

Addressing recruitment and retention in paediatrics: a pipeline to a brighter future

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ABSTRACT

Background In the UK, the number of junior doctors completing foundation programme, and the number of trainees applying to paediatrics has been in decline in recent years. The NHS is at ‘breaking point’, exacerbated by workforce shortages, chronic underfunding, increasing service demand and poor job satisfaction within healthcare workers. Issues in recruitment and retention of paediatricians ‘threaten the safety of our children’s health’, according to the Royal College of Paediatrics and Child Health.

Aim To explore what strategies have been described in the literature to enhance recruitment and retention in paediatrics.

Methods A scoping review methodology was conducted, employing a qualitative approach to review the literature. The studies included were English-language studies. 16 full-text articles were reviewed and analysed.

Study findings There is a paucity of data in the literature that describes evidence-based approaches to enhancing retention and recruitment in paediatrics. The most important strategies employed to help are identified and grouped into six main themes. These include professional advocacy, workforce diversity, mentorship, improving working conditions, career flexibility and enhancing educational opportunities. The authors have created a ‘paediatric pipeline’ paradigm of ‘identify, engage, recruit, retain and champion’, which allow us to present these themes in a pragmatic way for paediatricians and policymakers.

Conclusions While some issues share similarities with other specialties in difficulty, much of the context and potential remedies within paediatrics are distinct. A strategic, multi-agency collaborative approach is required urgently to address the significant issues that face both paediatrics and the healthcare system.

INTRODUCTION

Paediatrics and child health is a unique, wide-ranging and stimulating medical

Key messages

What is already known on this topic?

- ▶ In the UK, the number of junior doctors entering specialty training has been in decline over the last number of years.
- ▶ Paediatrics is amidst a recruitment and retention crisis—with record low competition ratios and fill rates in 2019, increasing number of job vacancies and rota gaps, contributing to high levels of reported job dissatisfaction and staff burnout.
- ▶ Recent ‘NHS Improvement’ report identified workforce problems as the main contributor to poor ratings of paediatric services by the Care Quality Commission.
- ▶ The Royal College of Paediatrics and Child Health has recently declared that these issues ‘threaten the safety of our children’s health’, and recently published the #choosepaediatrics campaign as their key strategic priority for the next three years.

What this study adds?

- ▶ This is the first-known scoping review of the literature exploring specific strategies used to enhance recruitment and retention in paediatrics.
- ▶ Despite the grave importance of these issues, there is a relative paucity of data in the literature that describes evidence-based approaches to improving retention and recruitment in paediatrics.
- ▶ The authors propose a ‘paediatric pipeline’ strategic model to target recruitment and retention.
- ▶ Themes that are of importance in promoting and nurturing recruitment and retention include professional advocacy, workforce diversity, proactive mentorship, improving working conditions, sustainable career flexibility and enhancing educational opportunities.



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specialty. It is a rewarding, varied and enriching career which is often very popular with undergraduate medical

Learning and teaching

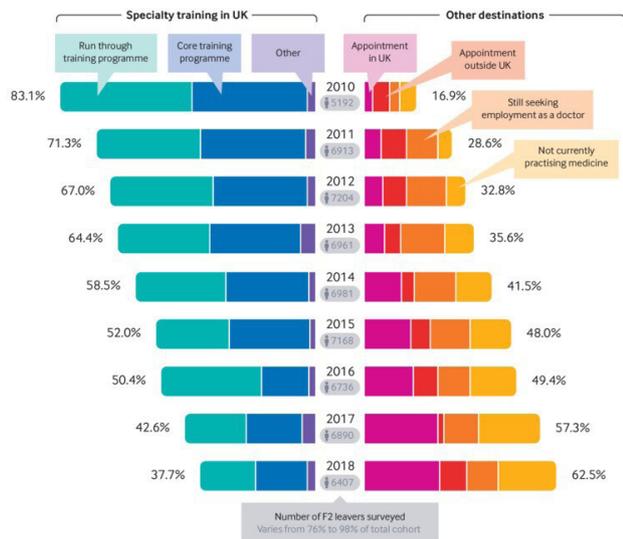


Figure 1 Summary of destination of F2 doctors following completion of UK Foundation programme 2010–2018 (Moberly T, Stahl-Timmins W. *BMJ* 2019;364:l842).

students. This popularity has not translated through to a postgraduate level in the UK, where paediatrics has consistently endured decreasing levels of applicants at specialty recruitment level.¹ There is an urgent need for active strategies to promote the specialty and to encourage retention of the existing workforce.

The National Health Service (NHS) has been described recently as reaching ‘breaking point’, exacerbated by workforce shortages, chronic underfunding, increasing demand and poor job satisfaction.² Reports of burnout, stress leave, job dissatisfaction and prolonged career breaks are commonplace among doctors. The problems seem to start even before university, with evidence of decreasing applications to medical school.² This problem continues with fewer applications to foundation programmes and specialty training across all specialties, represented in figure 1.³

The Royal College of Paediatrics and Child Health (RCPC) has declared that issues in recruitment and retention of paediatricians ‘threaten the safety of our children’s health’ and announced their new ‘#choosepaediatrics’ campaign as a key strategic priority.¹ A recent NHS report identified workforce problems as the single main contributor to poor perception and ratings of paediatric services by the Care Quality Commission.⁴

A limited number of reviews have been performed in other specialties, including general practice^{5–7} and psychiatry.⁸ This study is a scoping review of the literature to identify strategies that have been used to improve recruitment or retention of medical staff in paediatrics.

METHODS

This study followed the five-stage scoping review framework described by Arksey and O’Malley.⁹

Table 1 Key search terms

Search terms	Main concepts		
	Profession	Career	Longevity
Medicine, Internal Medicine, Paediatrics, Paediatrics, Physicians, Clinicians,	Recruit*, Strateg*, Retention*, Attrition* or Career*	Education, Continuing, Internship, Residency, Development	

The team undertook an iterative process to define an appropriately broad, yet relevant and focused review question. We systematically searched PubMed, MEDLINE and Embase using the key search terms outlined in table 1. A ‘title-only’ search was performed in Google and Google Scholar using the keywords from MEDLINE. A subject librarian with expertise in medical databases helped design and adapt the search terms for each database.

Following review of the provisional searches, the research team further refined the study inclusion and exclusion criteria (table 2). Several articles initially found related to trainee opinions on their specific training scheme. This was in the form of surveys, trainee-representative body reports and other documents. We excluded these surveys and questionnaires as they were not relevant to our specific research question. While we acknowledge they are relevant in general and would provide useful information, these papers focus on the reasons for poor recruitment and retention, rather than the strategies employed to enhance these; therefore, we decided to exclude them.

A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart of the selection process is shown in figure 2. The heterogeneity of data elicited precluded a quantitative analysis. The lead researcher read all the papers in detail, immersing himself in the material. Initial notes were recorded on a recognised framework.¹⁰ The research team analysed the initial comments and identified emergent themes. The lead researcher then reviewed the data and grouped these into six common themes outlined in table 3.

Table 2 Eligibility criteria for paper selection

Inclusion Criteria	Any study which reported strategies to promote staff recruitment and/or retention
Any type of scholarly output (full-text published work) was included, whether experimental or non-experimental, which described some or all of the following:	Paediatric/Pediatric postgraduate training, residency, career English language. Any country.
Exclusion criteria	Papers solely related to surveys or questionnaires focusing on factors affecting trainees choosing or continuing with a career in paediatrics
	Studies related to other specialties

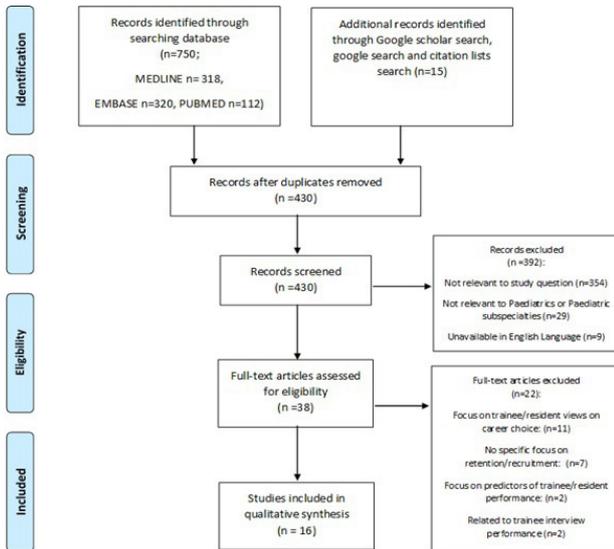


Figure 2 Flowchart of studies in the scoping review and reasons for exclusion.

RESULTS

A total of 756 articles were retrieved. After title and abstract screening and removal of duplicates, 430 articles were retained for further analysis. A total of 392 articles were excluded: 354 were not relevant to the study question; 29 were not relevant to paediatrics; and nine were unavailable in English. Thirty-eight full-text articles were assessed by two reviewers for eligibility. Sixteen studies were included at full-text review for qualitative synthesis (figure 2).

Of the 16 articles, 9 were from the USA, 6 from the UK and 1 from Canada. Their publication dates range from 2008 to 2018. The set of 16 articles scrutinised in the scoping review are included in table 3. The team used a qualitative approach to collate, summarise and present the results.

Table 3 Summary of final papers identified, and predominant themes elicited

Theme	Authors
Early advocacy of paediatrics	Admani, Shereck, Graham, Fromme, Jacob, Hanson, Roberts ^{12 16 22 31–34}
Workforce diversity/ expansion	Pachter, Spector, Fromme, RCPCH, BMA ^{2 12 17 18 27 35}
Personal mentorship	Pachter, Umoren, Admani, Solomon, Graham, Fromme, Jacob, RCPCH ^{12 17 20 22 31 32 35 36}
Enhance working conditions	Shortland, Fromme, Jacob, RCPCH, BMA ^{2 12 18 22 23 35}
Career flexibility and adaptability	Umoren, Spector, Admani, Shereck, Solomon, Hanson, Fromme, Jacob, RCPCH, BMA, Thomas ^{2 12 16 18 20 22 27 31 33 35–37}
Academic/educational opportunities	Pachter, Umoren, Shereck, Hanson, Graham, Jacob, RCPCH, BMA ^{2 16–18 20 22 32 33 35}

BMA, British Medical Association; RCPCH, Royal College of Paediatrics and Child Health.

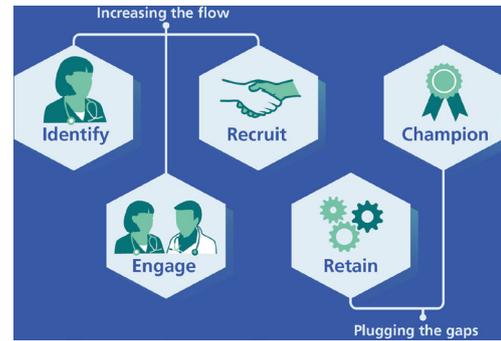


Figure 3 Paediatric pipeline for targeting recruitment and retention.

DISCUSSION

Our analysis identified six predominant themes as outlined in table 3. When considering how this information could be used by paediatricians and policy-makers, we contemplated presenting them according to a pipeline analogy used to promote recruitment in general practice.¹¹

- ▶ *Increasing the flow*—relating to recruitment.
- ▶ *Plugging the gap*—relating to staff retention.

Our analysis of the evidence in paediatrics found this an oversimplification of a very complex issue. We therefore proposed a ‘paediatric pipeline’ outlined in figure 3, allowing us to present the six themes in a pragmatic way.

Early advocacy

Fromme and Fagan remarks that paediatrics has relied too heavily and for too long on its ‘altruistic nature to entice idealistic medical students’.¹² It suggests this approach has been too passive and non-compatible with healthy and sustainable recruitment. This message of continuous specialty promotion and active recruitment resonates through many of the final articles.

Increasing number of medical students (identify)

The Royal College of Physicians propose that in order to meet service requirements in the near future, the UK will need an additional 2480 medical students per year for the next five years.¹³ The RCPCH strongly support these recommendations in their recent workforce planning paper.^{1 14}

Early exposure to paediatrics at an undergraduate level (engage)

Typically, paediatrics and child health is delivered at the latter part of the undergraduate syllabus. Fromme and Fagan suggests learning from traditional business models by incentivising paediatrics in three ways: ‘creating a corporate brand, becoming competitive and creating a pipeline’.¹² The authors suggest a redesign of the status quo and exposing undergraduate students to paediatrics at an early stage in their student careers, and that by creating a more longitudinal programme, this may potentially stimulate interest and aide recruitment.

Learning and teaching

Promotion and exposure at an early postgraduate stage (engage and recruit)

Currently in the UK, less than 10% of Foundation Year (FY) placements involve a paediatric rotation. This has significant implications on the number of trainees who gain exposure to the specialty.¹⁵ Action should be taken to improve UK-wide access to FY1 paediatric placements.

In recent years, the recruitment rate of ST1 trainees has fallen to below 90%, meaning that unfilled training posts lead to rota gaps which perpetuate workforce pressures from the beginning of each clinical year.¹⁵ In the USA, Shereck suggests that early exposure to their specialty at both undergraduate and postgraduate levels results in an increased interest in pursuing a career in paediatric haematology/oncology.¹⁶

Workforce diversity and expansion

Under-represented minorities (identify, engage, recruit and champion)
Pachter and Kodjo argue that a diverse workforce has a multitude of benefits, including healthcare provision as well as healthcare education.¹⁷ Within the UK, significant ethnic and social class differences exist in healthcare education and healthcare practice. In 2011, only 4% of medical students came from low socio-economic backgrounds. Between 2009 and 2011, half of all schools in the UK did not provide a single applicant to medicine.¹⁸ Reversing these trends, by widening participation and actively recruiting trainees is key to a diverse workforce. While there is currently a lack of evidence to support its impact on paediatric recruitment, the research team feels that by promoting an inclusive, representative and diverse membership body, this will have a positive influence on the wider perception of paediatrics, and ultimately, will serve its patients' better.

Use other healthcare professionals (identify, engage, recruit and champion)

Greater emphasis should be placed on expanding the roles of other healthcare professionals to work alongside doctors.^{2 14} Their varied skillset should be incorporated into clinical teams and used alongside and in collaboration with medical staff, with adequate support, supervision and autonomy.¹⁴

Personal mentorship

Mentorship (engage, retain and champion)

Mentorship can be described as 'a person who gives a less experienced person help or advice over a period of time'.¹⁹ Umoren *et al* states that 'choosing a medical career is a complex process for any individual and multiple factors play a role'.²⁰ Of 34 potential factors, medical students reported having an 'exceptional role model' as the greatest impact on emotional development.²¹

Pachter advocates a tiered membership scheme with junior and senior mentors playing different roles.¹⁷

Jacob advocates redesign of the current supervisor arrangement in the UK paediatric training scheme.²² Figure 4 is an adapted model example suggested by the research team, which could be used more widely.

The proposed longevity in this suggested partnership enhances the opportunity to build a meaningful relationship and potentially offers a degree of detachment from the daily clinical activity, which again may enrich the relationship.

Importantly, reflections from trainees who have left paediatric training programmes cited improved pastoral support and access to personalised career advice as key areas for change that might help retain trainees.²²

Enhance working conditions

Although the underlying reasons are complex, the UK's NHS is under significant pressure. Doctors report an increasing workload, high levels of job dissatisfaction, increased propensity to retire early or a desire to relocate to work in a different healthcare setting. The total attrition rate for paediatric trainees leaving the specialty over the first three years of training has been reported as high as 15%.²³ The factors contributing to such poor junior doctor morale nationally were categorised into four distinct themes and summarised in figure 5.²⁴

Rota gaps/rota intensity (engage and retain)

The British Medical Association and the General Medical Council (GMC) have published surveys highlighting the significant negative impacts of rota gaps on trainee doctors.^{2 25} Many trainees report being put under considerable pressure to work longer shifts, cover extra shifts and/or cover extra wards. This leads to an increase in stress and sense of burnout. The GMC

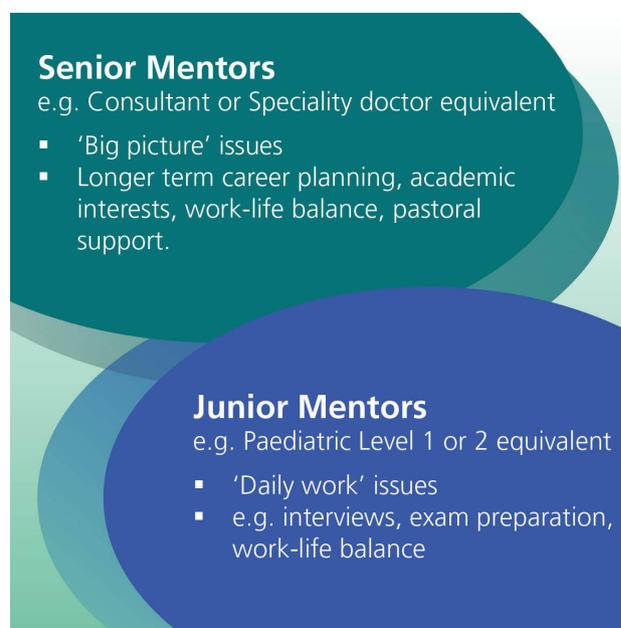


Figure 4 Paediatric training mentorship model.



Figure 5 Themes contributing to poor junior doctor morale (Royal College of Physicians).

National Training survey 2018 revealed that paediatrics is one of the specialties with the greatest pressures and that 65% of trainees feel burnt out by their work.^{1 25} Concerted collaborative and inclusive efforts between employers, training agencies and doctors are essential with consideration for self-rostering or other novel rota approaches required.

Employer relationship (retain and champion)

There is a widely-reported disconnect between junior doctors and their employers within the NHS. Many report not feeling valued, being dehumanised and being placed under excessive workload demands.²⁴ This is reflected in paediatrics by the high rates of trainee burnout and dissatisfaction.^{1 25} Healthcare organisations have a responsibility to look after the well-being of their employees. Flexibility around annual leave requirements, e-rostering, protected study leave allocation, shared parental and carer leaves have all been suggested as means of improving relations and developing a more cohesive relationship.² Work has begun within some areas of the NHS to explore the concept of ‘exit interviews’, developing a targeted forum to engage with staff who have recently or who are strongly considered leaving their NHS post.²⁶ This

will be carried out to further explore and understand their reasons and can potentially help employers and medical training organisations develop targeted interventions to enhance retention.

Career flexibility/adaptability

Flexible working arrangements (engage, retain and champion)

Spector *et al*'s work on generational influences on the paediatric workforce is a welcome reminder of the evolving dynamic of attitudes and values in the 21st century.²⁷ There are currently four generations represented in the paediatric workforce, each with varying values and characteristics attributed to them (table 4).

With an increasing number of clinicians born in the ‘millennial era’, there is a greater emphasis on ‘life-work’ balance, collaboration, and less inclination to ‘live to work’. Equally, there is a greater tendency among paediatricians in the USA to work part-time, seen in both men and women. Due to generational differences and values, the workplace of the future must be more flexible to facilitate career satisfaction, as well as adequately equipping the workforce and broader medical system.¹⁷

The *Shape of Training* report published in 2017 was a large national independent review exploring the UK post-graduate medical training.²⁸ The RCPCH has responded to its recommendations by advocating redesign of their current training scheme and committing to introduce a new two-level ‘run-through’ specialty training programme in 2022. This redesign has been branded as being ‘flexible, fulfilling and fit-for-purpose.’¹

Personal approach to training (engage and champion)

It is important for healthcare organisations and employers to better understand how doctors choose their career paths, both in terms of specialty and geographical location.² It is vital that committed investments are made to these areas to ensure that training places remain of high quality and educational value and that personal and family circumstances are considered at an individual level where possible.

Enhance academic/educational opportunities

An important quality indicator for training programmes is ease of access to education and academic opportunities.²² While this raises challenging staffing issues in many hospitals, it is vital for healthcare organisations to appreciate that the provision of a high standard of healthcare

Table 4 Generational values and attributes (Spector *et al*²⁷)

	Silent generation	Baby boomers	Generation X	Millennials
Born	1920–1940	1941–1960	1961–1981	1981–2000
Values and attributes	Hard work Respect for authority Living to work Delayed rewards	Personal growth Power Consensus building Optimism	Pragmatic Working to live Work–life balance Self-reliance	Work–life balance Collaboration Social networking Respect for their contributions

requires empowering trainees to access educational and professional development opportunities.

Expand academic opportunities (identify, engage, retain and champion)
There is a shortage of clinical academic posts across medical schools and universities in the UK.²⁹ Medical schools have cited difficulties in attracting and recruiting academic staff, an issue that could be further propagated if there are ongoing difficulties for international academics living and working in UK following the UK's recent exit from the European Union.² The total number of paediatric clinical academic consultant posts within the NHS has decreased by 8% between 2000 and 2016.²⁹ Doctors in academia typically have long career spans and are often involved in research, teaching and training into their retirement years. Further efforts should be made to understand why current trainees are deterred from academic careers, and greater attempts should be made to promote an academic or part-academic career path.

Promote flexible training pathways (engage, retain and champion)
Within many training programmes in the UK, there are relatively rigid requirements that must be met, for trainees to gain access to a period out-of-programme. Options include time out for experience, research, training or a career break. While it may seem counter-intuitive to permit more flexibility in this area from an immediate workforce point of view, employers must allow trainees greater flexibility in the design of the career pathway and help in the adaptation of each programme to their own personal and professional needs. This may help trainee perception of the training programme and their employers, and may positively contribute to retention.

Limitations

In accordance with established scoping review guidance, the search strategy was well considered, focused and incorporated both the published and unpublished literature. Scoping reviews are designed to provide an overview of the existing evidence base regardless of quality.³⁰ For that reason, unlike in systematic reviews, a formal assessment of methodological quality of the included studies was not performed.

One limitation is that all of the included studies originated from high-income countries comprising of the UK, USA and Canada. Equally, a small number of articles were unavailable in English language. While this may limit generalisability to other countries with varied health and education systems, the principles behind the methods may be transferable.

Studies without a defined strategy or intervention were excluded. This may have limited the search, but we aimed to evaluate specific approaches.

CONCLUSIONS

This is the first known scoping review to evaluate strategies employed to enhance recruitment and retention in paediatrics.

- ▶ This review identified six themes based on limited evidence to inform paediatricians and policymakers on specific strategies to promote recruitment and retention within the specialty.
 - Early advocacy, workforce diversity, mentorship, working conditions, career flexibility and education.
- ▶ We propose that these themes should be embedded within a 'paediatric pipeline' to allow a strategic approach to this problem— *identify, engage, recruit, retain and champion*.
- ▶ A multiagency collaborative approach is required urgently to address specific recruitment and retention challenges in paediatrics.

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Contributors PM, AT and TB conceived, designed and developed the research project. All were members of the research team and were involved throughout the process. PM undertook the scoping review as part of his final dissertation for Masters in Clinical Education through Queens University of Belfast. AT and TB reviewed throughout. TB was academic supervisor for Masters project. PM, AT and TB were involved in draft, revision and final submission of this piece.

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