

Facing the Future: A Review of Paediatric Services

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But what is clear is that some kind of change along the lines of this report is required. The possibility of staying the same is simply not open to us and for that reason I commend this report to our membership, to carers and to their elected representatives.

Professor Terence Stephenson

President, Royal College of Paediatrics and Child Health



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There will be far more opportunities for GPs to be trained in paediatrics. Paediatrics will become a more attractive career prospect with trainee numbers aligned to vacancies

to paediatric posts as we would like. The current uncertainties around the future working patterns of paediatricians could adversely affect recruitment and a second aim of this project has been to undertake a modelling exercise to determine the number of paediatricians that are needed, the likely configuration of paediatric services and an appropriate number of trainees. Whilst recognising that working practices will differ amongst paediatricians working in different specialities and different locations the report has attempted to look at the implications that new working practices (in particular the resident component of a post) will have on the roles that paediatricians undertake at different stages of their careers. From studies that the College has previously undertaken we are aware that there is an expectation amongst paediatric trainees that they will continue to undertake intensive duties throughout their entire career and the College recognises the detrimental effect that this has on recruitment to our specialty. These concerns could be partially alleviated by designing a realistic opportunity for phased careers in which more intensive consultant posts evolve in a planned way to less intensive ones.

Over the last ten years there has been a 50% increase in the consultant paediatric workforce in the UK. Despite this considerable increase, all of our recent workforce surveys have shown that paediatric departments are struggling to maintain essential services in the face of changing workforce legislation and increasing demands on the service, particularly out of hours. In recommending significant further expansion in our consultant workforce, the College believes that it is absolutely essential that we have a clear vision for how paediatricians will work in the future and a clear strategy that this increased workforce will address the current problems to ensure that there is a safe and sustainable service in all parts of the UK. In this way there can be a move from an historical pattern of a supply led workforce to a truly demand-led workforce.

The College recognises that this report is written against a background of a challenging financial climate and the prospect of turbulent commissioning arrangements but unless the current crisis in paediatric services is addressed the health of children and young people in the UK will continue to suffer, and we will not see the high quality consultant-delivered care that all children and young people deserve.

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9. Specialist paediatricians are available for immediate telephone advice for acute problems for all specialties, and for all paediatricians.

10. All children and young people, children's social care, police and health teams have access to a paediatrician with child protection experience and skills (of at least Level 3 safeguarding competencies) available to provide immediate advice and subsequent assessment, if necessary, for children and young people under 18 years of age where there are child protection concerns. The requirement is for advice, clinical assessment and the timely provision of an appropriate medical opinion, supported with a written report.



The Temple report concluded that consultant-delivered, as opposed to consultant led or consultant-based, care was the only viable model for the future of medical care in the UK. There were a number of reasons for this but most importantly the simple fact

recommend that the consultant (or equivalent) review takes place within 12 hours of admission rather than 24 hours. The admission time is taken to be the official time of admission to the paediatric department rather than, for instance, the time of presentation to the emergency department or the time of referral to the paediatric department.

For SSASG doctors to be considered as “consultant equivalent” they should successfully revalidate at this competency level through the RCPCH or a similar approved partner scheme. The RCPCH encourages SSASG doctors to develop competencies throughout their career and to take the MRCPCH exam if they wish to do so. The RCPCH also supports the provision of at least 1.5 SPAs each week for SSASGs to have adequate time for CPD and preparation for revalidation. In addition, they must have a mutually agreed named consultant who, at least as part of an annual appraisal process, has a signed contract in which they

consultants (or SSASG equivalents, see explanatory text to Standards 1 and 2) available for advice even if they are not physically present.

The College also would expect that any child or young person who is continuously present in an SSPAU for more than eight hours will be discussed with a consultant or paediatrician on a middle grade rota to decide upon ongoing treatment and / or transfer.

Standard 4 is based on published evidence.

5. **At least one medical handover in every 24 hours is led by a paediatric consultant (or equivalent).**
6. **A paediatric consultant (or equivalent) is present in the hospital during times of peak activity.**

Implementation of the EWTD and the consequent transition to shift patterns of working have significantly reduced the continuity of care that junior doctors used to provide and increased the number of clinical handovers between medical staff. At the same time, junior medical staff have not adopted the kind of structured handover process with which nurses are familiar. There is a growing body of evidence that clinically significant information can be lost during the handover process, and that this can lead to adverse outcomes for patients.⁶ It is also well documented that the peak admission time for acute paediatrics is the early evening, 5-10pm, when traditionally the consultant has not been present. Consultant presence during this time would not only improve patient outcomes, but their presence during handovers would provide an excellent training opportunity for junior staff.⁷ Hence, the College has specified these two standards in order both to improve patient safety and outcomes as well as facilitate the training of medical staff.

Standards 5 and 6 are based on published evidence.

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.**

With the introduction of EWTD, continuity of care has become a significant problem for inpatient care. The College believes that the most appropriate system to mitigate the effect of new working practices is to adopt a consultant of the week system in which the consultant has no other clinical duties during that week but is fully available for the management of acute admissions. Anecdotal evidence received by the RCPCH has indicated that such systems have contributed towards WTD compliance, improved patient safety, created better continuity of care and better training, supervision and consultant support for trainees.⁸ The College recognises that some consultant of the week rotas may include some SSASG doctors if recognised as competent to operate at this level (see

8. All general acute paediatric rotas are made up of at least ten WTEs, all of whom are EWTD compliant.

The EWTD mandated that no-one should work more than 48 hours per week on average. The subsequent SiMAP⁹ and Jaeger¹⁰ judgements have clarified the implications for junior doctors. The Academy of Medical Royal Colleges have stated that in order to protect adequate training time, as well as to cover for annual leave and recovery periods, ten WTE doctors in a rota are required.¹¹ It is possible to design rotas that are compliant with just eight staff and in relation to neonatal medicine, where there is less daytime outpatient activity, rotas of this size may be entirely appropriate.¹² However, for general acute paediatrics, eight cell rotas inevitably result in the use of internal locums, and therefore in practice are not sustainable. The College does not believe that relying on junior doctors opting out of the directive is acceptable. An exception to this standard would be where resident consultants form part of the middle grade rota. In this situation, rotas with fewer trainees can be appropriate, sustainable and EWTD compliant provided there are the equivalent of ten WTEs on the rota.¹³

Standard 8 is partly pragmatic, and partly based on published evidence.

9. Specialist paediatricians are available for immediate telephone advice for acute problems for all specialties, and for all paediatricians.

With increasing centralisation of specialist care and in order to facilitate appropriate long term condition management closer to the child or young person's home, it is imperative that local paediatricians have access to appropriate specialist advice in a timely manner, at least if unnecessary referrals and admissions are to be avoided. This standard aims to ensure that the local paediatrician, whether based in the community, an SSPAU or an inpatient unit, can access the specialist opinion that is needed when faced with acute problems in children and young people with complex and specialist needs. It is optimal if such advice is provided as part of a managed clinical network which encompasses all of the local secondary care providers. It is also important to stress that this standard does not apply when the presenting problem is not an emergency, nor does it apply to referrals from non-paediatricians who should, in the first instance, seek the advice of their local paediatric service.

Standard 9 was arrived at by consensus.

10. All children and young people, children's social care, police and health teams have access to a paediatrician with child protection experience and skills (of at least Level 3 safeguarding competences) available to provide immediate advice and subsequent assessment, if necessary, for children and young people under 18 years of age where there are child protection concerns. The requirement is for advice, clinical assessment and the timely provision of an appropriate medical opinion, supported with a written report.

Standard 10 aims to ensure that any child or young person of 17 years or younger, presenting with child protection concerns, is appropriately assessed at an appropriate time by a competent paediatrician. This service must be available to all units on a 24 / 7 basis. As with all clinical presentations, the timing of the assessment is determined by the presentation and in child protection, the likelihood of finding and collecting forensic evidence.

An initial strategy discussion (with interagency colleagues) must take place in accordance with local safeguarding policies, as soon as practical and usually within two hours. Depending upon the needs of the child or young person (clinical, forensic and safety) the child or young person must be assessed and an opinion provided (which may be provisional depending upon further investigations and discussion) usually within 12 hours of presentation where there are recent injuries. The written medical document should be available within three days.



The next four chapters of this report will present a series of tables showing the current configuration of acute paediatric services, the current numbers of consultants and trainees, and the College's proposals for the reconfiguration of services based on these figures. This chapter addresses the current provision of services. It shows the number of inpatient units and their size based on the 2009 RCPCH census and 2009 acute admission data from Hospital Episode Statistics (HES) and the health statistics departments of Scotland, Wales and Northern Ireland. It also indicates the size of the current paediatric workforce and begins to highlight some of the challenges we face. It is important to recognise that the cut-off date for all of the data was 2009. It is, therefore, inevitable that the precise number of inpatient units may have changed slightly since this time, almost certainly in the direction of fewer units.

According to the 2009 data sources, there are 263 paediatric services within the UK comprising general, community and tertiary services. Of these services, 218 have paediatric inpatient beds. We have been able to identify accurate acute admission data for 94% of these and made informed estimates of activities for the other 6% of units (partly based on census returns). In addition to this, there are 13 stand-alone SSPAU's which do not have resident paediatric medical staff.

This report has defined a very small hospital as one that has up to 1,500 emergency paediatric admissions per annum and a small hospital as one which has between 1,501 and 2,500 emergency admissions per annum. Based on these data, there are 30 very small hospitals in the UK, and 75 small hospitals, representing 14% and 34% of the total respectively (Table 1). The definitions used in this report are different from those proposed by the College in 1996.¹⁴ At that time, a small unit was defined as one "with fewer than 1,800 acute paediatric medical referrals per year (including those acute problems referred but not admitted)." This equates roughly to our definition of a very small unit. However, this report has not used that definition as the currently available data for referrals is less accurate than the data that is available for admissions.

Table 1 – Inpatient Paediatric Units in the UK

		Number of hospitals (% of total)
Very Small Hospitals	≤1500 admissions per year	30 (14%)
Small Hospitals	1501-2,500 admissions per year	75 (34%)
Medium Hospitals	2,501-5,000 admissions per year	103 (47%)
Large Hospitals	>5000 admissions per year	10 (5%)
TOTAL		218

Medium hospitals were defined as those that receive between 2,501 and 5,000 emergency paediatric admissions per annum. There are over 100 of these units (Table 1). Large hospitals

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This report has already made clear that our overall goal is to see high quality paediatric healthcare delivered for all of the UK childhood population. In pursuit of that vision the College has set out ten service standards that will improve the quality of care that is provided. In order to implement those standards, and therefore ensure high quality care, we need to have the right number of staff, trained to an appropriate level, delivering care in an appropriate number of units. Although it may appear desirable for every hospital to have an inpatient paediatric unit, given the finite number of trained paediatric doctors and nurses there is a limit to how many units can be staffed safely.

Reconfiguring acute services represents part of the solution. These proposals are made to ensure that our service standards are met and high quality care is delivered for all our children and young people. The report examines the possibility of no change as well as what is termed moderate and maximum reconfigurations.

Very small hospitals are defined as those having up to 1,500 acute admissions per annum. If we define 'proximal' as those units within 30 minutes normal (non rush hour) drive time of another unit, and 'distal' as more than 30 minutes normal drive time, there are ten sites both proximal and very small, and 20 sites distal and very small (Table 4). The precise service redesigns that might take place at these sites are unpredictable as they depend on factors not simply related to the size of the unit and distance from other units, but also local politics, history and public opinion. Service standard 8 stipulates that all general acute rotas should be comprised of 10 WTEs. As indicated earlier, there are currently not enough tier 1 and tier 2 staff to deliver this in all of the existing units across the country. It is therefore likely that in order to ensure that service standard 8 is met that Deaneries will choose to concentrate their tier 1 and tier 2 doctors in those units that see the most patients in order to maximise the training opportunities for their doctors. How this will work in practice will depend on each individual area, but we would anticipate that Deaneries might choose, for instance, to remove trainees from those units which are small or very small (less than 2,500 admissions per annum). If this occurs, we would anticipate that at least a proportion of these units will reconfigure in the coming years. It is the College's view that the necessity to remove trainees from units will only apply to tier 2 doctors and not to tier 1. This is because it is easier to supplement tier 1 doctors with GP trainees and advanced children's and neonatal nurse practitioners than it is to supplement tier 2 doctors (see our detailed workforce modelling in chapter 6).

intervention. The third option would involve alternative provision made at a local GP practice or health centre where advanced children's nurse practitioners could staff some observation beds, perhaps up to four hours for any individual child. The fourth and last option would be replacement of the unit by a new stand alone SSPAU. This could be staffed by a combination of ST1-3 trainees, foundation year doctors, GP trainees and advanced children's nurse practitioners, all of whom would be supported by a consultant, available for advice and review as necessary. It is the College's view that the last of these options would be the most appropriate for approximately two thirds of the units that will close especially for those units that are either geographically more isolated or that are larger. The College anticipates that the remaining one third of units that will close will adopt one of the other options.

Table 4 shows such potential reconfigurations of very small units. This report models for both moderate changes and maximal changes. The moderate position is one where all

this happens then those units that remain open will either become two tier services or convert to an SSPAU, or simply close. There are some small units that have tertiary services, and in such cases it may be appropriate that they maintain three tiers in their

It is envisaged that these SSPAUs will be open for approximately 14 hours each day and will be staffed by a single tier of ST1-3 trainees, GP trainees, Foundation Year Doctors and advanced children's nurse practitioners. There will be medical consultant advice (and review as necessary) available during all the hours they are open. The degree of consultant presence will inevitably vary according to the competencies of the staff that are available. We anticipate, for instance, that for the more experienced ST3 trainees and advanced children's nurse practitioners (ACNPs), the consultant would only be present when called upon. In contrast, we would anticipate a much greater degree of consultant presence for GP trainees, Foundation Year Doctors and less experienced ACNPs. This greater consultant presence would not only ensure that the children receive high quality care, but also provide opportunities for training of the less experienced staff.

This proposal - to increase the number of SSPAUs - is in line with recent comments from the Royal College of Nursing who have anticipated these changes. In their 'Submission to the Prime Minister's Commission on Nursing and Midwifery', they wrote, "There will be a significant decrease in the number of children and young people's inpatient units (possibly a reduction by as much as 50% over the next ten years), with a substantial increase in the availability of community children's nurses and the number of children and young people's assessment and short stay/observation beds, which will be led and staffed by advanced children's nurse practitioners."¹⁷



In the following three chapters, the report looks at the workforce implications of the service reconfiguration proposals outlined above. In this chapter, the report addresses the impact on medical consultant numbers, and in the next chapter the report undertakes the same exercise for trainee numbers before Chapter 7 where we explore medical consultant career pathways.

There are currently 3,264 consultant paediatricians in the UK (3,084 WTEs). This number comprises three groups: General Paediatricians (with or without a special interest), sub-specialty paediatricians (Community Paediatricians, Neonatal Paediatricians and the other 18 recognised sub-specialties) and academic paediatricians. General Paediatricians are the largest group with Community Paediatricians and Neonatal Paediatricians forming the largest components of the sub-specialty workforce (see Table 9). The number of academic consultants is relatively small.

It is important to note that the number of

Neonatal Paediatricians (NPs) is 1,000.

In the third column of Table 7, "small / v.small", there is an assumption that consultants will be required to be resident on average for 25% of their on-call duties as there will be a need for consultants in these units to be resident when tier 1 staff have inadequate competencies or children and young people with high dependencies are admitted. The next column, "Small / v.small with 24/7 cons", indicates what the required number of consultants would be if resident consultants were needed 100% of the time. The report includes this column for information, but does not use it in subsequent calculations as the College does not believe that any of these small / v.small units will require 24/7 consultant presence, especially when that would require a staff complement of 11.2 consultants.

Table 8 uses the calculations of general paediatric consultant requirements from Table 7 and combines it with modelling from Table 6 to demonstrate the number of general paediatricians required in the UK. The Table also shows the current number of general paediatricians.

Table 8: General Consultant Paediatrician Requirements in WTEs

Type of unit	No change	Moderate reconfiguration	Maximum reconfiguration	Current number of general consultant paediatricians
SSPAU	0	141	220	
Small / v.small	808	439	223	
Medium	958	> 0	> 0	

represents 6% of the total consultant workforce. In contrast, in general medicine 12% of consultants are in academic posts. Since 2000, the paediatric consultant workforce has increased by over 50%, but the paediatric academic consultant workforce has actually decreased by 16%. The equivalent figures for general medicine and general practice are increases of 26% and 32% respectively.¹⁸ In addition, the academic workforce is disproportionately skewed both to men and to the older age group. As these individuals retire they are not being replaced by younger academics. It is imperative that as we continue to see an expansion in the consultant paediatric workforce, a significant part of this expansion takes place in academic paediatrics.

In addition to the calculation of consultant numbers for general acute paediatrics, this report considers the requirements for Community Child Health. In 1999, the British Association of Community Child Health (BACCH) undertook detailed workforce modelling for community paediatrics. At the time, they recommended that the number of consultant community paediatricians required to deliver a 'good enough' level of care was 4.5 WTE per 300,000 population.¹⁹ This would equate to a little over 900 consultant community paediatricians in the UK. Since then, there has been a significant expansion in the range of statutory duties that fall to community paediatricians, particularly in the area of child protection. At the same time traditional hospital-based care has, albeit slowly, moved increasingly into the community. Despite this, the number of consultants working primarily in the community remains at 591 WTEs (662 persons), significantly below the required number. If service standard 10 is to be implemented then a significant expansion in the consultant community workforce would be required.

As part of this project, the College contacted leads from the 19 paediatric subspecialty groups to predict the requirement for consultants in their specialty. They indicated that across a range of subspecialties there exists a significant shortfall in the number of consultants. To give just two examples: the recently completed standards for paediatric endocrinology state that there should be one endocrinologist per ½ million total population. Therefore for a population of 62 million, there should be 124 consultants in paediatric endocrinology.²⁰ This represents more than a doubling of current figures. Similarly, in 2002, the British Renal Society indicated that there should be at least 72 paediatric nephrologists in the UK.²¹ The current figure is around 55.

To achieve standards across all specialty groups, there would have to be an increase in the number of sub-specialty consultants (excluding neonatology) by approximately 30%. This would mean an increase of 362 consultants to a total of 1,200 consultants.

For neonatology, using the same methodology as earlier, the College has calculated the number of PAs required for the 68 Level 3 neonatal units in medium and large hospitals. Using this approach, there is a requirement for 6.3 WTEs in Level 3 units in medium

hospitals, and 11.0 WTEs in Level 3 units in large hospitals.²² We have assumed that the former figure applies to the 32 Level 3 units in DGHs, and the latter applies to the 36 Level 3 units in tertiary centres. This gives a combined requirement of 598 consultants.

There are currently 357 WTE (369 persons) neonatologists in the UK, significantly short of the 598 required. However, if neonatal consultants are required to become resident to support tier 2 rotas (see Table 15 and discussion in chapter 6), greater numbers would be needed (265 WTE), bringing the total requirement to 863 WTE neonatologists.

These discussions assume that the configuration of tertiary neonatal units remains unchanged and, perhaps, can be used as an argument to review the configuration of neonatal services to develop a model with a more achievable and sustainable consultant workforce. We have included this figure for neonatal consultants (598) in our final modelling assumptions as it would be appropriate to have larger numbers of tertiary neonatal specialists if there were to be a tier 2 neonatal service. ~~Costs~~

The previous chapter demonstrated that there is a need for at least a 50% increase in the number of consultant paediatricians to provide a high quality, consultant-delivered model of care and if the service standards are to be met. This chapter explores the implications of the potential service configurations on trainee numbers. It does this against a background of the dual problem highlighted earlier: too few trainees to staff rotas, and too many trainees for the current consultant establishment. The proposals contained in this chapter seek to address both of those problems.

The most recent figures from the RCPCH training department indicate that there are 3,461 registered trainees (including LATs, FTSTAs and ACFs). This is significantly higher than the 2,544 WTE trainees who participate on acute general and neonatal rotas. There are three different groups of doctors who account for this difference of just under 1,000. The first group is those who are currently Out Of Programme (OOP) whether due to maternity leave, research, long term sick leave or working overseas. Such doctors appear in the register collected by the training department, but are not available to participate in acute general / neonatal rotas. The second group is the significant number of trainee doctors who work part time. They will appear as whole persons in our register of trainees, but because they do not work full time will reduce the number of WTEs working on the general / neonatal rotas. The final group of doctors who account for this difference comprises those doctors who work on specialist rotas (excluding neonates). Like the OOP doctors, they will appear on our register of trainees, but will not appear in the numbers of WTEs that work on general / neonatal rotas. Unfortunately, the College do not know precisely how many doctors are in each of these categories. However, if we assume that half of our non-neonatal 'grid' trainees work on general rotas and that a further 250 (non-grid) doctors work on specialist rotas, whether at tier 1 or tier 2 level, then the effective participation rate (i.e. those actually available for work on general / neonatal rotas) for paediatric trainees is 85%.²³ If in fact a higher number than this work exclusively on specialist rotas (whether as 'grid' trainees or not), then the participation rate will be higher than 85%. If the number of trainees on specialist rotas is lower, then the participation rate will be lower than 85%.

There are two methods for calculating trainee requirements. The first is to consider how many are necessary to maintain a steady state for the number of consultants required, and so produce just the right number of CCTs to balance the number of consultant vacancies that will arise. As previously discussed, the overall ratio of trainees to consultants should be 1:3. Hence, if the consultant workforce was expanded in line with our proposals the

The alternative approach is to consider the number of rotas and to calculate our trainee requirement based on that service need. Even if the College assumes the maximum reconfiguration then there would be 142 tier 1 and 113 tier 2 general inpatient rotas (Table 6). If we combine this with the tier 1 and tier 2 workforce required for neonates, then we get a combined requirement of 3,774 trainees (142 x 26.5 = 3,763 Red req + 113 x 33.3 = 3,763 neonate req + 48 = 3,774 total req)

Table 11 uses the figures from Table 10 to show how those 1720 trainees might be allocated across each of the eight years of training, taking into account a four per cent per year attrition rate. It also demonstrates how approximately 175 paediatricians will complete training each year.

Table 11: Trainee allocation with 4% attrition rate per annum (WTEs)

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Table 12: General Paediatrics tier 1 Requirements for various reconfiguration models in WTEs

		Current numbers	No change in service	Moderate reconfiguration	Maximum reconfiguration
tier 1	GP Trainees	568	568		

SSASGs doctors contributing to these rotas. The number of ST trainees in the Table uses the proposed number from Table 10 (630) minus the number that would be on neonatal rotas assuming that every trainee does one neonatal placement between ST4 and ST5 of 6 months (630-63=567). It also assumes that all grid trainees are supernumerary.

Table 13: General Paediatrics tier 2 Requirements for the various reconfiguration models in WTEs

		Current numbers	No change	Moderate reconfiguration	Maximum reconfiguration
tier 2	Nurses	21	21	21	21
	Trust doctors	220	220	220	220
	SSASG	273	273	273	273
	ST Trainees	1093	567	567	567
	Consultants	86	49	49	49
	Totals	1693	1130	1130	1130

The most significant finding from Table 13 is that it is possible to manage the reduction in trainee numbers, including a reduction in the number of consultants required to work as resident on the tier 2 rotas by removing tier 2 trainees from the acute rotas in small and very small hospitals.



Tables 14 and 15 show workforce numbers for neonatology. There are currently 86 tier 1 rotas and 67 tier 2 neonatal rotas. In accordance with the recent BAPM standards, the staffing requirements below are based on eight WTEs per cell model.²⁷ The number of tier 1 ST trainees represents 40% of those tier 1 trainees available for general and neonatal rotas as this reflects the current proportion of tier 1 trainees that work in neonates (excluding those who work on specialist rotas). The recent BAPM standards have indicated that although GP trainees and foundation year doctors may be appropriate at a tier 1 in Level 2 neonatal units they would not be appropriate at tier 1 in Level 3 units.²⁸ Currently there are 92 GP and Foundation Year doctor posts on tier 1 rotas, but in line with the BAPM standards the College has modelled this workforce removing GP trainees and Foundation Year doctors. The BAPM standards also indicate that it is entirely appropriate for Advanced or Enhanced Neonatal Nurse Practitioners to work at this level.²⁹ The modelling indicates that there would have to be a significant expansion in the number of nurses who work in this way. It is important to recognise that the College is not merely proposing that nurses substitute for gaps in rotas. Instead, the College's view is that a career pathway that has proved successful and attractive for some nurses should be provided for many more with clear options for career progression provided as part of it.³⁰

Table 14: Neonatology tier 1 Requirements in WTEs

		Current numbers	Proposed staffing structure
tier 1	GP Trainees	40	0
	FY doctors	52	0
	ANNPs / ENNPs	91	410
	Trust doctors	78	78
	ST Trainees	432	200
	Totals	693	688

Table 15 shows the equivalent figures for tier 2 neonatal rotas. The number of nurses, Trust doctors and SSASG doctors has not been changed from those that currently work on tier 2 rotas. The number of ST trainees represents those that are grid neonatology trainees and the number of general tier 2 trainees who would be undertaking their neonatology placement (70 grid + 63 general tier 2 trainees). This is currently six months between ST4 and ST5 number of grid between ST4 and ST5.

Throughout the analysis the College has assumed that the total number of grid trainees would not change from the current number of 340 (70 of these are neonatal grid trainees). There is an assumption that grid trainees will not take a full part in the general acute tier 2 on-call rota. The Temple report recognised that these on-call duties can detract from the grid trainee's specialty training as a relatively high proportion of the hours that they work are out of hours therefore reducing the experience that the trainee has to their chosen specialty during normal working hours when training opportunities are most appropriate. The College recognises that maintaining the current number of grid trainees (excluding neonatology where the numbers may be appropriate) will produce sufficient numbers of specialist CCT holders for ongoing consultant expansion. However, if there was a reduction in the current consultant expansion in the future then the number of grid trainees would have to be reduced. There will need to be further work undertaken with the individual sub-specialties to determine the number of grid trainees required to maintain a steady state.

It is important to appreciate that all of the changes described in this document represent a situation some five to ten years ahead when a steady state has been reached in which there is a sufficient number of staff of adequate competency for all units, and when the number of trainees is appropriate for the number of consultant posts that will arise. There are a number of ways to achieve this transition. One possible scenario, which assumes that

trainees and advanced children's and neonatal nurses and shows a significant expansion in their numbers, and the top area represents paediatric trainees. It is important to note that the timeline has been designed so that the reduction in paediatric trainees only commences after two to three years in order to ensure adequate numbers on current rotas. If there is a reduction in tier 1 trainees immediately, and prior to any expansion in GP and nurse numbers, then the existing shortfall of tier 1 staff would deteriorate. Overall, the figure shows that the gap between provided and required staff is closed within just a few years. Immediately, this is facilitated by an expansion in the number of GP trainees on paediatric placements, and after two to three years by an increased number of nurses having been trained to an advanced level.

Figure 2 illustrates a similar analysis for tier 2 staff. The top solid line represents the total requirement of tier 2 staff. The precise shape of this line is crucially affected by how rapidly tier 2 trainees are removed from small and very small hospitals. The figure illustrates that we can expect that the total requirement for tier 2 staff will be met after two or three years as the smaller hospitals lose their middle grade rota. The figure also shows that the total provision of tier 2 staff remains essentially the same for the first five years before decreasing to reach a steady state at ten years. The reason that this reduction takes place some years after the reduction in tier 1 trainees (see figure 1) is that initially any reduction in paediatric trainees will only affect ST1s. It will take at least three years before any reduction in tier 1 is apparent on tier 2 rotas (see figure 3). The figure also shows that after eight years the number of consultants working on tier 2 rotas begins to expand to compensate for the ongoing loss of tier 2 trainees.

The final figure 3 summarises some of the data from figures 1 and 2 to illustrate the overall change in consultant numbers and paediatric trainee numbers. What it demonstrates is firstly, that the expansion in consultant numbers must begin before there is any reduction in trainee numbers. Although some reduction in trainee numbers takes place at three years, it only happens to a significant extent from four to three years onwards, when the expansion in consultants is well under way. This is very important as if we were to reduce trainees prior to the expansion in consultants then the service would simply not cope with the demands placed upon it, and potentially unsafe services would result. The College would also propose that any initial expansion in consultant numbers goes towards the smaller units to help alleviate potential problems that might result from their loss of tier 2 trainees. Only after that time would the continued expansion in consultants benefit other paediatric services.

The College has for many years argued that the current number of paediatric trainees should be maintained and it would represent a gross misunderstanding of this report to think that the College is now simply reversing that position. What this report is intended to demonstrate, is that
and simply not



As there is a transition to a consultant delivered care model in many areas of paediatric practice, consultants will need to be resident for at least part of their career. The College has attempted to calculate how long this might be for some of the career options.

and sustainable consultant-delivered model of care which will improve the quality of outcomes for children and young people.

Of course, more radical solutions to these problems are possible. Such solutions that the College considered, were:

1. Create a 'hospital at night' solution by completely redesigning paediatric training such that cross cover is available either between paediatrics and obstetrics & gynaecology, or paediatrics and general medicine. Training for the other specialty would also be required to be redesigned, and inevitably such a solution would lengthen the already relatively long training time.
2. Create a whole new cadre of staff, who could cover middle grade paediatric rotas. In some sense, this has occurred with ANNPs in neonatology, but might it be possible to create a cadre of GP paediatricians or neonatal assistants who could work in this way.³²

Both of these solutions were discarded, however, in favour of the more modest proposals outlined above.

The College expects that a number of the small and very small paediatric inpatient units will either convert to SSPAUs or simply close. This is far more likely for those that are proximal and very small, and less likely for those that are merely small (particularly at the higher end of that range) and more remote. It is impossible to predict with certainty which units will reconfigure, and which will remain. This is largely because decisions to reconfigure are not just based on factors such as volume of patients and distance, but also on local politics and public opinion.³³ Nevertheless, in the current economic climate, the

with a two tier acute service if they are required to do so. Some units already operate in this way and have developed a resident rota consisting of a combination of paediatric ST trainees, advanced children's nurse practitioners, foundation year doctors, GP trainees and SSASGs. The difficulty in these smaller units is establishing an appropriate model for the consultant paediatrician in supporting the acute service. In a proportion of units the consultant is only resident when tier 1 competences fall below an expected level or where a child or young person is admitted who will require a high dependency of medical care. In other units consultants are resident to provide a more senior rota in support of the tier 1 staff. This is, therefore, effectively a two tier resident model and in some cases a third tier of non-resident consultants are available. Whilst this latter model could be viewed as the best solution for smaller units it is clearly an expensive option and requires consultants to be wholly resident for their on-call duties. The current financial constraints could make the former model more attractive to Commissioners and Health Boards. The first model does, however, require well defined competencies for the tier 1 staff. If implemented, our service standards would ensure a safe standard of care as all admissions would be seen by the more senior paediatricians within four hours of admission and no patient would be discharged from the unit without their case being at least discussed with a paediatrician on the consultant rota. The College has also modified the second Service Standard to ensure that a patient is seen by a consultant paediatrician within 12 hours where the most senior, resident review is by an ST3 or more junior paediatric trainee.

The College accepts that implementation of these standards will necessitate a greater degree of consultant presence than has hitherto been the case but believes that these standards will bring a level of consistency to what is currently quite a variable pattern

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McNeill G *et al*, 'What is the effect of a consultant presence in an acute medical unit?', *Clinical Medicine* (June 2009); 9(3):214-8.

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Children and young people' and Maternity services in 2009: Working Time Solution (RCPCH, RCO&G, 2008). Available at: <http://www.healthcareworkforce.nhs.uk> (accessed 29th January 2011)

www.webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Managingyourorganisation/Workforce/Workforceplanninganddevelopment/Europeanworkingtimedirective/DH_4051942 (accessed 29th January 2011)

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Delivering Safe Services: Confronting Delivered Care for Maternity, Paediatric and Neonatal Services (Teamwork Management Services, 2008). Available at: www.healthcareworkforce.nhs.uk (accessed 29th January 2011). The College views this standard as applying primarily to rotas comprised of trainees rather than SSASG doctors. The College also recognises that it is possible to design a compliant middle grade rota comprised of 7 trainees, and the equivalent of 2 consultants.

Future Configuration of Paediatric Services (RCPCH, May 1996). This paper was written by Roddy MacFaul and others.

A related issue is the fact that there is a very large shortfall in the current number of children's nurses. This has obvious implications for the availability of advanced children's nurses to work on paediatrics rotas.

Modelling the Future II: Reconfiguration and Workforce Estimate (RCPCH: August 2008, p18). Available at rcpch.ac.uk (accessed 10th June 2010)

Submission of the Prime Minister's Commission on Nursing and Midwifery, (RCN, September 2009). Available at: rcn.org.uk (accessed 2nd October 2010).

Saving Lives: Medical Clinical Academic in UK Medical Schools, 2009-2010 (Medical Schools Council, May 2010). Available at: medschools.ac.uk (accessed 14th May 2010)

Kennedy, Professor Sir Ian, *Getting it right for children and young people and young people: Overcoming cultural barrier in the NHS to address their need* (Department of Health, September 2010) Available at dh.gov.uk (accessed 1st October 2010)

Service Standard for Hospital Providing Neonatal Care (BAPM, August 2010).

Service Standard for Hospital Providing Neonatal Care (BAPM, August 2010).

BAPM have stated that it is appropriate for ENNPs to work at tier 1 in level 3 units, but not at tier 2, where in respect of nursing staff on the middle grade rota, only "ANNPs (with appropriate additional skills and training)" are warranted. *Service Standard for Hospital Providing Neonatal Care* (BAPM, August 2010).

See also, Smith and Hall, 'Advanced neonatal nurse practitioners in the workforce: a review of the evidence to date' *Archives of Disease in Childhood* (June, 2010).

See also Shortland, D, *RCPCH guidance on the role of the consultant paediatrician in providing acute care in the hospital* (RCPCH, May 2009). Available at: rcpch.ac.uk (accessed 13th August 2010).

Cf Alan Downey, Paul Kirby and Neil Sherlock, *Paradise for Success* (KPMG, June 2010), section 2.6 p11. Available at kpmg.co.uk (accessed 14th July 2010)

Cf Andrew Lansley's statement on 21st May 2010. http://www.dh.gov.uk/en/MediaCentre/Pressreleases/DH_116290

In the CEMACH report *Why Children and Young people Die?*, potentially avoidable factors were found in 43% of cases, and one of the common ones of these was that the first point of contact did not have paediatric experience. *Why Children and Young people Die? A Pilot Study 2006* (CEMACH, 2008). Available at: www.cmace.org.uk



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