

RCPCH State of Child Health short report series

2017 workforce census: focus on Wales

Published May 2019

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1. Introduction

This report is a workforce profile for Wales, supported by the Royal College of Paediatrics and Child Health (RCPCH) workforce census 2017, and other data on the paediatric workforce and services collected by the College. It follows on from the Workforce Census 2017 Overview Report^[1] that provides a UK-wide analysis of the census data, and is part of a series of reports focusing on the four UK nations in turn. Further reports will focus on safeguarding provision, the workforce in paediatric specialties and Specialty and Associate Specialist (SAS) doctors.

This report makes recommendations specific to Wales in 5 key areas:

1. Planning the child health workforce
2. Recruiting, training and retaining more paediatricians
3. Incentivising the paediatric workforce
4. Planning for and expanding the non-medical workforce
5. Expand the primary care workforce

The reports are supported by the following Census Resources on the RCPCH websiteⁱ:

- An interactive dashboard of paediatric workforce data which allows users to apply filters and customise for their own use and interest.
- A set of detailed tables in Excel format for those who wish to see further breakdowns of the census data.
- An explanation of how we arrived at our estimate of consultant workforce demand and supply of trained doctors.
- The census data collection methodology and response rate.

2. Executive summary

Wales has seven Health Boards providing a range of paediatric services. Tertiary paediatric services are primarily concentrated at University Hospital of Wales in Cardiff and Vale University Health Board (UHB), and acute services in across South Wales are generally in large urban centres. However, elsewhere (in West Wales for example), services are based in more rural and remote areas with access and staffing problems. All health boards provide community child health services. There are particular concerns in Wales about workforce provision in remote and rural areas. As in the rest of the health service, remote and rural areas face higher costs^[2], and paediatrics faces issues of recruitment and retention and a reliance fewer of paediatricians in smaller centres.

Health Education and Improvement Wales (HEIW) was established on 1st October 2018. It is a special health authority created within NHS Wales which brings together three key organisations for health: The Wales Deanery; NHS Wales Workforce Education and Development Services (WEDS); and the Wales Centre for Pharmacy Professional Education (WCPPE). HEIW's key functions include: education and training, workforce development and modernisation, leadership development, strategic workforce planning, workforce intelligence, careers, and widening access. Therefore many of the findings and recommendations in this report are directed towards the new organisation with whom the RCPCH looks forward to having a fruitful and co-operative relationship in the future.

Paediatric consultant whole time equivalent (WTE) growth in Wales between 2015 and 2017 was 2.9%, the lowest of all the UK nations: lower than the England growth of 6.4% and the UK growth of 6.7% over the same period. To meet the RCPCH standards set out in Facing the Future^[3] and other

i <https://www.rcpch.ac.uk/resources/workforce-census-2017-resources>

service standards, there needs to be an additional 73.7 whole time equivalent consultants: from 175.7 WTE to 249.4 WTE. This would be an expansion of the current consultant workforce of 42.0%. Rates of less than full time consultant working in Wales are lower than the other UK nations and medical paediatrics has a trainee workforce which increasingly wishes to work less than full time (LTFT)^[4]. In Wales, GMC data show that LTFT for trainees working in Wales has gone from 16.4% in 2012 to 19.7% in 2018.ⁱⁱ Modelling needs to consider how the shift towards even greater LTFT in trainees may extend into consultant LTFT working patterns in future. This could lead to a potential dramatic fall in the whole time equivalent (WTE) workforce in Wales unless there is an increase in the headcount of doctors in training.

There is political emphasis on preventative health measures, as seen in A Healthier Wales^[5], which the College welcomes as an approach to child health. However, the increased burden on Community Child Health (CCH) services must be recognised and corresponding resources provided. CCH is facing difficulties as workload and demand expand without the corresponding expansion in workforce^[6]. The whole of the NHS workforce is facing a recruitment and retention crisis^[7], and shortfalls of other non-paediatric health professionals, such as educational psychologists and speech and language therapists, impact on the multidisciplinary teams in Community Child Health (CCH) services. The Health, Social Care and Sports Committee of the National Assembly for Wales recommended an increase in medical student places^[8], a call that the RCPCH supports.

Royal College of Nursing guidance^[9] states that every organisation should have a children's champion at executive board level, a view with which RCPCH agrees. However, in Wales, three out of seven (42.9%) of the organisations did not have a Board level lead/champion for children's services. Initiatives such as children's champions must be prioritised to ensure the voice of the child is heard.

The number of paediatric trainees and consultants are unlikely to rise by the amount needed to meet demand in the immediate future, especially as a 2018 report found that only 6% of foundation year 1 (F1) doctors consider specialising in paediatrics^[10]. Therefore, workforce planners need to develop appropriately trained non-medical workforces such as advanced nurse practitioners and physician associates and see their potential in helping paediatric services meet standards and demand.

The general paediatric workload is shifting, and we report a year-on-year upwards trend of admissions^[11]. A more effective way of working across primary and secondary care, as described in Facing the Future Together for Child Health^[12], is needed to keep up with this surge in admissions. The RCPCH are conducting a Paediatric 2040 project^[13]. The purpose of the project is to develop a shared understanding of what the key issues are likely to be for paediatricians as a discipline and to better understand what the future may hold for paediatricians in the UK in 2040.

We urge Health Education and Improvement in Wales to not emulate the mistakes of other nation's workforce planners. Wales is desperately short of paediatricians, by around 74 consultants. There are particular challenges in relation to the geography, demography and location of the population centres. Alongside trends towards less than full time working, planners must consider technology requiring more staff, traveling times and the effect that using consultants in either out of hours or resident working has on their availability during the week. Young doctors looking at choices between paediatrics and other specialities may view rota gaps and poor work life balance as disincentives to this otherwise deeply rewarding career.

Improving the health of the nation's children, aside from being a moral imperative, is an investment in the national economy. Healthy children have more school days, this leads to better education, better employment of healthier adults, who can work and pay tax back into the system until the longer retirement ages being expected of all of us.

ii See the Data Tables on the Census Resources section of the RCPCH website for further details.

3. Acknowledgements

The RCPCH would like to thank the clinical directors and clinical leads of Health Boards in Wales who submitted data to the census, conducted from autumn 2017 to summer 2018. Your input is invaluable in allowing the College to provide evidence-based recommendations and ensure the pressures facing the child health workforce are prioritised.

Dr Arun Ramachandran, Wales representative for RCPCH Paediatricians in Medical Management committee, and Dr Judith van der Voort, RCPCH Head of School for Wales, have provided essential guidance in the production of this report.

Martin McColgan, Marie Rogers and Anita Pau currently comprise the RCPCH workforce team which leads the census work. Heather Clark, Wingsan Lok, Donella Williams, Rachel Winch, and Lucas Woodward were also part of the workforce team during the census project and contributed to the work. Furthermore, Emily Arkell and Melissa Ashe in the Health Policy team gave valuable input, along with James Clayton and James Clark in the Recruitment & Careers team, and Gethin Matthew-Jones the External Affairs Manager for Wales.

Dr David Tuthill, RCPCH Officer for Wales

Dr Simon Clark, RCPCH Officer for Workforce Planning and Vice President for Health Policy

4. Recommendations

4.1 Plan the child health workforce

There has been an incoherent and inconsistent approach to planning for the child health workforce.

Health Education and Improvement in Wales (HEIW) must develop a bespoke child health workforce strategy for Wales.

The strategy must identify all the child health workforce to meet the needs of CYP including medical, midwifery, nursing, allied health professionals, pharmacists, health visitors and school nurses. The plan must model the paediatric and child health workforce at least up to 2030 based on what future services will look like and existing service demand projections.

The strategy must be sufficiently robust to deliver professional and service standards.

The strategy must acknowledge and support differential participation rates and the development of portfolio careers to enable retention of staff. RCPCH is prepared to work with all agencies in a constructive and collaborative manner to secure the workforce strategy.

4.2 Recruit and train more paediatricians

The RCPCH supports the Royal College of Physicians call to double the number of medical students in the UK. In addition, the RCPCH wants to see:

- a) The Welsh Government increase the number of paediatric trainee places in Wales to 22 doctors appointed at ST1 for the next five years.

- b) HEIW and the Deaneries in Wales support existing SAS grade doctors and their professional development, ensuring that this important part of the child health workforce is recognised as a viable, attractive alternative career pathway. Improved recognition of SAS doctors' seniority is important to improve attitudes and morale. Furthermore, it is essential that SAS grade is included in the workforce planning of HEIW.

4.3 Incentivise the paediatric workforce

Pay premia have been used in other hard-to-recruit medical specialties. Paediatrics is now facing severe shortages with falling applications and recruitment challenges.

- a) The Department of Health and Social Care, Health Boards and HEIW should offer flexible pay premia to paediatric trainees as a recruitment incentive into the paediatric specialty and for hard to recruit areas, including remote and rural settings.
- b) The Department of Health and Social Care, Health Boards and HEIW should offer flexible pay premia to paediatricians who return to clinical practice after successfully undertaking a pre-agreed period of approved academic research and those who take time out of clinical practice to undertake other recognised activities that may be of benefit to the wider NHS.

4.4 Plan for and expand the non-medical workforce

The delivery of paediatric services to children and young people and their families requires a multidisciplinary workforce.

HEIW must develop a national career strategy for advanced clinical practitioners including Advanced Nurse Practitioners in neonatology and paediatrics, and Physician Associates.

4.5 Expand the primary care workforce

The Welsh Government should fund an additional year of General Practice (GP) training. This additional year must include six months of dedicated paediatric and child health training for all GP trainees as proposed in the RCGP (Royal College of General Practitioners) curriculum submission in 2016. The extended programme would be subject to approval by the General Medical Council.

5 Findings

5.1 Consultant demand modelling

There were 175.7 WTE consultants in 2017 and we estimate that approximately 249.4 WTE in total are needed to meet demand. The greatest part of this estimated increase is for general paediatricians: 53.3 WTE. There are plans to reduce the number of units providing paediatric inpatient services in Wales, which will impact future demand calculations, but these plans have yet to be implemented. Furthermore, we estimate an increase of 23.6% in community child health (CCH) consultants is required to meet demand. This is a minimum, predicated on the number of SAS doctors working in CCH increasing at the same rate as consultants, which is subject to uncertainty surrounding future immigration policy.

To calculate consultant demand, we use standards that outline best practice in paediatric care, including the RCPCH Facing the Future standards^[3], which state there should be 12-hour consultant presence 7 days a week in inpatient units. In addition, the British Association of Perinatal Medicine (BAPM) standards^[4], which state that there should be 8 consultants per NICU, and the RCPCH Covering all Bases report^[6] which calculated demand for consultants in community child health (CCH) on the basis of population and referrals.

We have based our modelling on these assumptions:

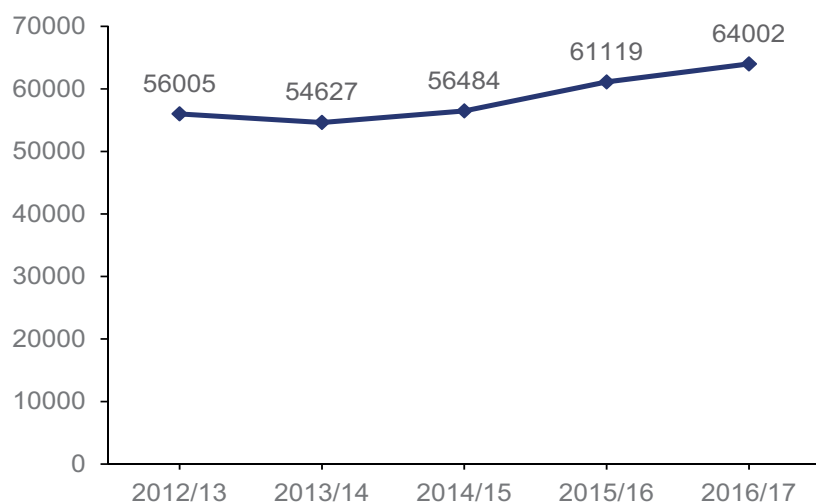
- Service structure remains as it was in 2017-2018 in terms of the number of inpatient units, neonatal units, paediatric intensive care units (PICUs), number of community child health services.
- The number of SAS doctors will not increase significantly.
- The number of GP trainees, nurses and other workforce groups who can work on rotas will not grow under current workforce policies operated by governments in the four UK nations.

The area with greatest difference between demand and actual consultant numbers is general paediatrics, accounting for around 60% of the increase needed.

The key factors influencing current demand level are:

- Between 2013/14 and 2016/17 paediatric emergency admissions in Wales have risen 17.2%. See Figure 1.
- The level of paediatric admissions in some units mean that double rotas are increasingly needed (i.e. 2 trainees in service at one time).
- The College’s Facing the Future Audit ^[5] shows continued challenges to meet standards for presence throughout all hours of peak activity and consultant review within 14 hours of admission .
- In 2017, the College and the British Association for Community Child Health (BACCH) published Covering all Bases^[6] which found that there was a need for substantial increase in the community child health medical workforce. This is necessary to meet the current and anticipated demand due to a rising number of co-morbidities, long delays in diagnosis for autism and ADHD, and growing safeguarding concerns.

Figure 1. Number of Emergency Admissions to Health Boards in Wales, 2012/13 to 2016/17 ^[6].



5.2 Career grade paediatric workforce

In 2017 in Wales, there were 186 paediatric consultants – a 5.1% increase from 2015 when there were 177 paediatric consultants. Consultant growth in England over the same time period was 8.2%.

Consultant growth in Wales appears to be slowing – between 2013 and 2015 there was a 9.9% growth in consultant headcount.

In terms of Whole Time Equivalent (WTE), in 2017 in Wales there were 175.7 WTE compared to 170.7 WTE in 2015; an increase of only 2.9%.

Figure 2. Percentage change from 2015 to 2017 in WTE of consultant and SAS grade doctors.

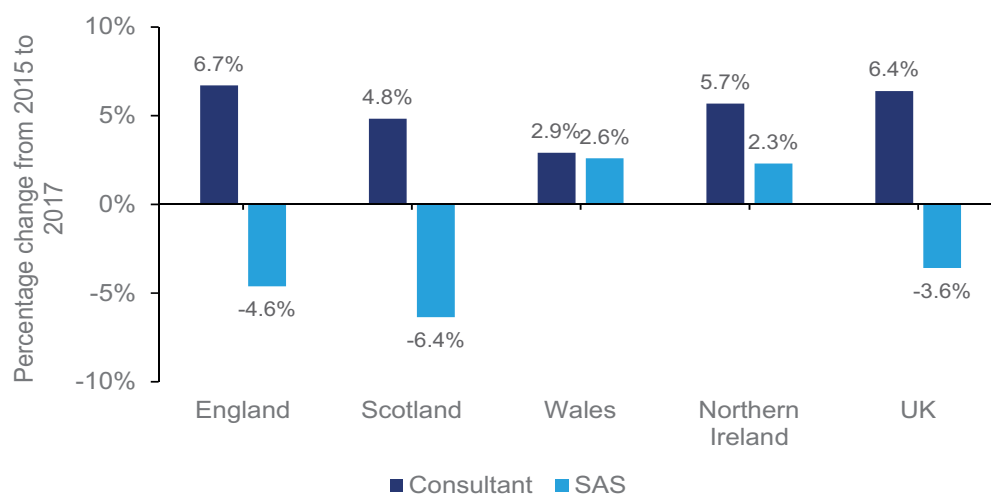
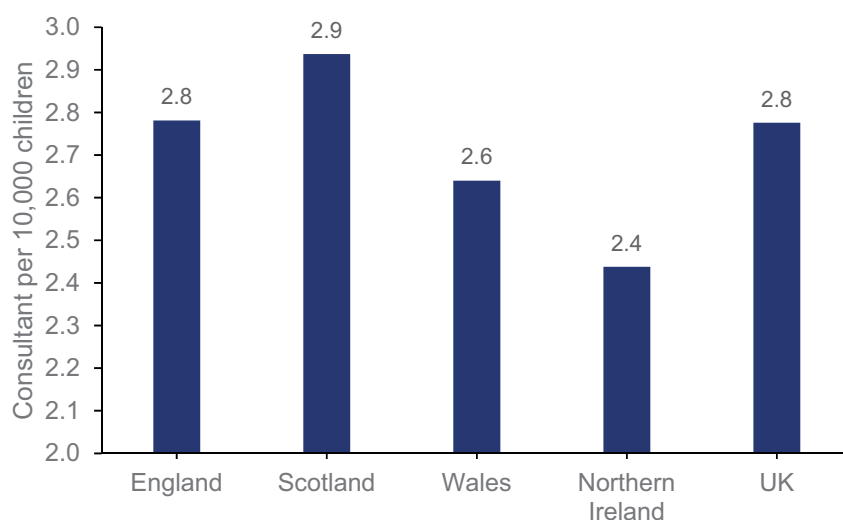


Figure 3. Headcount consultant and SAS grade doctors by nation, 2017.

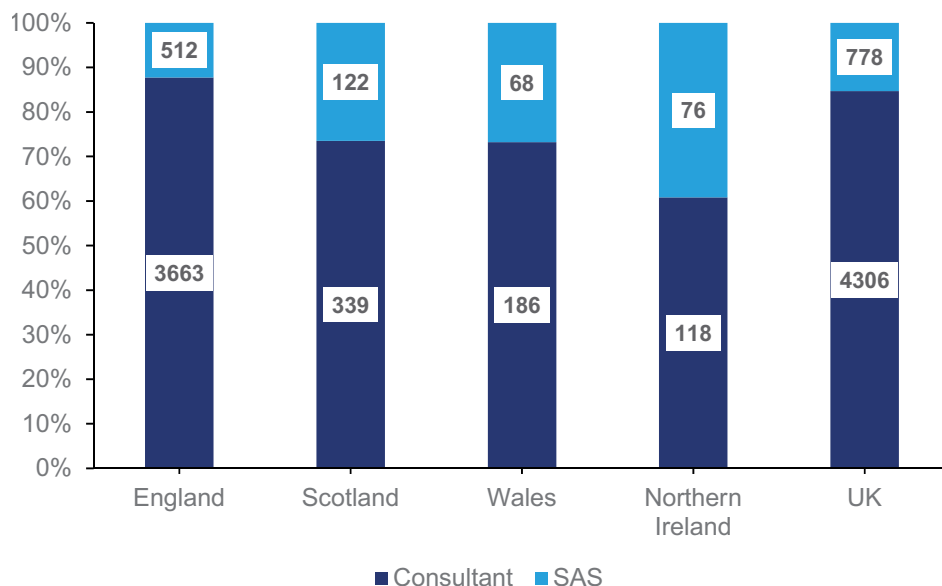


Wales has 2.6 consultant paediatricians per 10,000 children, lower than the UK rate of 2.8, see Figure 3. There were 68 headcount (58.2 WTE) SAS doctors in 2017, no change in headcount (2.6% increase in WTE), compared to 2015 when there also 68 (although 56.7 WTE). This is part of a trend seen since the first RCPCH workforce census in 1999 showing that SAS doctor numbers have decreased dramatically. Alongside the decline in SAS doctors, the numbers of Trusts doctors and Locally

Employed Doctors, who do not necessarily have the protection of national service conditions and career pathways, have risen.

Compared to the UK as a whole, Wales's career grade workforce has a higher proportion of SAS doctors. Across the UK, 15.3% of the career grade workforce are SAS doctors, whereas in Wales 26.8% are SAS doctors, see Figure 4.

Figure 4. Headcount consultant and SAS grade doctors by nation, 2017.



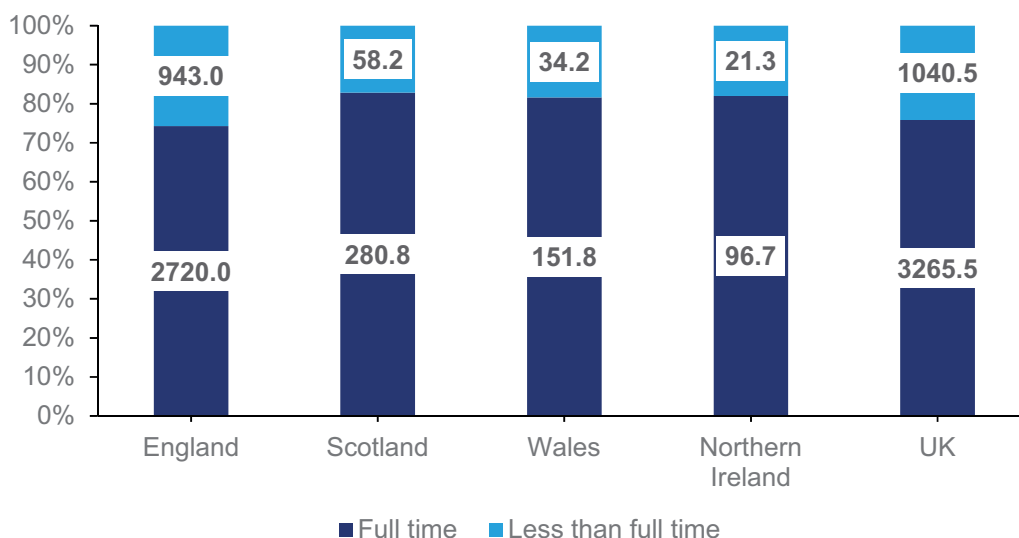
5.3 Factors influencing workforce demand

5.3.1 Less than full time working

Consultants in Wales have a lower rate of less than full time (LTFT) working compared to the UK as a whole (see Figure 5). In 2017, 18.4% of consultants in Wales worked less than full time, compared to 25.7% in England and 24.5% overall in the UK, see Figure 5. This has increased since 2015 when 14.5% of consultants worked LTFT in Wales. This rise in LTFT working has reduced the effect of the increase in consultant headcount. This trend is likely to continue given the percentage of less than full time working amongst doctors in the training programme (27% according to GMC data ^[4]).

Rates of LTFT working for SAS doctors are higher than consultants in Wales, at 36.0%. However, this is the lowest rate of LTFT working in SAS doctors of the four nations. The overall UK rate of SAS doctor LTFT working in 2017 was 45.8%.

Figure 5. Proportion of full time vs less than full time consultants by nation in 2017. Data labels show WTE.

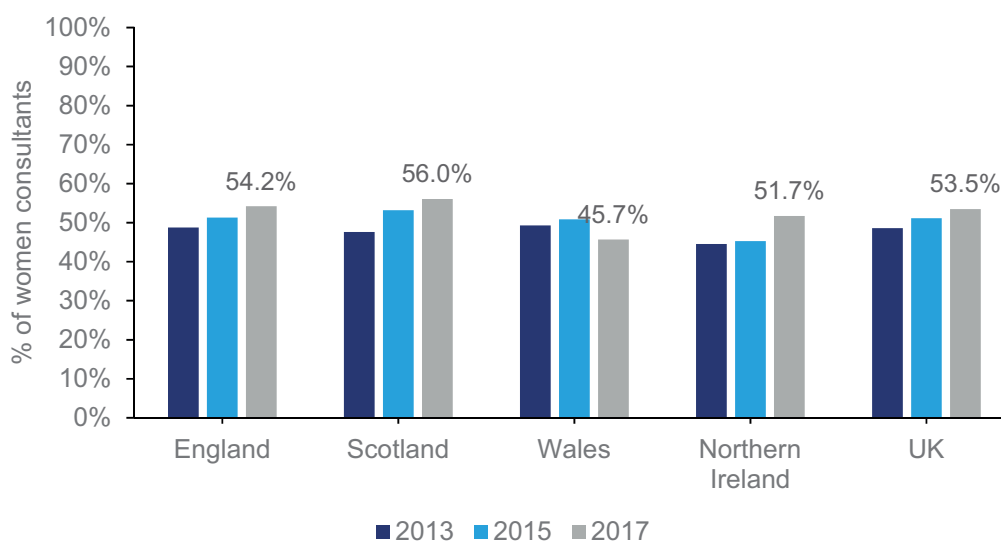


Rates of LTFT working varies widely between job type, which should be considered when workforce planning. For example, in Wales 23.7% of community child health consultants worked LTFT compared to 15.3% of specialists and 12.6% of generalists. This is a different trend to the UK overall where the lowest rates of LTFT working are seen in specialists.

5.3.2 Gender changes in the workforce

Wales saw a drop in the proportion of female consultants between 2015 (50.8%) and 2017 (45.7%). This is the opposite trend to the rest of the UK nations which has seen a steady increase in the proportion of female consultants (see Figure 6). It is unclear why this is, but as the overall numbers of consultants in Wales is small (85 female and 101 male consultants in 2017), a small change in actual numbers creates a relatively large shift in proportions.

Figure 6. Proportion of women consultants by country, from 2013, 2015 and 2017 census data.

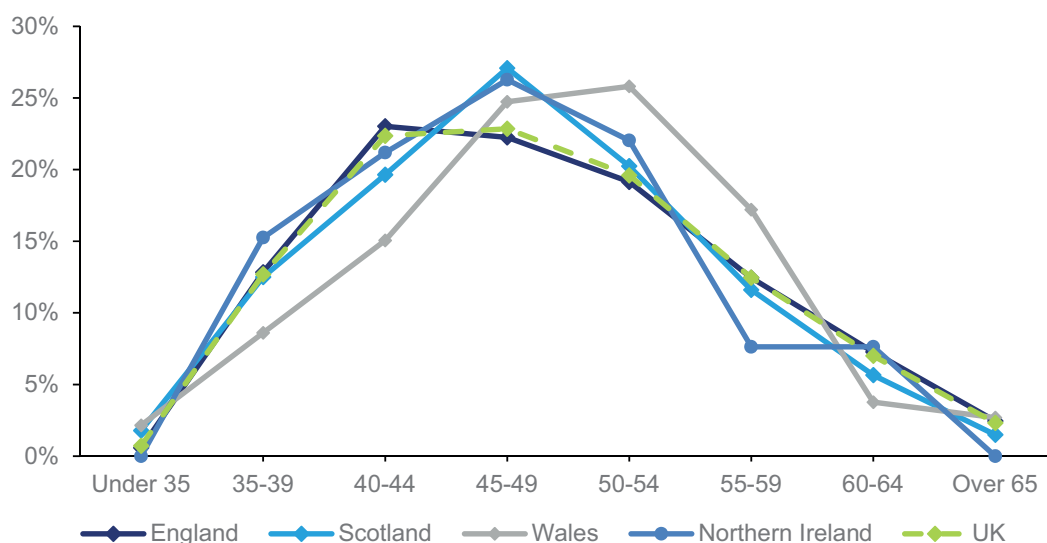


Women account for a higher proportion of SAS grade doctors in Wales compared to the rest of the UK. In 2017, 79.4% (54/68) of SAS grade doctors were women in Wales. However, this has also dropped from 2015 when it was 80.9% (55/68), representing a reduction of one female SAS doctor in the workforce.

5.3.3 Age characteristics of the workforce

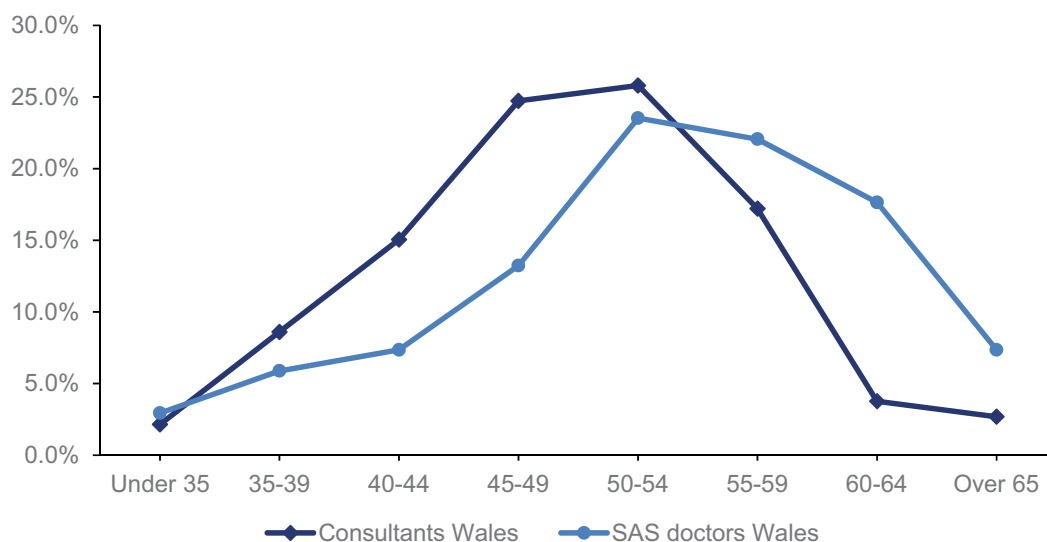
Wales has an older paediatric workforce than the other UK nations, and combined with the slow rate of workforce growth this is a serious concern. Figure 7 shows that the highest proportion of consultants in Wales are in the age group 50-54 (25.8%), closely followed by 45-49 (24.7%). 49.3% (92/186) of consultants in Wales are aged 50 or over.

Figure 7. Proportion of consultants in each age group by nation, 2017.



As in the rest of the UK, SAS doctors in Wales tend to be older than consultants. Figure 8 shows that the highest proportion of SAS doctors are also in the age group 50-54, but 70.8% of SAS doctors in Wales are aged 50 or older.

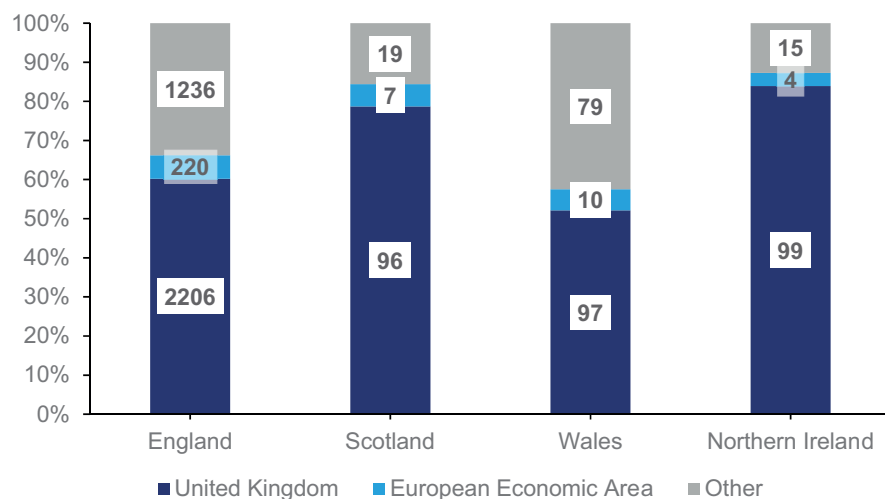
Figure 8. Proportion of consultants and SAS doctors in Wales in each age group, 2017.



5.3.4 Place of Primary Medical Qualification (PMQ)

Of the UK nations, Wales relies most highly on overseas-educated consultants. In 2017, 5.4% obtained their primary medical qualification (PMQ) from a European Economic Area (EEA) country, 42.5% from outside Europe and 52.2% of consultants gained their PMQ in the UK (see Figure 9). Whereas in the UK overall, 61.1% of consultants obtained their PMQ in the UK.

Figure 9. Consultant PMQⁱⁱⁱ by nation, 2017.

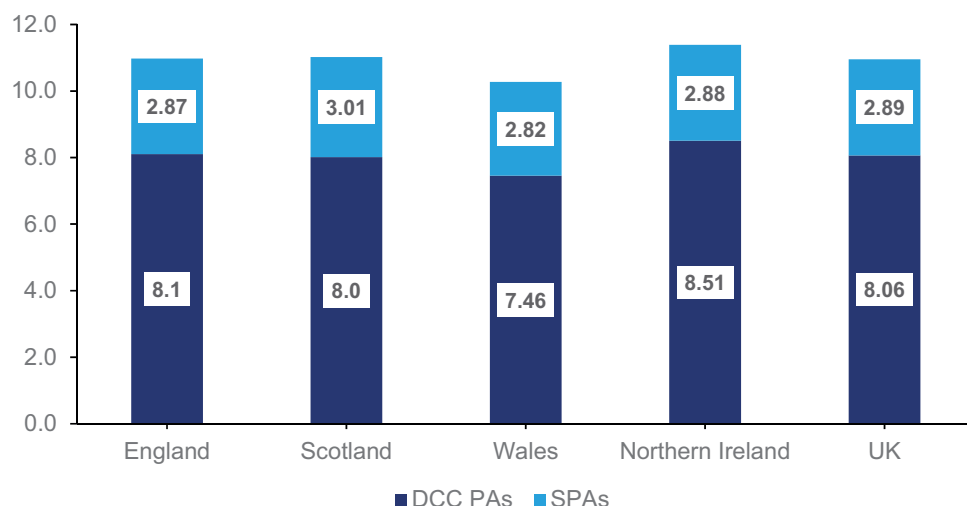


5.3.5 Consultant programmed activities (PAs)

Wales has the lowest average number of contracted PAs for full time consultants: 10.3, compared to UK average of 11. The British Medical Association (BMA) recommends that full time contracts should be 10 PAs^[16].

Programmed activities in a contract are broken down into time for Supporting Professional Activities (SPAs) and time for Direct Clinical Care (DCC). For full time consultants in Wales, the average number of DCCs is 7.5 and the average number of SPAs 2.8. Wales has the lowest number of average SPAs in full time contracts of the UK nations.

Figure 10. Average number of Direct Clinical Care (DCC) PAs and Supporting Professional Activities (SPAs) in full time consultant contracts by nation, 2017.

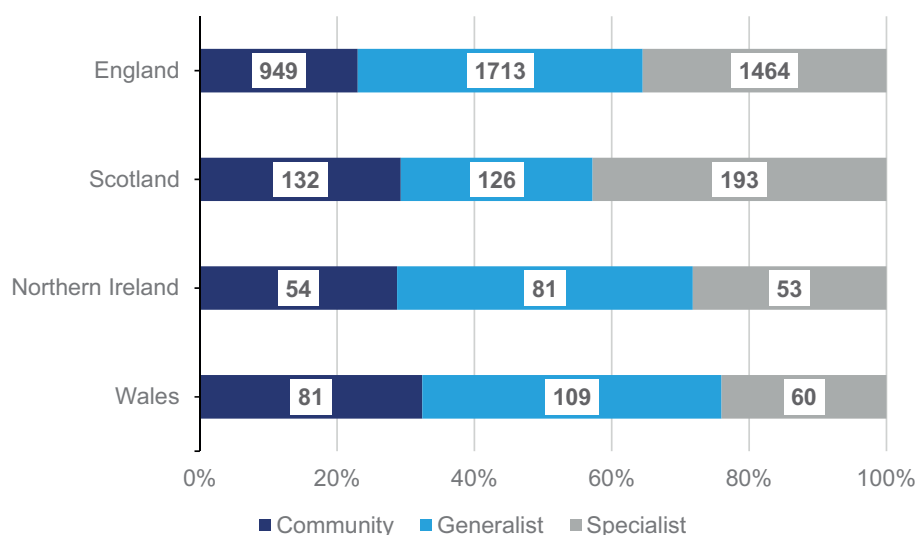


ⁱⁱⁱ PMQ data missing for 218 consultants across the UK; none are missing for consultants in Wales.

5.3.6 Job type breakdown of workforce

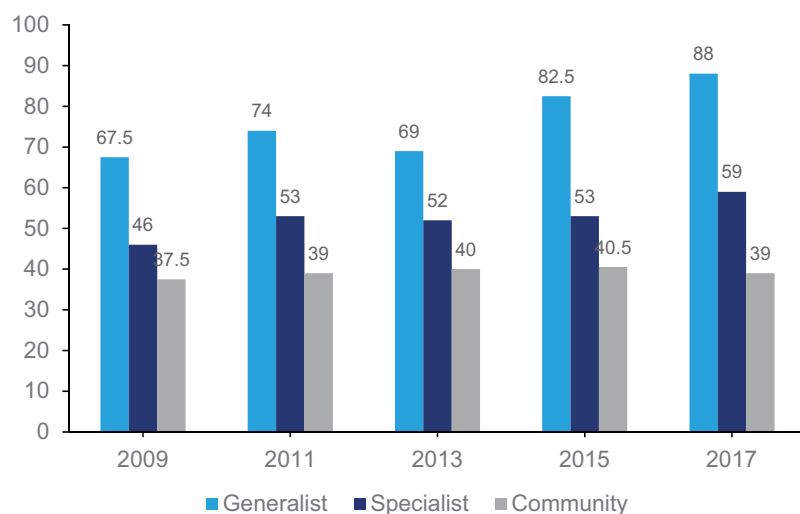
Wales has the highest proportion of generalist career grade paediatricians of the UK nations (109/250; 43.6%) and the lowest proportion of specialist career grade paediatricians (60/250; 24.0%). Figure 12 shows that the expansion in the consultant workforce in Wales (from 151 headcount in 2009 to 186 in 2017) has mainly been driven by a modest expansion in generalists, whereas there has been little change in the number of specialists or community child health consultants.

Figure 11. Headcount numbers of all career grade doctors by job type and nation in 2017. iv



When calculating whole time equivalent, we estimate that there were 85.0 WTE generalists, 55.2 WTE specialists and only 35.1 WTE community child health consultants in Wales in 2017. The higher rates of LTFT working in community mean that the WTE is considerably lower than the headcount numbers. These factors point towards a severe shortfall in the community paediatric workforce.

Figure 12. Headcount number of consultants by job type group (generalist, specialist or community) in Wales, from 2009 to 2017^v



iv Consultants recorded as “50% generalist / 50% community” were evenly split into Generalist and Community groups
 v One consultant had information about job type missing in 2015, they are not included in the 2015 count in this Figure.

The academic workforce is not reported here as there are concerns that not all consultants with academic contracts have not been recorded as such, resulting in an underestimate. We plan to investigate this, and further information on the academic workforce will be available in the Census Resources section of the website.

5.3.7 Consultant vacancies

There were 8 WTE career grade (consultant plus SAS doctor) posts vacant for longer than 3 months across the Health Boards in Wales, according to the 2017 census data. This represents 4.3% of the total workforce in Wales, slightly higher than the overall UK rate of 4.1%. See Table 1.

The vacancies reported in this section reflect the established posts not filled. They do not give an indication of the shortfall against the College standards, rather they are the shortfall against the workforce establishment of the organisation. The gap between the 2017 workforce and that required to meet standards is considerably larger (see section 5.1 Consultant demand).

Table 1. Headcount (HC) vacancies and vacancy % levels, by nation and grade group.^{vi} Percentages as a proportion of each nation's overall workforce.

	England		Northern Ireland		Scotland		Wales		UK total	
	HC	%	HC	%	HC	%	HC	%	HC	%
Consultant	130.1	3.6%	13	11.0%	9	2.7%	8	4.3%	160.1	3.7%
SAS doctor	32.8	6.4%	9	11.8%	5	4.1%	3	4.4%	49.8	6.4%
Total	163.0	3.9%	22	11.3%	14	3.0%	11	4.3%	210.0	4.1%

5.4 Factors influencing workforce supply

5.4.1 New Certificate of Completion of Training (CCT) and Certificate of Eligibility for Specialist Registration (CESR) holders

Across the UK, there has been minimal change in the number of new paediatric CCT and CESR holders each year. There was a gradual increase between 2011 and 2014, where the number of new certificate holders went up from 247 to 332. But numbers have fallen slightly each successive year, down to 300 in 2017. The number of new CCT-holders who trained in Wales between 2011 and 2017 can be seen in Table 2. In 2017, 10 of the 300 new CCT holders trained in Wales. Current level of supply of new CCT holders in Wales would not be enough on its own to satisfy RCPCH calls for demand for consultants.

vi All organisations in Scotland, Northern Ireland and Wales returned complete vacancy information. In England, 140 out of 168 organisations responded (83.3%). The vacancies in England were weighted up to reflect this response rate

Table 2. Average WTE and proportion of rotas with less than 10 staff, by rota tier and service.

	2011	2012	2013	2014	2015	2016	2017	Total 2011-2017
Community Child Health	-	1	1	-	1	1	-	4
Neonatal Medicine	1	-	-	3	-	1	-	5
Paediatric Emergency Medicine	-	1	-	-	-	-	-	1
Paediatric Neurodisability	1	-	-	-	-	1	-	2
Paediatric Neurology	1	-	-	-	-	-	-	1
Paediatric Oncology	-	-	1	-	-	-	1	2
Paediatric Palliative Medicine	-	-	-	1	-	-	1	2
General Paediatrics	8	5	7	9	14	8	8	59
Total	11	7	9	13	15	11	10	76

The RCPCH conducts a yearly survey of new CCT and CESR holders, one year on from their certification, to identify career pathways and views on transition to consultant posts. Findings from the 2016 cohort survey indicate that it is becoming a buyer's market for new CCT and CESR holders. Across the UK, there has been an increase of those who are working in the same specialty as their specialist registration with the GMC, from 77% in 2015 to 89.2% in 2016. Furthermore, fewer doctors are working in a different region from their training region after CCT: 31.7% of 2015 cohort respondents and 27.7% of 2016 cohort respondents.

5.4.2 Medical Training Initiative (MTI)

The Medical Training Initiative (paediatrics) scheme enables non-UK/European Economic Area paediatricians, primarily from developing nations, to complete two years of postgraduate training in the NHS before returning to their home countries. Successful applicants are given Royal College sponsorship for GMC (General Medical Council) registration and are recommended for a Tier 5 Visa.

Table 3 shows the number of successful placements in the UK for 2018 and 2019. MTI numbers were not collected prior to 2018. Placements for 2019 are expected to rise as the final total number has not yet been confirmed. Relative to its size, Wales accounts for a large proportion of the MTI placements in the UK. Placements tend to be focused in the more rural areas of Wales. In 2019, there were 13 placements in Aneurin Bevan; 4 in Abertawe Bro Morgannwg; 2 in Hywel Dda and 1 in Cwm Taf.

Table 3. Number of MTI(p) placements in the UK by nation and year.

	England	Scotland	Wales	Northern Ireland	UK
2019	88	3	20	-	111
2018	52	-	12	-	64

5.4.3 Paediatric trainees

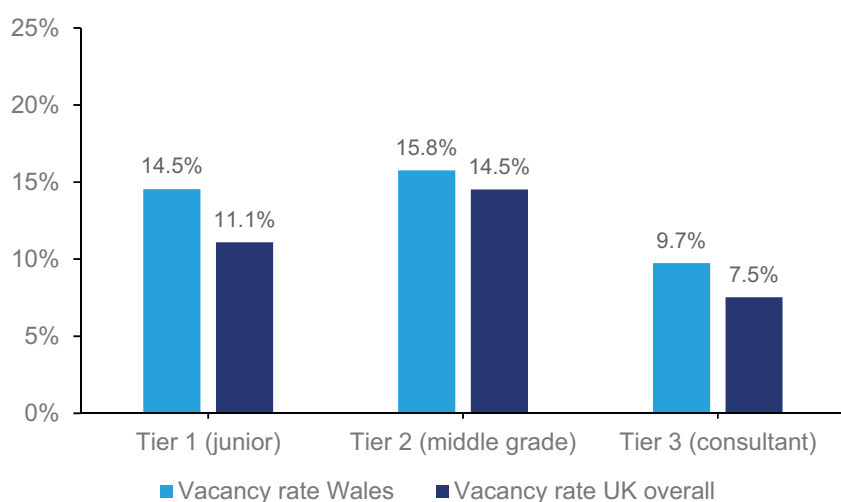
According to GMC data ^[4] the headcount number of doctors in training in paediatrics and child health increased by 2.7% between 2012 and 2018 across the UK. Wales trainee application rates are lower than the rest of the UK. In January 2018, the first preference applications to posts ratio

was 1.1 to 1 in Wales compared to 1.4 to 1 for the UK overall. This shows that competition for posts is lower in Wales compared to the rest of the UK, which is potentially detrimental to the quality of the workforce. Furthermore, the fill rate for Wales in 2018 was only 76.5% (17 places, 13 accepted). The fill rate for the UK overall in 2018 was 80.0%. Applicants can keep changing their preferences right up until the very last set of offers have been made, therefore the numbers stated here are a snapshot.

5.4.4 Rota gaps and vacancies

The Census asks clinical leads to provide information about the number of rota vacancies for each service tier. It also asks for vacancies broken down by the main types of rota: general paediatrics, neonatal and for combined general/neonatal (depending on the set up in each unit). The vacancy rates in Wales are higher than the UK overall for every rota tier (see Figure 12).

Figure 13. Vacancy rate by rota tier, comparing Wales to whole of UK, 2017.



RCPCH Facing the Future^[3] states that there should be 10 whole time equivalent posts on general paediatric training rotas. The standard of 10 WTE is used because of analysis undertaken by the Academy of Medical Royal Colleges for how many doctors are required to protect adequate daytime training time and comply with European Working Time Regulations^[17]. All of tier 1 and tier 2 general paediatric rotas meet this standard in Wales, but no tier 3 rotas do.

Table 4 shows that the average number of WTE on tier 1 and 2 rotas tends to be higher overall (10.9 and 9.3) and particularly for general paediatrics (12.0 for both) compared to tier 3 rotas (7.9 overall and 7.7 for general paediatrics). This is the opposite pattern to the rest of the UK, where trainee rotas are under the most pressure. Caution must be taken with this data, as the averages are skewed upward by double rotas at hospitals with large workloads (i.e. 2 trainees in service at one time). Having fewer doctors and other staff on the rota inevitably means there is less time for trainees for teaching, research and carrying out audit and other quality improvement work.

Table 4. Average WTE by rota tier and service.

	General paediatrics	General / neonatal	Neonatal medicine	Total
Tier 1 (Junior)	12.0	11.7	7.7	10.9
Tier 2 (middle grade)	12.0	9.3	6.8	9.3
Tier 3 (consultant)	7.7	8.3	7.1	7.9
Total	9.8	9.7	7.3	9.3

5.4.5 Other paediatric and child health workforce groups

There were only 7.0 WTE advanced children's or neonatal nurse practitioners (ANPs) reported as employed to work within the hospital setting with children and young people across the seven Health Boards in Wales.^{vii} 33.3% of units employed ANPs in Wales in 2017, much lower than the overall UK figure of 60.6%, see Table 5. No units in Wales employed Physician Associates in 2017.

RCPCH is supportive of an increased skill mix where other types of appropriately trained and competent non-medical and other medical groups can support paediatric services. For example, RCPCH supports ANPs by providing e-portfolio for their training at reduced membership rates.

Table 5. Units employing advanced children's or neonatal nurse practitioners (ANPs) by country

	Count of units with ANPs	% of units with ANPs	Estimated total WTE of ANPs	Average WTE of ANPs per unit
England	81	58.7%	378.3	3.8
Northern Ireland	5	100.0%	22.0	4.4
Scotland	9	81.8%	72.8	8.1
Wales	2	33.3%	7.0	3.0
Total	97	60.6%	491.3	4.2

5.4.6 Trainee supply requirements

With a consultant demand figure of 249.4 WTE, we can estimate reasonably accurately how many new CCT and CESR holders in paediatrics are needed to meet demand.

We estimate there will be 12.5 WTE expected leavers each year (mainly retirements) and 16 CCTs are needed to replace these based on current LTFT working and because 10% of new CCT holders either go abroad or go into non-clinical roles. This factor has been fairly constant across the UK since 2010/2011^[8].

From our previous cohort studies of training^[9] we have seen that somewhere between 3-5% of trainees leave the programme permanently each year. This is supported by comparing the number of trainees starting paediatrics and CCT outputs. Therefore, attrition from training is expected to account for 5.7 doctors from each cohort of trainees. To meet demand, 21.7 (say 22) must be appointed at ST1.

vii However, this may be an underestimate as Cardiff and Vale UHB did not give complete data

5.5 Service structure and pressures

Seven Health Boards (Betsi Cadwaladr University, Hywel Dda, Abertawe Bro Morgannwg University, Cardiff & Vale University, Cwm Taf, Aneurin Bevan, and Powys Teaching), comprised of 14 hospitals, employ paediatricians to deliver acute, community and specialist (including neonatal) care for children and young people in Wales. All seven Health Boards provide acute and community paediatrics, and in five Health Boards other community services are provided such as community children's nursing and therapists. Three Health Boards (Abertawe Bro Morgannwg University, Cardiff & Vale University, and Aneurin Bevan) provide tertiary paediatric services and tertiary neonatal care, with different specialties provided. Four provide child and adolescent mental health/learning disabilities services.

Three hospitals have dedicated children's emergency departments (Morrison, University Hospital of Wales and Royal Gwent), and the other hospitals see children in their emergency departments.

5.5.1 Paediatric inpatient units

Of the 14 hospitals in Wales employing paediatricians, 12 have paediatric inpatient units and all 14 have paediatric outpatient units. Four units have a dedicated adolescent ward. The RCPCH report *Bridging the Gaps: Healthcare for Adolescents*^[20] recommended as a minimum a separate facility for adolescents. Six units have a max age of 18 years, two have a max age of 17 years and four have a max age of 16 years.

In one hospital there is no paediatric critical care (PCC) provision, in three there is level 1 PCC, in seven there is level 2 PCC and in one there is level 3 PCC ^[21]. We did not receive a response to this question for two hospitals in Wales.

Of the 12 hospitals with paediatric inpatient units, three have a Short Stay Paediatric Assessment Unit (SSPAU) and nine have a paediatric assessment unit (PAU). Eleven are co-located with the paediatric inpatient unit. The other is on-site with an emergency department (ED) but not co-located.

Paediatric inpatient units in Wales had to close to new admissions for 40 days in total in the previous year to 30th September 2017. See Table 6.

Table 6. Inpatient unit closures to new admissions by country, year to 30th September 2017.

Nation	No. units closed 1 or more times	Average No. times unit closed	Max No. times closed	Total responses
England	27	1.6	30	117
Northern Ireland	2	1.8	8	8
Scotland	5	9.8	85	14
Wales	5	3.3	15	12
Total	39	2.5	85	151

5.5.2 Neonatal Care

There are three Neonatal Intensive Care Units (NICUs), three local neonatal unit (LNU) and two Special Care Baby Units (SCBU) in Wales. A new “Sub Regional Neonatal Intensive Care Centre (SuRNICC)” was announced on 12/10/2018 in North Wales located at Ysbyty Glan Clwyd (Betsi Cadwaladr UHB)[22]. Neonatal units had to close for a total of 59 days in the previous year to September 2017. Prince Charles Hospital and Royal Glamorgan Hospital at Cwm Taf LHB together accounted for 40 of these days.

5.5.3 Workforce pressures

Census respondents were asked to “select the service and workforce pressures or issues that you feel pose a significant risk to your service or to children, young people and their families.” Respondents could select more than one response to the question. In Wales, the most frequently selected pressures were “Difficulty recruiting paediatric non-consultant, non-training grade staff”; “Patient/Public expectations on services”; “Paediatric training post vacancies and gaps” and; “Difficulty recruiting paediatric consultants” with 100% of respondents selecting these. These were followed by “Clinical workload” at 85.7% and “Funding” at 71.4%.

5.5.4 Children’s champion

In Wales, three out of seven (42.9%) of the organisations did not have a Board level lead/champion for children’s services. This is higher than the overall UK level of 18.2% of organisations which did not have a children’s champion. Of the four Health Boards that did have a children’s champion, in two this role was provided by a non-executive director. In the other Health Board this role was provided by a nursing director.

5.5.5 Lead roles and safeguarding

In all Health Boards, there is a Designated and Named Doctor for Safeguarding. In two of the Health Boards the Designated Doctor for Safeguarding is provided by another organisation. There was an average of 0.38 and 0.39 WTE allocated respectively to the role in the responsible individual’s job plan. There was also a medical adviser for adoption/fostering in all Health Boards (provided by paediatric consultant or SAS doctor). However, in one Health Board this role was not filled. There was an average of 0.34 WTE allocated to this role in job plans.

Six out of seven Health Boards had a Procedural Response to Unexpected Deaths in Childhood practitioner (in one of these six Health Boards the role is not filled). There was an average of 0.39 WTE allocated in job plans. In only one Health Board was there a lead role for a Named general practitioner (GP) for safeguarding children (or equivalent); a Designated medical officer for Additional Learning Needs; and a Health Child Programme Coordinator. See Table 7 for further detail and see the Census Resources on the website for further breakdown of lead role data.

Table 7. Lead roles in Health Boards (HB); * indicates data missing for one health board.

Lead Role	Provided by the HB (filled by the HB)	Provided by another org	HB where role does not exist	% where role exists	Average WTE allocation for role
Designated doctor for safeguarding	5	2	-	100.0%	0.38
Named doctor for safeguarding	7	-	-	100.0%	0.39
Named general practitioner (GP) for safeguarding children (or equivalent)*	1	-	5	16.7%	0.01
Designated medical officer for Additional Learning Needs*	1	-	5	16.7%	0.50
Medical adviser for adoption/fostering	7 (6)	-	-	100.0%	0.34
Designated doctor for looked after children*	2	1	3	50.0%	0.40
Named doctor for looked after children	4 (3)	1	2	71.4%	0.28
Procedural Response to Unexpected Deaths in Childhood practitioner	6 (4)	-	1	85.7%	0.39
Immunisation coordinator*	4 (3)	-	2	66.7%	0.63
Healthy Child Programme coordinator*	1	-	5	16.7%	0.01

6 Methodology and response rate

The RCPCH workforce census 2017 asked the clinical leads or directors at all 191 organisations providing paediatric services in the UK to respond on behalf of their service. Across the UK as a whole, 80.6% (156/191) of core hospital and staffing information was completed or validated by the clinical lead/director.

In Wales, six of the seven health boards responded to the census (85.7%). The health board that did not respond validated data collected by the RCPCH workforce team. Some responses were missing to individual questions within the census, for example information on the number of unit closure days was difficult to obtain. Response rates to individual questions are reported in footnotes beside the relevant analysis throughout the report. See Census Resources for further detail.

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RCPCH State of Child Health: short report series
2017 Workforce Census: focus on Wales

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