working in such systems. For example:

In trusts where RSWCs are employed to cover overnight shifts on the Tier 2 rota then it is possible there will not be any Tier 2 doctors working alongside the consultant, but there will be a Tier 1 doctor. Under these circumstances the amount of 'hands-on' work undertaken by the consultant will be dependent on the skills and competencies of the Tier 1 doctor (and nurses) and the medical needs of the child. However, it is possible that the consultant may need to take bloods, put in drips, perform lumbar punctures and intubate if required. This model enables consultants to maintain skills but some doctors may not have worked like this for a number of years.

If a RSWC is working twilight or overnight shifts alongside Tier 2 doctors then the consultant can take responsibility for the allocation of tasks during the shift. This ensures that tasks are split between those that require consultant participation and those that do not. This delineation will also ensure that training opportunities are maximised and appropriate supervision is provided.

Team job planning and integrated multi-disciplinary team working will ensure that all the team members; doctors, nurses, Advanced Nurse Practitioners, Advanced Neonatal Nurse Practitioners, will be able to play an active part in the delivery of safe effective care to the patient. A team approach also helps to ensure that the right person carries out the right tasks thus minimising the need for consultants to carry out tasks not appropriate to their seniority. It is preferable that the frequency of resident shifts is higher for the newly appointed consultants and in turn the more experienced consultants can reduce, or eliminate their resident commitment and use their expertise in PAs worked during normal working hours. This point of principle is a key factor in team job planning for units and is explored further in the following sections.

7.1.2. Should all consultants, regardless of age, work resident shifts throughout their career?

The 2003 Consultant Contract³³ is clear that resident shift working cannot be imposed on any consultant and requires negotiation between the employer and employee. There are practical concerns such as whether consultants who have been in post for some time have retained their competence to undertake practical tasks such as cannulation and lumbar punctures, or indeed have been required to provide hands-on care for neonates.

It is clear that each organisation and paediatric service will have a different staff profile and service needs. What is suggested is that in line with guidance¹⁴ team job planning should be undertaken to determine how best to meet the needs of the service and individuals. Of the sites visited, 90% operate some form of team job planning. Additionally, any resident duties should be reviewed annually and be agreed between the consultant and the trust.

7.1.3. Age cut off for RSWCs – how can this be achieved?

Birmingham Children's Hospital - Paediatric Intensive Care Unit (PICU)

The main concern about the sustainability of consultant delivered care models centred on the frequently expressed views that this is suitable for younger consultants, but not those over 50. Clinical Directors and others expressed doubts about a means of moving consultants off the rota, whilst ensuring that a 24/7 service could still be provided, and indeed, what mechanism could be applied to ensure that consultants could move off the rota. At an RCPCH workshop on the 22nd November, the PICU at Birmingham Children's Hospital shared their solution to this problem.

In their busy unit there had been an expansion in consultant numbers from 7 to 13, and a reduction in training numbers from 16 to 13. The system for on-call is that there is a 1st on call consultant who is resident in the unit, and there is a 2nd on-call consultant at home. All the consultants agreed that it would be divisive to have a system which referred to 'junior' and 'senior' consultants, and they sought a system which would be equitable for all concerned. They have devised and agreed a framework for the 'intense' on-call, which also accommodates the 2nd on call, in a clear and transparent way. The framework is based on a sliding scale which adapts the proportion of intense on-call in recognition of length of service and experience. Thus newly appointed consultants undertake the majority of their on-call as resident consultants, but do have some 2nd on-call duties; and those with longer lengths of service have different proportions of both, with the most experienced (usually older) consultants having the majority of their on-call as 2nd on call, with a smaller amount of residency. This can be demonstrated in the following chart³⁴.

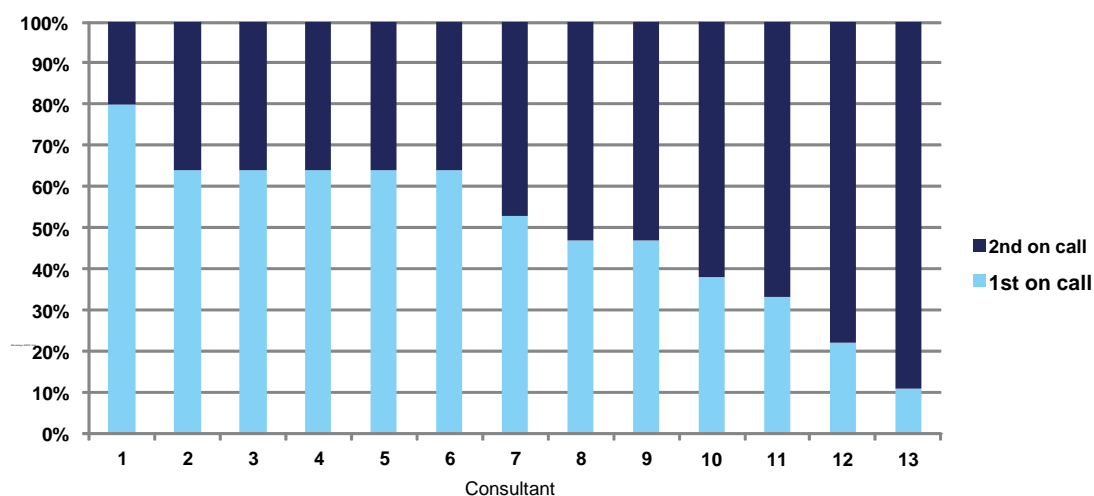


Figure 7: Allocation of on-call commitments at the PICU, Birmingham Children's Hospital

7.1.4. Can this model be part of a portfolio career? ^{13, 14}

Portfolio careers recognise the changing roles and responsibilities of a consultant paediatrician during their career and formally incorporate this into their contracts. This allows for a changing emphasis in the ratios of work within a consultant job plan, e.g. increasing the proportion of managerial duties and College roles with a reduction in the amount of intense clinical work. It is likely that resident-shift working could be included in a portfolio career in recognition that a consultant's capacity for intense clinical work may reduce as he/she gets older. More work needs to be done to see if the Birmingham PICU medical workforce model can be extrapolated to other acute and non acute services.

7.1.4. How can we ensure there are sufficient trainees to fill vacant consultant posts in the future?

Collaborative work between NHS Service and workforce planning organisations, the Academy of Medical Royal Colleges, and the RCPCH should be progressed to ensure that the particular requirements of paediatrics are understood and reflected in national workforce planning. The RCPCH workforce census for 2009²³ indicates there was a 4% vacancy rate at consultant level, and the information from *Facing the Future*⁷ indicates there needs to be an expansion in consultant numbers alongside a reduction in the number of trainees. These seemingly contradictory proposals need to dovetail so that training numbers reflect the vacancy levels that will result from the changing age profile of the expanding consultant workforce. Robust and continuous workforce data collection and planning is the cornerstone of achieving the correct balance of trainees and consultants.

7.1.5. The number of consultants working this way

The RCPCH 2009 census²¹ indicated that 104 consultants were working resident shifts on Tier 2 rotas; and the questionnaire results from the CDC project identified that 134 trusts have CDC provided in a variety of ways, including 'consultant of the week', consultant led handovers, consultants working twilight shifts or consultants on the Tier 2 rota. Seventy six new posts were established in England using Department of Health funding in 2009 (specifically targeted at paediatrics, neonatology and obstetrics) and of these 61 posts included resident shifts in the job plan. It is clear that the number of consultants working resident shifts is increasing and early indications from the 2011 RCPCH Workforce Census strongly support this view.

7.2. Does 'care closer to home' fit with the CDC model, and how is such a service to be funded?

At a number of the trusts visited there was discussion regarding Short Stay Paediatric Assessment Units (SSPAOUs). SSPAOUs have been introduced over the last 10 years and 2009 RCPCH census indicated that there are now 146 SSPAOUs; 125 in England, 10 in Wales, 8 in Scotland, and 2 in Northern Ireland. They are dedicated child-focused areas, typically between 4 and 12 beds, supported by paediatric staff, used for the observation, investigation and treatment of children and young people without recourse to in-patient ward areas³⁵. In the early stages of any illness may be difficult to distinguish minor conditions from more serious disorders without further assessment and observation. Emergency Departments are constrained by the 4 hour target for discharge or admission to an inpatient ward and may have reduced thresholds for admission as a result. Admission to an SSPAOU 'stops the clock' on the 4 hour target and provides a more efficient clinical service for patients who have self-limiting illnesses. The length of stay in the SSPAOU can be tailored to the condition for which the child is being observed e.g. 4 hours, 8 hours, or 12 hours.

- Senior clinical staff should be involved in gate-keeping and should be pivotal in decision making, providing effective training and delivery of services
- Senior clinical staff should be available at times of peak demand, including during evenings and weekends
- There should be good access to diagnostics
- Discharges can be nurse-led according to pre-set criteria with robust safety-netting and clear re-attendance policies³⁵.

SSPAOUs are part of the modern model of care which seeks to keep children out of hospital and to provide care for them at home or as close to home as possible. There is presently no national tariff structure in England within Payment by Results (PbR) for SSPAOUs. It is not known if or when such a structure will be introduced.

The PANDA (Paediatric Assessment and Decision Area) unit is a 24/7 SSPAOU at Salford Royal Hospitals NHS Foundation Trust. It is a stand-alone service as there is no paediatric in-patient unit on site and any child requiring admission is transferred to the local tertiary centre

in Manchester. The PANDA staff have analysed their activity over a number of years and can demonstrate that 96% of their attendances do not result in admission to an in-patient unit. The table below provides the breakdown of the Paediatric Emergency Department attenders, by disposition and by percentage and may be helpful to others planning such a service development.

Table 26: Evidence from 24 hour SSPAOU in Salford

Evidence from 24 hour SSPAOU in Salford - open since 2008 [no in-patient paediatrics on site]	
a	87% of all paediatric Emergency Department attenders discharged without admission to the SSPAOU, but with support from CCNTs if needed
b	12% of all paediatric Emergency Department attenders admitted to the SSPAOU
c	1% of all paediatric Emergency Department attenders transferred to the in-patient unit without admission to the SSPAOU
	a + b + c = TOTAL paediatric Emergency Department attenders
d	76% of those admitted to the SSPAOU are subsequently discharged without in-patient admission
e	24% of those admitted to the SSPAOU are subsequently admitted to the in-patient unit
	a + d = TOTAL discharged without in-patient admission [96%]
	c + e = TOTAL in-patient admissions [4%]

There is a range of SSPAOU types, including those that are open 24/7; those that are open for fewer hours – typically between 10 and 14 per day; and those that are open weekdays only. Fuller information can be found in the RCPCH document *Short Stay Paediatric Assessment Units – advice for commissioners and providers*³⁵.

Of particular concern to those trusts visited in this review was the problem of reconciling a modern model of service provision with the funding necessary to support it. If a child is admitted to an SSPAOU and subsequently discharged without in-patient care then commissioners may seek to reduce the payments made to trusts for that episode. In turn, this may put the continued existence of the paediatric service at that location in jeopardy. There is a perverse incentive if organisations receive more income for an out-dated model of care if that is the only means of supporting the cost of a paediatric service. In the event of reconfiguration, commissioners still have to pay for the care of children and young people in their catchment population wherever that care is provided. CDC can be a very useful means of supporting an SSPAOU, particularly out of normal working hours. A number of trusts visited commented that consultants working twilight shifts had a positive effect on discharges from the SSPAOU.

The Joint Statement by the Royal College of General Practitioners, the Royal College of Nursing, The Royal College of Paediatrics and Child Health and the College of Emergency Medicine – ‘*Right care, right place, first time*’³⁶ lists nine ways in which urgent and emergency care for children and young people differs from that for adults. These are reproduced here and are particularly relevant in the context of any discussions about reconfiguration, the quality of service provision, and funding.

- The frequency of emergency consultations (GP and Emergency Department) and emergency hospital admissions is relatively high in the 0-4 age group compared with 5-65 year old people (65+ is also high).
- When parents seek help for acute illness or injury in their children, there is a greater urgency to their need compared with seeking help for their own illness or that of an adult; this is determined by both worry and convenience (trying to balance the needs of the whole family).
- Calls to the ambulance service are unusual and very sick children are likely to be brought directly to the ED by parents, without warning.
- Children aged 0-2 years, in particular, form a vulnerable group, in terms of difficulty of diagnosis and the propensity to decompensate quickly.
- Failure to recognise the severity of illness was one of the key avoidable factors in the pilot study for the Child Death Review³⁷. Many healthcare professionals are less confident and competent diagnosing children. Without safe provision of skills, clinical errors and over-referral to other services becomes a problem.
- “Zero length of stay” (<24 hours) admissions are frequently cited as evidence of inefficient healthcare or avoidable hospital admissions, but common in children and young people. When professionals views are sought it is clear that this is a clinical necessity and not due to clinicians being risk averse; children have frequent minor illnesses, are hard to diagnose, but can become unwell very quickly. Due to low incidence of serious illness in the UK the outcome for the vast majority is discharge following a period of observation (usually up to 12 hours).
- An inappropriately high number of referrals from one healthcare provider to another occur in young children, presumably due to lack of confidence in the staff concerned.
- Telephone triage of children is difficult: symptoms are vague and face-to-face examination is often recommended by NHS Direct/24 and GP surgeries
- The clinical expertise for this patient group can fall between two specialties: emergency medicine and paediatrics; if in a locality there is no paediatric emergency medicine consultant, then both emergency medicine and paediatric consultants should be involved where clinical advice is needed.

From the above, and from the discussions in our face-to-face visits for this review, it is clear that SSPAOUs have a lead role to play in the provision of high quality care for children and young people. *“Right care, right place, first time”* also states that ‘tariffs or other financial arrangements must not be used perversely, compromising clinical care’. This point was raised a number of times in our discussions with clinical directors at the trusts we visited.

The importance of developing and maintaining clinical networks⁸ for paediatrics cannot be underestimated. Networks support an integrated model of care where professionals from primary and secondary care can work together in teams, across traditional health boundaries, to manage patients using care pathways designed by local clinicians 38 .

7.3. Relevance to safe and sustainable paediatric service provision and training

7.3.1. Facing the Future – service model vision

As *Facing the Future*¹ has indicated, the current situation is unsustainable. It suggests that the way forward is to take forward five interlocking proposals which need to be tackled together, not piecemeal. They are:

- a. Reduce the number of inpatient sites
- b. Increase the number of consultants
- c. Expand significantly the number of registered children's nurses
- d. Expand the number of GPs trained in paediatrics
- e. Decrease the number of paediatric trainees

For example, if trainee numbers are reduced before nurse, GP and consultant expansion occurs, or before the number of inpatient services declines, the consequences for children and young people would be disastrous. The transition to any proposed future design must be managed smoothly.

The RSWCs working on Tier 2 rotas are an important and pivotal element of ensuring that paediatric services are safely staffed during any transition. They are also likely to be fundamental to any reconfigured services in the future as the ratio of trainees to consultants reduces. The advantages and disadvantages of CDC, including resident-shift working, must be fully understood through further research so that appropriate, attractive working arrangements can be established and support the transition in line with the *Facing the Future* proposals.

7.4. Applicability to other specialties

We believe that the outcomes of the project will be applicable to other 24/7 specialties where the use of cross cover to provide an out-of-hours service is not appropriate, and believe that working on a collaborative project which includes, for example, the Royal College of Obstetricians and Gynaecologists, the Royal College of Anaesthetists and The College of Emergency Medicine would be productive in terms of:-

1. Identifying the similarities and differences between the four service areas and clarifying the clinical links between them, including any opportunities for dual trained or dual qualified staff (e.g. emergency medicine and paediatrics);
2. Providing a wealth of quantitative and qualitative data which will underpin robust workforce planning for all our services and clarify the bespoke approaches that are necessary to ensure sufficient trained doctors are available now and in the future;
3. Providing well thought out reconfiguration strategies that recognise the essential links between our services and reduce the risks to patient care inherent in any service changes;
4. Identifying a range of service models applicable to units of varying sizes, types, and locations and taking into account international comparators where these exist;
5. To agree consistent outcome measures across the specialties;
6. Enabling the production of commissioning advice to support the new local and national commissioning arrangements;
7. Supporting and providing financial modelling to demonstrate the cost effectiveness of consultant delivered care;
8. Providing a picture of what the future workforce should look like for NHS commissioners, service and workforce planners.

From our stakeholder involvement work there have already been strong indications from the other Colleges of their willingness to co-operate in such a project.

Appendix A – Initial questionnaire sent to all paediatric and neonatal units

1. Do you currently operate a form of consultant delivered care?

For the purposes of this study, consultant delivered care includes "consultant of the week" or "hot week" arrangements, consultant led handover, resident on-call twilight shifts, and the presence of consultants on the middle grade rota.

☐ Yes

☐ No

2. How often do you have consultant led handovers?

☐ Never

☐ Approx once a week

☐ Approx 2-3 times a week

☐ Approx 4-5 times a week

☐ Once a day

☐ Twice a day

☐ Three or more times a day

3. Do you have consultant led handovers at the weekend?

☐ Yes

☐ No

4. How many of your consultants work resident twilight shifts?

Number of consultants

5. How many Whole Time Equivalent (WTE) on the middle grade (Tier 2) rota are consultants?

WTE

6. Please select the option which reflects your current "consultant of the week" or "hot week" arrangements

☐ Operates on weekdays and weekends

☐ Operates on weekdays only

☐ No consultant of the week or hot week scheme in place

7. Have you undertaken any evaluation of the impact of introducing consultant delivered care in your service?

☒ Yes

☐ No

☐ Not sure

8. Please describe briefly the evaluation you have undertaken

9. Would you be prepared to share your findings with the College as part of this study?

☐ Yes

☒ No

10. Would you be willing to further take part in this study in the form of a site visit/series of interviews?

☐ Yes

☒ No

Appendix B – Site visit questionnaires

B.1. Questions asked of clinical directors

1. Are all your consultant (or equivalent) contracts 10 PAs? (Please provide details if not)
2. Have you got 'consultant (or equivalent) of the week' (COW)?
 3. If 'yes' – are resident shift working consultants (or equivalent) included in COW?
 4. If 'yes' – how do you achieve this? (try and get a sample rota if possible)
5. Do all your consultants (or equivalent) undertake Resident Shift Working?
6. When were the Resident Shift Working consultants (or equivalent) appointed?
7. How many resident consultants (or equivalent) do twilight shifts?
8. How many twilight shifts are there in total per week?
9. When consultants (or equivalent) undertake twilight shifts is there a middle grade on the rota with them?
10. What working patterns do they have?
11. How many Programmed Activities (PAs) do resident consultants (or equivalent) undertake?
12. Do you believe this is a good service model?
13. Do you believe this is a sustainable service model?
14. Has the model had an impact on the overnight workload?
15. Have you had problems with these new rotas?
16. Do you think there should be an age limit for undertaking Resident Shift Working?
 17. If 'yes' what age limit do you think this should be?
18. What advantages do you think there are for Resident Shift Working?
19. What disadvantages do you think there are for Resident Shift Working?
20. Do you have Team Job Planning?
21. Do you have an SSPAOU (Short Stay Paediatric Assessment and Observation Unit)?
 22. If 'yes', what is the composition of the SSPAOU rota?
 23. What are the SSPAOU opening hours?
 24. Do you feel the presence of the SSPAOU has reduced the in-patient unit workload?
25. Do you have a Community Children's Nursing Team to support discharge planning?
26. Do you meet the standards in 'Facing the Future' (in particular: 2, 5, 6, 7)

a) (2) Every child or young person who is admitted to a paediatric department with an acute medical problem is seen by a consultant paediatrician (or equivalent staff, specialty and associate specialist grade doctor who is trained and assessed as competent in acute paediatric care) within the first 24 hours.

b) (5) At least one medical handover in every 24 hours is led by a paediatric consultant (or equivalent).

c) (6) A paediatric consultant (or equivalent) is present in the hospital during times of peak activity (5- 10pm).

d) (7) All general paediatric inpatient units adopt an attending consultant (or equivalent) system, most often in the form of the 'consultant of the week' system.

27. Have you noticed any reduction or increase in patient complaints since you have had resident shift working consultants?

28. Has there been any impact on admissions since you have had resident shift working consultants (or equivalent)?

29. Has there been any impact on critical incident of SUI (Serious Untoward Incident) rates since you implemented resident shift working consultants (or equivalent)?

30. Have you noticed any increase in trainee satisfaction?

31. Have you evaluated the new model?

32. If 'yes' how did you do this? And what did it show?

33. Do you have any SSASG doctors on Tier 2 or Tier 3?

34. If yes, do they have CESR (Certificate of Eligibility for Specialist Registration)?

35. Have they undergone annual appraisal?

36. Do they fulfil current CPD requirements?

37. Can you confirm the current composition of your Tier 1, 2 and 3 rotas? (We will provide the rota composition as at the last RCPCH Census in 2009 as a starting point).

38. Have you collected or are you aware of any outcome measures from service, governance, or regional network audits?

PICU specific questions

1. How would you say the new ways of working are going in the PICU?

2. Are there any particular issues you have encountered as a result?

3. Do you have any plans for future changes to the PICU service?

B.2. Questions asked of resident shift working consultants

1. Do you believe this is a good service model?

2. Do you believe this is a sustainable service model?

3. Has the model had an impact on the overnight workload?

4. When consultants (or equivalent) undertake twilight shifts is there a middle grade on the rota with them?

5. Have you had problems with these new rotas?
6. Do you think there should be an age limit for undertaking resident shift working?
 7. If 'yes' what age limit do you think this should be?
8. What advantages do you think there are for resident shift working?
9. What disadvantages do you think there are for resident shift working?
10. Have you noticed any increase in trainee satisfaction?
11. Do you feel junior to non-resident shift working consultants (or equivalent)?
12. Do other members of staff treat you as junior to non-resident shift working consultants (or equivalent)?

B.3. Questions asked of paediatric trainees

1. How would you rate your access to teaching? (*Excellent, Good, Indifferent, Poor or Very Poor*)
2. How would you rate your hands on experience? (*Excellent, Good, Indifferent, Poor or Very Poor*)
 - a) When working with resident consultants (or equivalent)?
 - b) When there is no resident consultant (or equivalent)?
3. Do you like this new model?
4. In what way(s) do you think this has improved your training?
5. In what way(s) do you think this has harmed your training?
6. Will you want to work like this when you have your CCT?
7. Has the presence of resident consultant (or equivalent) reduced the need to call in non-resident consultants (or equivalent)? *Yes/No*
8. If yes, please explain why.

B.4. Questions asked of finance directors or equivalent

1. Have you seen any reduction or increase in paediatric income since the introduction of resident shift working consultants (or equivalent) – and can you quantify this?
2. Have you seen any effect on paediatric medical staff locum costs since the introduction of resident shift working consultants (or equivalent) – and can you quantify this?
3. If there is an SSPAOU – how is this funded – who determined the tariff, and does it cover the costs of running it?
4. In your opinion, how sustainable is the resident consultant (or equivalent) working system?
5. Did you use DH trained doctor solution monies to establish resident consultant (or equivalent) posts?

B.5. Questions asked of human resources directors or equivalent

1. Is Tier 1 EWTR compliant?
2. Is Tier 2 EWTR compliant?
3. Is Tier 3 EWTR compliant?
4. If any of the above is not compliant, is there an agreed plan for becoming compliant? Is this plan funded?
5. What band is Tier 2 on for New Deal?
6. What band is Tier 1 on for New Deal?
7. How many vacant posts do you have on each of the rotas and how long have these posts been vacant?

B.6. Questions asked of lead paediatric nurses

1. Do you like this new way of working?
2. Can you give examples of any changes for the better or worse?
3. Do you notice any differences in the way the service runs, e.g. hand-over or decision making?
4. Have you noticed any increase or decrease in the number or type of complaints?
5. Has the model had an impact on the overnight workload?
6. Have you noticed any impact on admissions since you have had resident shift working consultants (or equivalent)?
7. Do you feel that this way of working assist the nursing staff? (give examples)
8. Do you feel that this way of working improves the care of patients? (give examples)

Appendix C – Outcomes from survey of Trainees’ Committee

1. Does your organisation have a short stay paediatric assessment and observation unit?

Response and percent count	
Yes	70.8% 17
No	29.2% 7
answered question	24
skipped question	0

2. What New Deal banding is applied to your middle grade doctors?

Response and percent count	
3	4.5% 1
2A	4.5% 1
2B	18.2% 4
1A	63.6% 14
1B	9.1% 2
1C	0.0% 0
No banding	0.0% 0
answered question	22
skipped question	2

3. Does your Trust have any consultants who are resident on-call?

Response and percent count	
Yes	37.5% (9)
No	62.5% (15)
answered question	24
skipped question	0

4. How many resident on-call consultants are there in paediatrics and neonates in your organisation?

	Response
Mean	3
Range	1 to 5
answered question	7
not sure	1
skipped question	16

5. The following questions relate to units where a Resident Consultant is present:

Response and percent count				
	Yes	No	N/A	Total
Do these consultants work resident overnight shifts?	25.0% (2)	75.0% (6)	0.0% (0)	8
Is there a middle grade on duty when the consultant is resident overnight?	12.5% (1)	25.0% (2)	62.5% (5)	8
Do these consultants work resident twilight shifts?	87.5% (7)	12.5% (1)	0.0% (0)	8
Is there a middle grade on duty when the consultant is resident on a twilight shift?	62.5% (5)	25.0% (2)	12.5% (1)	8
answered question				8
skipped question				16

6. The following questions relate to the effect Resident Consultants may have on training and quality of care:

Response and percent count			
	Yes	No	Total
Do you believe that resident on-call consultants improve the quality of training for junior medical staff?	65.2% (15)	34.8% (8)	23
Do you believe that resident on-call consultants improve access to training for junior medical staff?	65.2% (15)	34.8% (8)	23
Do you believe that resident on-call consultants improve the quality of care for patients?	95.7% (22)	4.3% (1)	23
Do you believe there should be a cut-off age for consultants being resident when on call?	60.9% (14)	39.1% (9)	23
answered question			23
skipped question			1

7. Please use the free text box to make any comments you feel are relevant to the RCPCH project to evaluate the effects of consultant delivered care

"Feel it is a good stepping-stone to full consultancy and fills in some of the middle grade rota issues, but the working pattern and continuation of night shifts is an undesirable working pattern for the rest of your consultancy."

"It is an indisputable truth that we have all had our starkest learning opportunities at 3am in the morning on our own. How can we make sure trainees at the end of their training can 'fend for themselves' at all times (with the back-up of a consultant) with a consultant breathing down their neck. I would like to ensure that for the majority of the time a junior is the first person to clerk a patient not a consultant. We need to keep trainees engaged and to feel they have a meaningful role in delivering care."

"There should be a cut off age."

"Unnecessary and will reduce competencies amongst registrars."

"Consultant delivered care may improve the efficiency of paediatric services and the quality of care for patients now but I wonder whether this will be the case long term. Registrars in training at present will become less experienced if consultant delivered care becomes the service standard and therefore when they become consultants, the care may not be a better quality. Effectively, it will end up being a junior consultant resident (Effectively a SpR on the old training scheme) with a senior consultant on call from home."

"There must be some 'cut off' age beyond which there is no expectation for consultants to provide resident on-call."

"Acute care in my unit is highly registrar-led and might serve as a useful comparison model."

"I do feel that there will be a bottle neck when resident consultants want to go on to non-resident posts later on in their career and these appointments should be transparent."

Appendix D - Analysis of GMC National Training \ Survey 2011 results with specific reference to the 11 trusts surveyed for the CDC project

The black vertical error bar represents the 95% confidence level around the mean score or percentage obtained by each trust or unit, which is indicated by the light blue square. The horizontal line represents the national mean score or percentage. All data was taken from the GMC National Training Survey 2011²⁹.

Overall satisfaction

Overall satisfaction, reported as a score from 0 to 100, was calculated by combining satisfaction with each of the key elements of a training post.

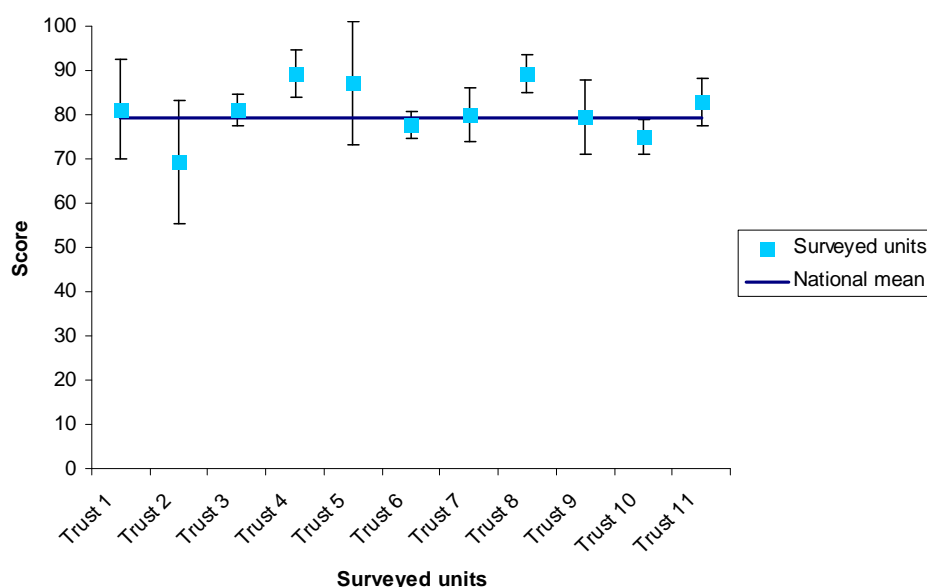


Figure 8: Overall satisfaction

Of the 11 units surveyed, 8 were reported as on or above the national mean for overall satisfaction. Three were below the national mean.

Work load

Work load is reported as a score between 0 and 100. A low score indicates a situation where work intensity and/or long hours may result in sleep deprivation or exhaustion, and is calculated by assessing the answers to a series of questions about working hours and intensity. Seven of the visited units had scores higher than the national mean, and four had lower scores than the national mean.

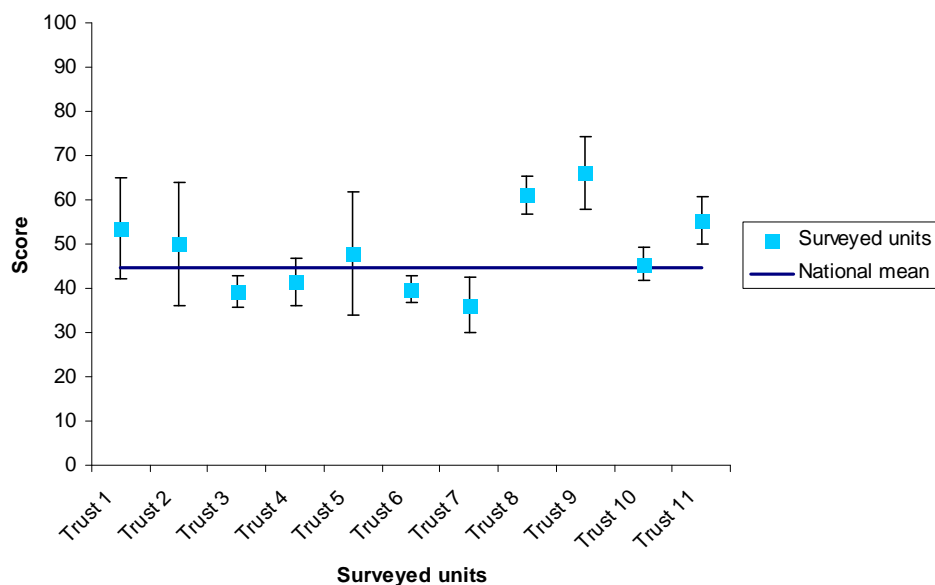


Figure 9: Work load

Handover

Handover is reported as a score from 0 to 100, with a higher score representing a situation where handover is more formally organised. Five of the 11 units visited had higher scores than the national mean, and six had scores lower than the national mean.

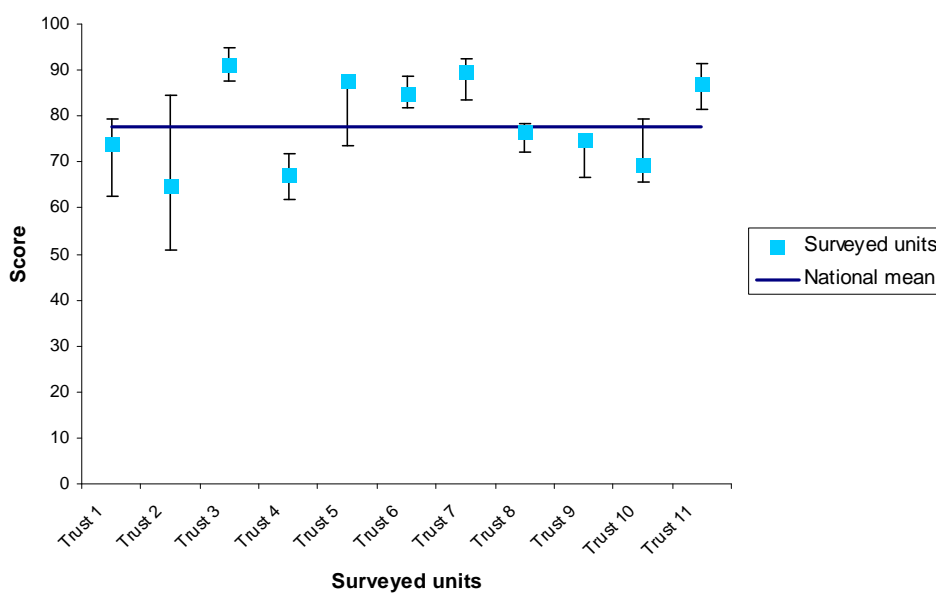


Figure 10: Handover

Compliance with EWTD

A percentage score was calculated for this measure based on two questions which ask about compliance on paper and pressure to report hours less than worked.

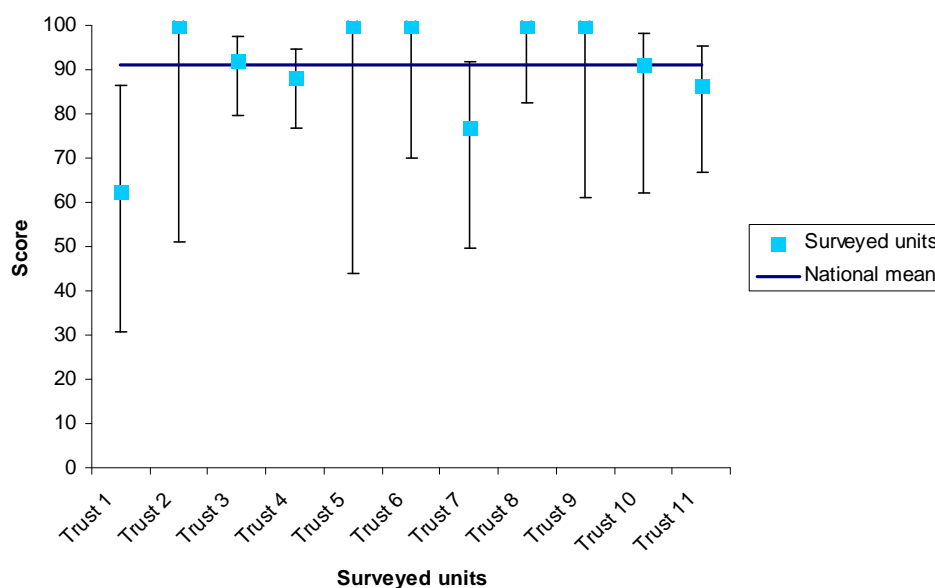


Figure 11: Compliance with EWTD

Hours of education per week

Reported as a score from 0 to 100, this measure looks at the hours of weekly education received by trainees in addition to on the job training.

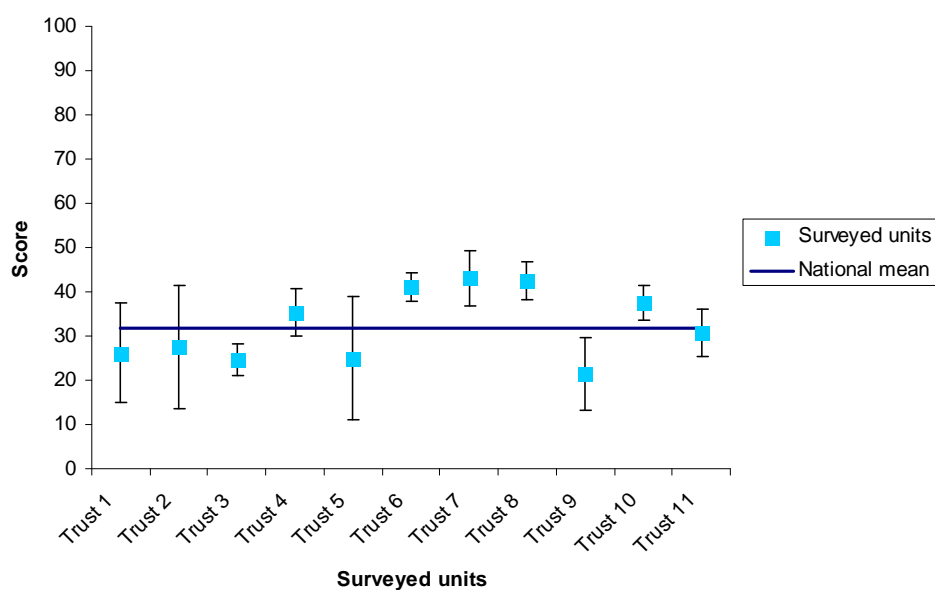


Figure 12: Hours of education per week

Adequate experience

Respondents were asked to rate their hands on experience and about their confidence in acquiring competencies in this post. The responses were used to calculate a score from 0 to 100.

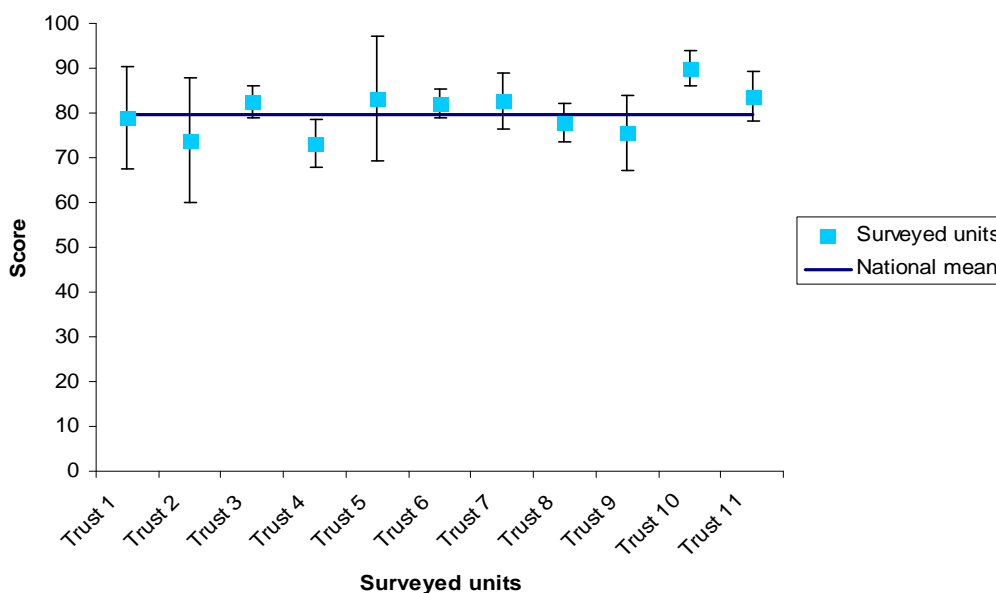


Figure 13: Adequate experience

Redistribution of tasks

Reported as a score from 0 to 100, a high score indicates that the trainee may not be getting enough experience from the post as they should.

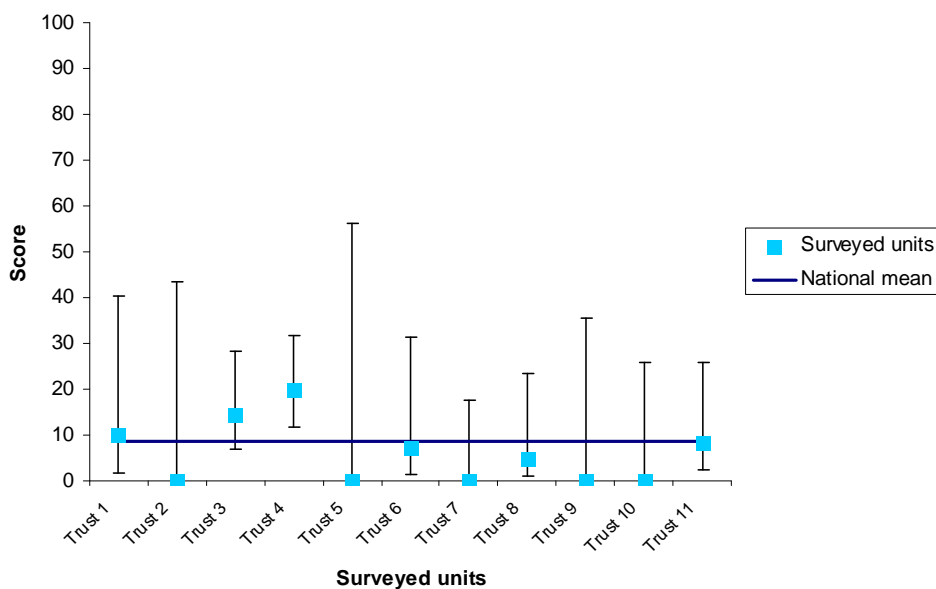


Figure 14: Redistribution of tasks

The majority of surveyed units (9 out of 11) surveyed have a mean score on or below the national average. A low score is considered positive for this outcome measure.

Education supervision

The score was calculated by combining the responses to a series of questions about supervision and support, learning portfolios and training agreements.

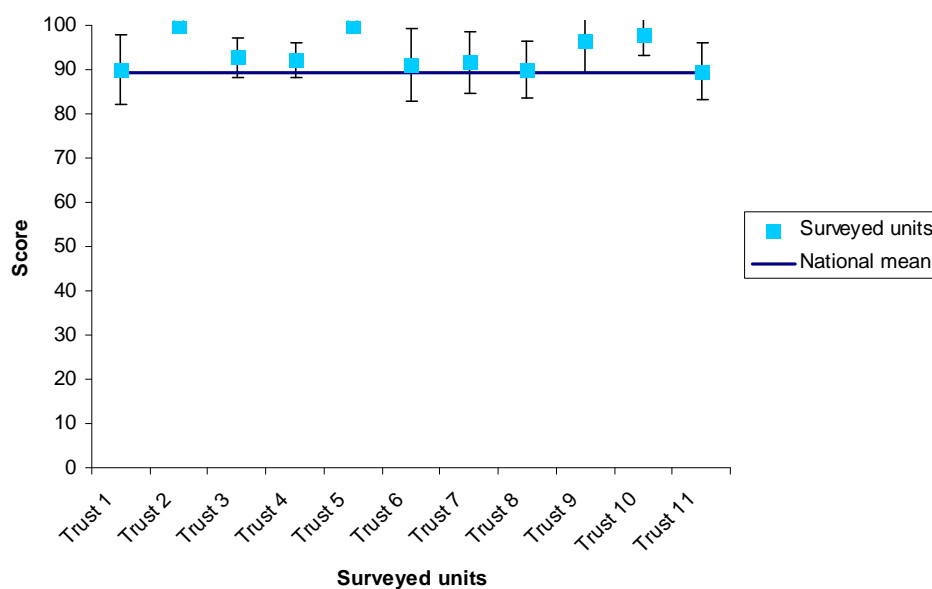


Figure 15: Education supervision

All of the surveyed trusts score on or above the national average for education supervision, for which a high score is considered positive.

Feedback

The feedback score, reported from 0 to 100, relates to the availability of day to day feedback, appraisal and assessment. Eight of the 11 units surveyed scored on or above the national mean for feedback.

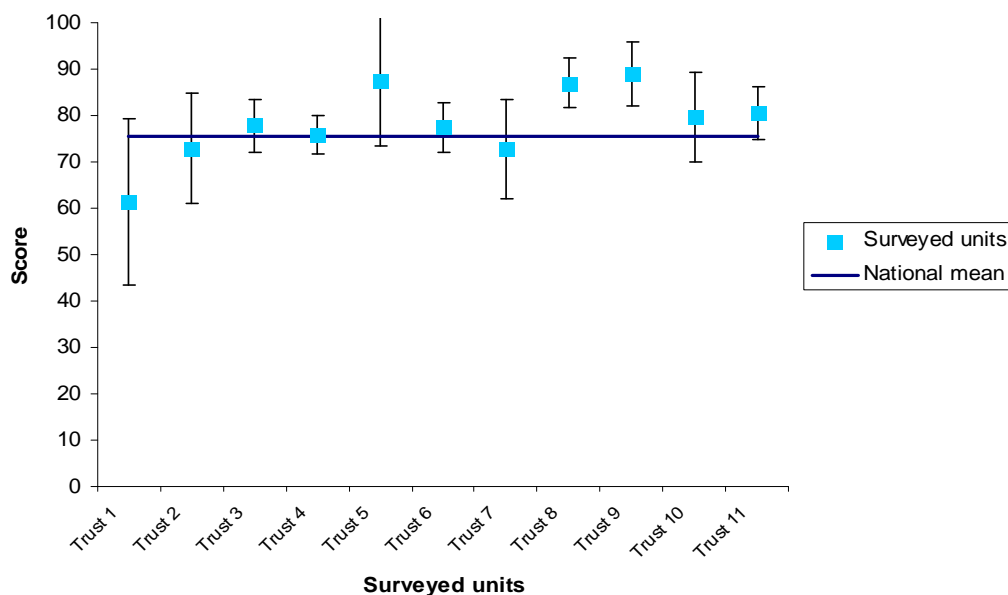


Figure 16: Feedback

Undermining by consultants

A high score indicates that trainees are experiencing undermining behaviour from consultants. All surveyed units had a very low score for undermining by consultants. Only one trust was above the national mean, by 1.5 points.

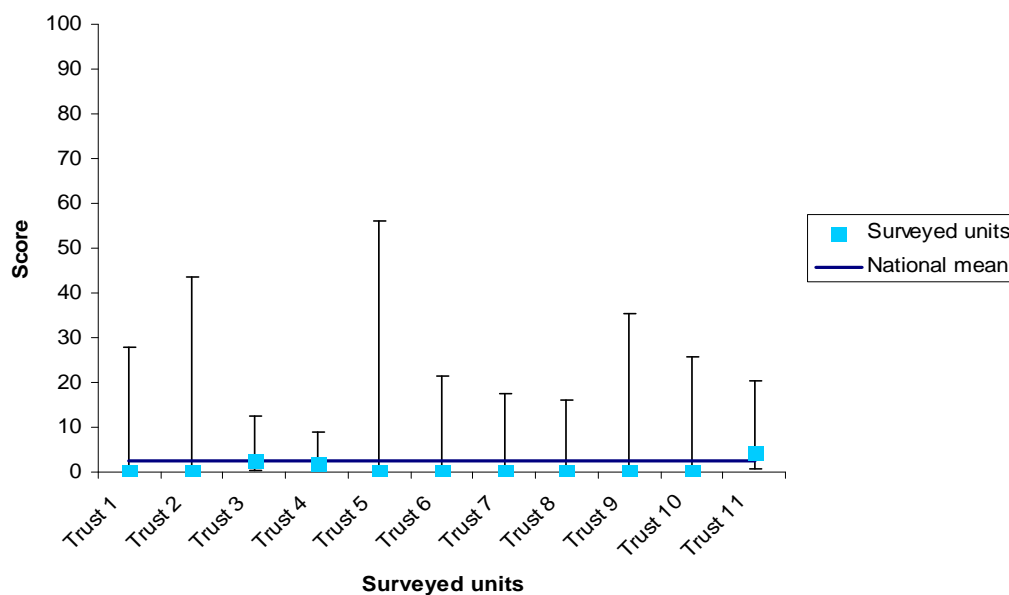


Figure 17: Undermining by consultants

Undermining by other staff

A high score indicates that trainees are experiencing undermining behaviour from staff other than consultants. Undermining by other staff is considerably higher on average than undermining by consultants, according to the GMC National Training Survey 2011.

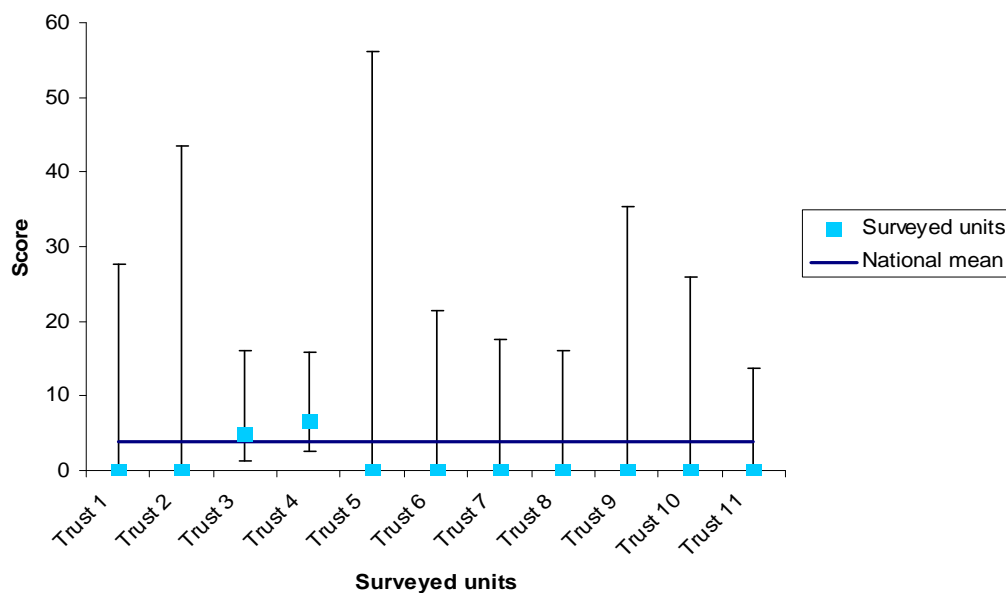


Figure 18: Undermining by other staff

Appendix E - Project review

Discrete aspects of the project are identified below. The next step is to conduct a larger and more critically evaluated study so that these factors will be taken into account.

There is a broader challenge that underpinned the whole of the project and which can best be described as a perception of 'bias'. Despite best efforts to include the whole range of service models, those individuals and units who were interested in CDC and had experience of it contributed most to the work. This is valuable in that a range of units (urban, rural, large, medium, small) demonstrated consistent themes – both good and bad. However, those who work in such units tended, overall, to be enthusiastic supporters of CDC and this has been appropriately reported.

Notwithstanding that, where criticism and constraints were identified these have also been included, and these are the areas that we believe should be addressed in a further, larger, piece of work. CDC cannot by itself be the means of resolving workforce, service and quality issues within paediatrics, but it can contribute to their resolution.

E.1. Challenges within the project

E.1.1. Choice of indicators

The choice of indicators was based, in some instances, on assumptions about the ease of availability of data.

It became apparent that there was difficulty obtaining robust recent activity data, and financial information for elements of the paediatric services (Emergency Department activity, SSPAOU activity, etc). Similarly, financial information was often too high level to be directly useful to the CDC model.

Organisations do not necessarily have information on the number of complaints (by directorate) or paediatric specific patient satisfaction survey information.

Any future work would need to consider the availability of data very carefully and take advice from an NHS information specialist to determine what data could be obtained, and which indicators should be used as measures to support a project such as this.

E.1.2. No responses from trusts without CDC

Despite sending a specific questionnaire to trusts without CDC we did not receive any responses from this group of organisations and therefore were unable to include any information from these trusts.

E.1.3. Limited time available

The project ran for 5 months from the end of July 2011 to the end of December 2011. This was a very tight timeframe for the development and distribution of questionnaires, the analysis of responses, arranging site visits, evaluating the information gained through the visits, and writing the report. It was, however, made possible with the contributions from all the stakeholders and contributing organisations.

E.1.4. Number of sites visited

Site visits were restricted due to the timeframe for the project. The project has focussed predominantly on England, despite repeated attempts to visit trusts in Northern Ireland, Scotland and Wales.

E.1.5. Collection and availability of data

As mentioned in 8.3.1 above, there were considerable difficulties in obtaining data that could be used to support evaluation of the indicators.

E.2. What went well

E.2.1. Questionnaire responses

The questionnaire was sent to 220 paediatric and neonatal units. Responses were received from 139 which equates to a response rate of 63.2%. Of those, 134 trusts had some form of CDC.

E.2.2. Visits to trusts

Of the 139 trusts responding to the questionnaire and operating a form of consultant delivered care, 123 indicated they would be willing to be visited and take part in further in-depth interviews. Ten trusts were contacted and were able to confirm arrangements for the visits in the necessary timeframe. Each organisation ensured the clinical director, a resident shift-working consultant, a Tier 2 doctor, a lead paediatric nurse, a representative from finance and a representative from human resources, were available for interviews on the day of the visit. Every organisation was very welcoming and provided additional data (sample rotas, activity information, etc) if available.

E.2.3. Stakeholder involvement

As reported in 2.4.9 the project benefitted from the input and experience of a range of stakeholders. The contributions from clinicians, academics, lead nurses, SSASG doctors, trainees, representatives from the Department of Health, representatives from the Centre for Workforce Intelligence, the Academy of Medical Royal Colleges, managers, workforce specialists, and other Royal Colleges, offered valuable insights into issues to be considered and shared their experiences of CDC.

References

- 1 Royal College of Paediatrics and Child Health (2011) *Facing the Future – A Review of Paediatric Services*. [Online] Available at: <http://www.rcpch.ac.uk/facingthefuture>
- 2 British Medical Association (2008) *The role of the consultant*. [Online] Available at: http://www.bma.org.uk/images/roleofconsultant0708_tcm41-169893.pdf
- 3 Academy of Medical Royal Colleges (2012) *The Benefits of Consultant Delivered Care*. [Online] Available at: <http://www.aomrc.org.uk/publications/reports-a-guidance.html>
- 4 Royal College of Paediatrics and Child Health (2011), *Response to the Academy of Medical Royal Colleges' Benefits of Consultant Delivered Healthcare: call for evidence*. [Online] Available at: <http://www.rcpch.ac.uk/sites/default/files/Response%20018%2011%20RCPCH%20response%20AoMR%20consultants%20FINAL.pdf>
- 5 Temple, J. (2010) *Time for Training: A Review of the impact of the European Working Time Directive on the Quality of Training*, Medical Education England. [Online] Available at: www.mee.nhs.uk/PDF/14274%20Bookmark%20Web%20Version.pdf
- 6 Royal College of Paediatrics and Child Health (2011) *EWTR Survey Findings*. [Online] Available at: http://www.rcpch.ac.uk/sites/default/files/EWTR_Report_Feb2010.pdf
- 7 Pathiraja, F. & Wilson, M-C. (2011) The rise and rise of the portfolio career, *BMJ Careers*, 19 January 2011. [Online] Available at: <http://careers.bmj.com/careers/advice/view-article.html?id=20001807>
- 8 Royal College of Paediatrics and Child Health (2012) *Bringing Networks to Life: An RCPCH guide to implementing clinical networks*. [Online] Available at: <http://www.rcpch.ac.uk/sites/default/files/Bringing%20Networks%20to%20Life%20for%20web.pdf>
- 9 Royal College of Paediatrics and Child Health (2011), *Response to the NHS Modernisation Listening Exercise*. [Online] Available at: [http://www.rcpch.ac.uk/sites/default/files/RCPCH%20response%20to%20Listening%20Exercise%2030 511 0.pdf](http://www.rcpch.ac.uk/sites/default/files/RCPCH%20response%20to%20Listening%20Exercise%2030%20511%200.pdf)
- 10 Centre for Workforce Intelligence (2011), *Medical Specialty Workforce Summary Sheet – Paediatrics*. [Online] Available at: <http://www.cfwl.org.uk/intelligence/shape-of-the-medical-workforce-informing-medical-specialty-training-numbers/paediatrics>
- 11 Royal College of Paediatrics and Child Health (2007), *Modelling the Future – a consultation paper on the future of children's health services*. [Online] Available at: <http://www.rcpch.ac.uk/sites/default/files/MtF%2025.09.07.pdf>
- 12 Royal College of Paediatrics and Child Health (2008), *Modelling the Future II – reconfiguration and workforce estimates*. [Online] Available at: http://www.rcpch.ac.uk/sites/default/files/asset_library/Publications/M/Modelling%20the%20Future%20II.pdf
- 13 Royal College of Paediatrics and Child Health (2009), *Modelling the Future III – safe and sustainable integrated health services for infants, children and young people*. [Online] Available at: <http://www.rcpch.ac.uk/sites/default/files/MTFIIIDec09.pdf>
- 14 Royal College of Paediatrics and Child Health (2009), *Guidance on the role of the consultant paediatrician in providing acute care in the hospital*. [Online] Available at: http://www.rcpch.ac.uk/sites/default/files/Guidance%20on%20the%20Role%20of%20the%20Consultant%20Paediatrician135KB%20PDF_0.pdf

-
- 15 Bristol Royal Infirmary Inquiry (2001), *Learning from Bristol: the report of the public inquiry into children's heart surgery at the Bristol Royal Infirmary 1983 – 1995* (Sir Ian Kennedy).
 - 16 Making it Better – reconfiguration of women's and children's services in Greater Manchester, <http://www.makingitbetter.nhs.uk>
 - 17 British Medical Association (2012), *BMA Q and A: Consultant presence*. [Online] Available at: <http://web2.bma.org.uk/nrezine.nsf/wd/BSKN-8Q7K8F?OpenDocument&C=7+January+2012>
 - 18 Pasupathy D, Wood A M, Pell J P, Fleming M, Smith G C. (2010) Time of birth and risk of neonatal death at term: retrospective cohort study. *British Medical Journal*; 341: c3498.
 - 19 NHS, (2012) *Medical Specialty Training (England)*, [Online] Available at: <http://www.mmc.nhs.uk>
 - 20 Ahmed-Little Y, Bluck M, (2006) The European Working Time Directive, *British Journal of Health Care Management*. Available at: www.healthcareworkforce.nhs.uk/2007wtdconferencepresentations
 - 21 Academy of Medical Royal Colleges (2004), *Implementing the European Working Time Directive: A Position Paper from the Academy of Medical Royal Colleges*. Available at: www.aomrc.org.uk/publications/statements/111.html
 - 22 Academy of Medical Royal Colleges (2008), *Medical Workforce Project to identify the added value doctors bring to the healthcare team*. [Online] Available at: <http://www.aomrc.org.uk/publications/reports-guidance.html>
 - 23 Royal College of Paediatrics and Child Health (2011) *Medical Workforce Census 2009*. [Online] Available at: <http://www.rcpch.ac.uk/sites/default/files/RCPCH%20Workforce%20Census%202009.pdf>
 - 24 Royal College of Surgeons of England (2009) *The consultant surgeon and the consultant-delivered service*, [Online] Available at: <http://www.rcseng.ac.uk/publications/docs/the-consultant-surgeon-and-the-consultant-delivered-service>
 - 25 Royal College of Obstetrics and Gynaecology (2001) *Getting a Life – Work-Life Balance in Obstetrics and Gynaecology; Working Party Report*. [Online] Available at: <http://www.rcog.org.uk/womens-health/clinical-guidance/getting-a-life>
 - 26 NHS Employers (2003) *Consultant contract 2003*. [Online] Last updated 28 June 2011, Available at: <http://www.nhsemployers.org/PayAndContracts/MedicalandDentalContracts/ConsultantsAndDentalConsultants/Pages/Consultants-KeyDocuments.aspx>
 - 27 Edwards H, Ewing C, Bluck M, et. Al. (2011) *Evaluation of the introduction of resident on-call consultants across the North West Strategic Health Authority*. Contact: halcyon@hrmenterprises.co.uk
 - 28 Bluck M, Edwards H, (2008) *Delivering Safe Services*. [Online] Available at: <http://www.makingitbetter.nhs.uk/documents/DeliveringSafeServices.pdf>
 - 29 General Medical Council (2011) *GMC National Training Survey 2011, Key Findings*. [Online] Available at: http://www.gmc-uk.org/NTS_trainee_survey_2011.pdf_45270429.pdf
 - 30 Royal College of Paediatrics and Child Health (2011) *National Neonatal Audit Programme 2010* (updated October 2011). [Online] Available at: http://www.rcpch.ac.uk/sites/default/files/2011NNAP_Annual_Report_Oct2011_0.pdf
 - 31 Royal College of Surgeons of England (2010) *Locum doctor costs in NHS Trusts in England*. [Online] Available at: <http://www.rcseng.ac.uk/publications/docs/locum-doctor-costs-in-nhs-trusts-in-england?searchterm=Locum+costs>

-
- 32 Zircadian Limited (2010), *Demystifying the Working Time Regulations for Doctors in Training*. [Online] Available at:
<http://www.zircadian.com/resources/documents/DemystifyingtheWorkingTimeRegulations3.1.pdf>
- 33 British Medical Association, *Consultants contract*. [Online] Available at:
<http://www.bma.org.uk/employmentandcontracts/employmentcontracts/consultantscontracts/>
- 34 Provided by Dr Adrian Plunkett, Birmingham Children's Hospital
- 35 Royal College of Paediatrics and Child Health (2009) *Short Stay Paediatric Assessment Units – advice for Commissioners and Providers*. [Online] Available at:
http://www.rcpch.ac.uk/sites/default/files/asset_library/Publications/S/SSPAUK.pdf
- 36 Royal College of General Practitioners, Royal College of Nursing, Royal College of Paediatrics and Child Health, College of Emergency Medicine (2011) *Right care, right place, first time?* [Online] Available at: <http://www.rcpch.ac.uk/news/right-care-right-place-first-time>
- 37 The Confidential Enquiry into Maternal and Child Health (2006) *Why Children Die: A Pilot Study*. [Online] Available at: www.injuryobservatory.net/documents/why_children_die1.pdf
- 38 Royal College of Paediatrics and Child Health, Royal College of General Practitioners, Royal College of Physicians (2008) *Teams without Walls*. [Online] Available at:
<http://www.rcpch.ac.uk/sites/default/files/teams-without-walls.pdf.pdf>