

# Our vision for the future of paediatrics in the UK

## Executive summary



Data



Innovation



Models of care



Working lives

# Contents

<b>Forewords.....</b>	<b>3</b>
<b>Summary: our vision for 2040.....</b>	<b>5</b>
<b>Summary: our evidence.....</b>	<b>7</b>
<b>Summary: enablers for a brighter future.....</b>	<b>8</b>
<b>Summary: voice matters.....</b>	<b>9</b>
<b>1. Why Paediatrics 2040?.....</b>	<b>10</b>
What we've done.....	10
Who this report is for.....	11
<b>2. What we've found.....</b>	<b>12</b>
Future burden of need for paediatric services.....	13
Future impact of innovation on paediatrics.....	15
Scenarios for future models of care.....	17
Future workforce requirements.....	20
Voice matters.....	23
<b>3. What we want to see.....</b>	<b>25</b>
Integration.....	25
Innovation.....	26
Inclusion.....	26
<b>4. What we will do next.....</b>	<b>27</b>
Supporting our members.....	27
Advocating for children and young people.....	27
<b>Acknowledgements.....</b>	<b>28</b>

## Forewords

We live in a time of challenge, complexity and uncertainty. The COVID-19 pandemic in particular has up-ended all our lives and taught us how rapid change can be. The RCPCH spends much of its time fighting to improve health and wellbeing for our children and young people and improve working lives for our members. This can often be highly reactive, responding to the problems of the here and now or the issues we can see just around the corner.

It's a truism that we can only see where we truly are and where we are going, if we look up and around us. We spend most of our time focusing on the mud at our feet, the problems of right now. But looking only at our feet means we will inevitably stumble. Gazing into the future can feel idealistic or impractical. Yet if we don't dream about what is coming and how it will be, the future will happen to us in ways that we don't like. Only by actively planning for the future can we hope to have some control over it.

**"If we don't dream about the future, it will happen to us in ways that we don't want it to"**



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Models of care



Professor Russell Viner

Paediatrics 2040 is the College looking up and looking around. The RCPCH has always planned its strategy for the next three or so years and we are currently updating the strategy for 2021-24. However short-term strategies are inherently focused on the problems we see today. Paediatrics 2040 is our long-term strategy, looking out 20 years to see how best we can train and support paediatricians to care for children and young people over the next two decades.

Crystal balls are notoriously hard to come by these days. Instead we turned to science, using recent trends in health and healthcare to forecast how things might be in 2040 in the UK. We have focused this work on the UK, however we recognise many of the issues may apply across other countries.

We have worked to engage all parts of the College in the project, from medical students through to retired paediatricians, and very much looked across the four UK nations. The project was co-led by the President and the Chair of the Trainee Committee, recognising the reality that in twenty years one of us hopes to be mostly relaxing on a beach(!).

We hope Paediatrics 2040 will also engage our members and bring a sense of excitement about these possible futures.

**Professor Russell Viner, RCPCH President 2018-2021**



I feel so excited to see this report launched, the culmination of three years of discussion, in-depth research and consultation. To have paediatricians from across the UK, at every stage in their career along with children and young people, imagine the future of the care we provide is a major achievement. As a trainee, it is all too easy to get caught up in the day-to-day grind of shift work, exam preparation, training progress. This project has been a fantastic opportunity to think big. I hope that this report will serve as a springboard for future projects, concentrating our efforts on optimising the care we provide through better systems and a highly skilled, coherent and happy workforce.

**Dr Hannah Jacob, Chair of RCPCH Trainees Committee 2019-2021**



We are really pleased to have been able to get involved with Paediatrics 2040. It's a chance to make an impact on others' future.

"It has given me hope for the future of paediatrics, and I feel confident that future generations of young people will have better experiences with healthcare." Youth Author

"I feel strongly that the voice of young people is important when dealing with aspects of life such as health and well-being to ensure that everyone's own views and beliefs are respected." Youth Author

Nearly 900 children and young people have told RCPCH &Us their ideas to help develop paediatrics over the next 20 years, we want to say thank you to all of them and everyone from the Paediatrics 2040 project for involving us, listening to us and working with us over the coming years.

**RCPCH &Us, the voice of children, young people and families**



I am delighted that this landmark report has been launched - we are at an inflection point in the NHS with respect to the nature of the care we offer. Thus our children and young people stand to benefit most from rethinking healthcare, with improved integration and personalisation of care backed up by a health system where innovation and flexibility allow new technology to enhance the work of dynamic clinical teams. The insights from Paediatrics 2040 are timely and much-needed. We can have a brighter future for our children and young people - but let's not miss the opportunities set out to help get us there.

**Professor Helen Stokes-Lampard, Chair, Academy of Medical Royal Colleges**



As we embark upon the creation of a new three-year strategy for the College, this report could not be more timely or more welcome. The pandemic has forced us into new ways of working and new ways of thinking. It's clear that as the body that speaks for paediatrics and child health in the UK we need to set out a clear vision for how healthcare could improve in the future for the next generation.

This year, we celebrate our 25th birthday as a medical royal college. The challenges our workforce at home and abroad faces are considerable and as we understand more about the impact of the virus on childhood, the demands upon us are greater than ever. The work of Paediatrics 2040 is a testament to what can be achieved when we bring together the best minds and focus on the future that lies ahead.

**Jo Revall, RCPCH CEO**

**Dr Camilla Kingdon, RCPCH President-Elect**

# Summary: our vision for 2040



In 2040 we hope to see:



## Innovation

- An improved landscape for innovation, with increased capacity for research that is specific to innovation and technology in paediatrics.
- Clinicians moving beyond the digital consultations adopted during the 2020 pandemic and using digital health products to better monitor, care for and treat patients.
- Technology used in paediatric settings that is designed or adapted for use specifically with children and young people.
- Widespread implementation of appropriate guidelines and frameworks that are specific to paediatric care to make technology safe and accessible for all.
- All relevant stakeholders involved in paediatric care, including children and young people, involved in the design, development and integration of different innovations and health technologies relating to their care.
- All innovations and technology assessed for accessibility to ensure they will not further isolate underserved populations.
- A workforce with the expertise to utilise new data technologies with confidence and lead projects to address the needs of those working at the coal face of the NHS.

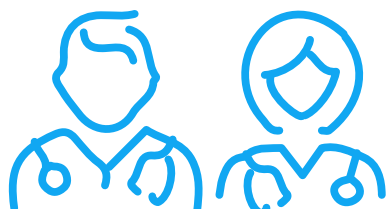


## Models of Care

- Life reimagined through the lens of the children and families we care for, exhibiting compassion for their needs and equity of care for all families.
- A whole population approach to care that builds on six broad patient segments as oppose to stratification by patient pathways.
- Paediatric models of care that are truly child centred, rather than built to suit existing systems, with communication and adaptation as the key ingredients in any system.
- Developmentally appropriate care that is easily adaptable to changing biopsychosocial profiles.
- Care models that take vulnerability into consideration and explore social circumstances in all encounters that include personal and community factors.
- Reduced clinical variation for single chronic health problems, with every child being seen in

the right place at the right time by the right professional through connected care.

- Enhanced care models for children with long term conditions that focus specifically on improving quality of care and quality of life.
- More children and families empowered to know when to seek care, with reduced pressure on emergency department attendances.
- Optimisation of technology to support fully integrated systems across paediatric care, allowing remote monitoring and seamless interconnectivity.
- Child and family engagement embedded in every paediatric service across the UK.



## Working Lives

- Doctors working remotely with multidisciplinary and global teams to support clinical decisions, sharing their knowledge, guidance and research.
- Doctors having knowledge and understanding of new medical technology and data interpretation, to benefit and create personalised health care, working in partnership with patients.
- Stronger links between paediatrics and other specialties, with paediatricians and GPs finding ever closer ways of working together.
- Increased consideration of the whole child and a focus on making every contact count for medical and social care, health promotion and teaching and training.
- Flexible and progressive rotas which allow doctors to deliver high quality patient care, not impeded by excessive workload, allowing for both continuity of care and attention to sleep, as appropriate.
- Staff wellbeing being at the forefront of institutions, with attention to taking proper breaks to refuel on nice, healthy food, the ability to rest and recharge and initiatives to promote health and balance.
- All staff feeling like they are part of a cohesive team, with true inclusivity, attention to diversity and modern leadership.
- Inclusion of different working models within paediatric teams and inclusion of more varied multidisciplinary team members to support patients.
- Trainees who are supported to obtain the best career fit, with flexible training options.
- A paediatric workforce that is involved and influences global health, climate changes and inequality.

## Summary: our evidence



### What are the key issues likely to be in paediatric care in 2040?

- Without implementation of integrated care, we expect to see a significant rise in the number of children and young people needing paediatric care via both emergency department and outpatient routes.
- For adolescents and young adults, we forecast significant future increases in poor mental health, substance use and the consequences of prematurity. This was set to happen even before the impact of COVID-19, based on previous trends.
- Without targeted investment in existing roles and funded expansion of new workforces, such as Advanced Clinical Practitioners, paediatric workforce pressures are set to worsen, with projected decreases in the SAS doctor role and community paediatric workforce, and more doctors working less than full time.
- We expect that there will continue to be increasing challenges to child health felt from the impact of worsening poverty and climate change.

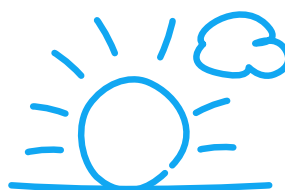
### What is the likely role of paediatricians in 2040?

- Paediatricians will remain a central part of the integrated child health workforce in 2040.
- Their roles will look different - increases in technology to support care will mean that paediatricians will be supporting children and young people in new ways. Those conducting face to face work may not be seeing patients in the traditional settings expected today.
- Paediatricians will likely need to spend a greater proportion of their time looking after children with more complex healthcare needs and working across physical and mental health.
- Paediatricians will spend more time working at a global health level, supporting colleagues with the impacts of emerging pandemics and population health issues.

### What will paediatricians need in 2040?

- What paediatricians are asking for doesn't look radically different to today - flexibility, evolving training, opportunities to work together - and it is hoped that by 2040, these asks will have been met so we continue to attract people to the speciality.
- We will need to be working in more integrated ways across the health system in order to fulfil their roles, otherwise our systems risk being overwhelmed.
- Paediatricians will also need their colleagues in other healthcare roles to be appropriately trained and supported to see the healthier child, giving them time to support children with complex needs.
- Paediatricians will need a strong collective voice in order to be heard in the context of new and increasing health issues on the agenda.

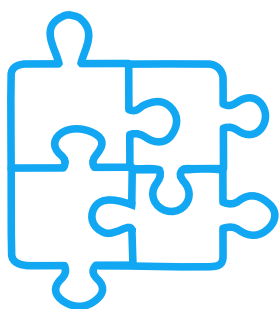
# Summary: enablers for a brighter future



We've reached a number of conclusions across our four workstreams about what paediatric care might look like in 2040. We are now at a pivotal moment to change how paediatrics will look for the better over the next 20 years.

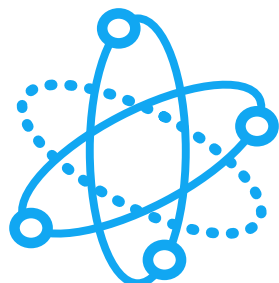
We've looked to identify the solutions to some of the challenges we expect to face, and this report is the roadmap for how to get there.

In particular, we want to highlight three areas for focus in paediatrics and child health, to set things on course for a better future and to reach our vision. Read more about these areas in section 3 of this report.



## Integration:

- Data systems
- Care models
- One team



## Innovation:

- Education and training
- Delivering care
- Evaluating and improving



## Inclusion:

- Co-production
- Equality and diversity
- Looking after each other



# Summary: voice matters

Children and young people have prioritised three key themes for the future



## Children and young people's priorities and ideas for the next 20 years in paediatrics

### Top three priorities

- Mental health
- Working with Us
- Mental Health & COVID-19



### Working with Us

Be respectful, kind, supportive & friendly  
 Be empathetic, understanding & actively listen  
 Be open-minded & aware of different experiences  
 Be professional, positive & funny

### In the future:

Collect data on our feedback  
 Find new ways to explain things  
 Use child friendly language  
 Give us choices about who we see & where  
 Learn about new topics like LGBTQ+, eating disorders, drugs & alcohol



### Mental Health

We need to work together to:  
 Remove the stigma  
 Support people to ask for help  
 Support good mental health & wellbeing  
 Support children & young people to deal with mental health issues at school & home

### In the future:

Collect data on mental health  
 Do mental health check-ins with patients  
 Signpost to good online resources  
 Ask about mental health more  
 Train all doctors in mental health  
 Support doctors to look after their own mental health



### Mental health & COVID-19

Remember to provide health promotion messaging  
 Ensure children & young people don't feel forgotten  
 Ensure confidentiality during home appointments for mental health services

### In the future:

Collect data about children & young people not getting help straight away  
 Create new ways to support confidentiality during virtual appointments  
 Support mental health services to adapt quickly to provide online or phone support  
 Support staff to maintain their own wellbeing



Thank you to all the children & young people that took part.

More details at <https://paediatrics2040.rcpch.ac.uk/voice-matters>

# 1. Why Paediatrics 2040?

In 2018, the then Chief Medical Officer in England, Professor Dame Sally Davies, chose to focus her annual report on the health of the public in 2040. The report offered cause for optimism and concluded that it is realistic to aspire to better and more equitable health in the next 20 years. It also demonstrated how, in many cases, we already know what we must do to improve health in 2040 – including effective population prevention of ill health, investment in new technology to diagnose disease early and improve prognosis, and use of big data to make predictive analytics everyone's business. By embedding and building upon these innovations and normalising their implementation, we can harness these opportunities for better health over the next two decades.

Paediatrics is no different. Economic, political, and social changes mean that the role of paediatricians, and the shape of paediatrics as a field today is very different to what it was two decades ago. It is likely that two decades from now, in 2040, paediatrics in the UK will look very different from how it looks at present.

Some of the likely challenges in the future are already known. Increasing pressures on paediatricians and on the health service are seen to be impacting negatively upon staff retention across the board. Shortfalls in the number of applicants for paediatric speciality training are a cause for concern and may have long-term impacts on the delivery of services.

We also know that more work needs to be done to improve health outcomes. The UK currently has worse child health outcomes in many fields compared to the EU15, including infant mortality (where the level in the UK is 30% higher than the EU15+ median) and medial (non-injury) mortality for preventable causes of death, including common infections and chronic respiratory conditions. Unless additional efforts are made, our child health outcomes will fall even further behind in the coming years.

In 2020, we saw unprecedented changes in paediatric services as a result of COVID-19. It transformed ways of working, to the extent that lots of the theoretical futures we were exploring in this project started to already be experienced. In June 2020, we published a snapshot report, "Reimagining the future of paediatric care post-COVID-19", which shared the learning and changes from COVID-19 that the paediatric profession would like to keep and take forwards into the future.

Despite COVID-19, we recognised the importance of keeping our Paediatrics 2040 work going in ways that we could, moving the project online and speaking to members virtually wherever possible. After extensively consulting with doctors and children and young people, in this report we are setting out our vision for the future of paediatrics in the UK. This is an opportune moment to refocus our thinking about the future of paediatrics and how we want to shape it.

## What we've done

For RCPCH to achieve its vision of ensuring a healthier future for children and young people, it is crucial that we have a vision of what the future is likely to look like, and of how we wish to shape it.

In Autumn 2018, we embarked on the journey of our Paediatrics 2040 project, established and led by Professor Russell Viner, RCPCH President from 2018-2021. We set out with a broad objective:

*"To better understand how paediatrics will function as a discipline in 2040, the role paediatricians will play in it, and how the College can continue to support our members into the 21st century."*

We are of course the Royal College of Paediatrics and Child Health, and we strive to put children at the heart of everything we do – including through this project, where children and young people’s voice has influenced us throughout. However, we recognised that we needed to focus the scope of our work in order to deliver on our objective, and for that reason we largely limited our scope to paediatrics and paediatricians. However, we have, where possible, involved our broader child health colleagues in discussion and consultation, and we hope they will read this with interest.

Across a two year period, we have been busy collaborating with paediatricians, experts and young people across the UK to develop our credible vision for the future of paediatrics in the UK, concentrating on four areas – data and evidence, impact of innovation, models of care, and working lives.

We travelled across the four nations of the UK to speak to paediatricians and members of the wider paediatric community, including paramedics, nurses and medical students. We also ran online engagement, including a survey, allowing us to speak to hundreds more of our members in a more structured and quantifiable way. We’ve also had around 120 of our members – from medical students and foundation doctors through to retired consultants – working with us across our four workstreams. They have been steered throughout the process by members of our project board.

Around 900 children and young people have also been involved, sharing thousands of ideas, experiences and hopes for continuing the good care they receive into the future, and working collaboratively to find solutions where there are areas for development.

## Who this report is for?

In 2019, we saw the release of a Long Term Plan for the NHS in England, with a whole chapter dedicated to children and young people. Through our State of Child Health and Child Health in 2030 work, we supported the NHS England Children and Young people’s Team to develop that plan and continue to support them in executing it. Similar policy and public affairs influencing also takes place across the rest of the UK, and since the launch of our State of Child Health work in 2017, we have worked closely with the devolved governments to successfully put paediatrics and child health higher on the agenda. We hope that, by sharing the views of paediatricians and experts working across all four nations, this report is similarly helpful to policy makers across the UK, supporting them to look at the opportunities that need to be harnessed in order to achieve better health for all children and young people in the UK in 2040.

This report is particularly for our members. The Paediatrics 2040 project would not have been possible without the UK members who have given their time to contribute. We hope to have reflected and represented as many of their ideas as possible in this report and throughout our supporting evidence. This is but a moment in time on the journey to 2040, but we hope this report leaves our members feeling inspired for a brighter future for paediatrics, and for the children and young people we care for.

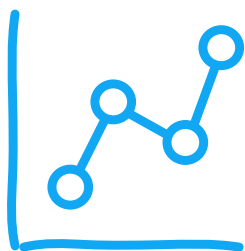
**This report presents a summary of the conclusions from the Paediatrics 2040 project. The supporting research from across our four workstreams, as well as more information about the project methodology, can be found on our dedicated project website at:**  
<https://paediatrics2040.rcpch.ac.uk>

## 2. What we've found

### Our overall objective has been

*"To better understand how paediatrics will function as a discipline in 2040, the role paediatricians will play in it, and how the College can continue to support our members into the 21st century."*

### To achieve this, we've produced research findings across four areas:



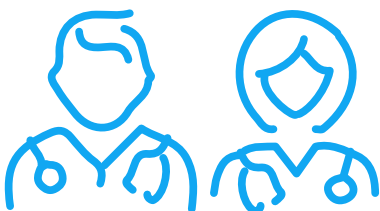
Future burden of need for paediatric services



Future impact of innovation on paediatrics



Scenarios for future models of care



Future workforce requirements



**We've also summarised the results of our mixed methods research conducted with 900 children and young people across the UK.**

## Future burden of need for paediatric services

### What our members said...

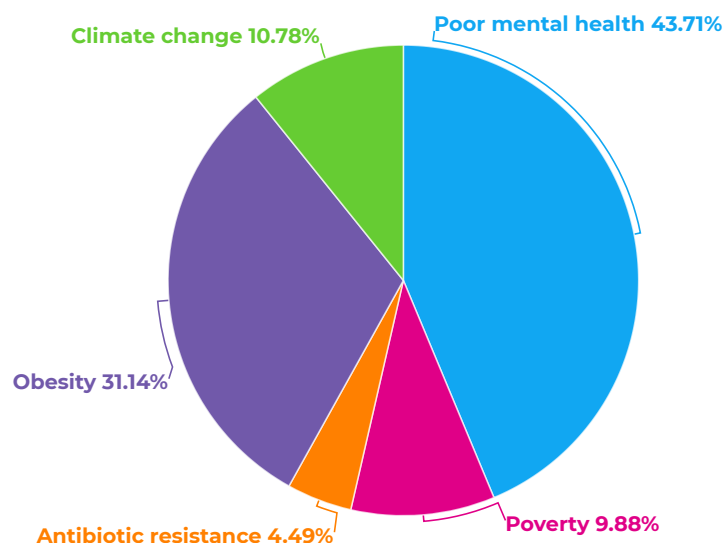


Figure 1: Results from our survey of members (n=298) to the question “In 2040, what do you think will be the biggest health issue affecting children and young people?”

### What our dedicated data and evidence work says...

In looking at data and evidence, we concentrated on three broad areas to consider likely trends in the future:

#### *Global burden of disease and disability*

We used data from the Global Burden of Disease (GBD) study (a tool to quantify health loss from hundreds of diseases, injuries, and risk factors) to identify recent and current burden of disease from various causes amongst children and young people across the UK. We then used the data to forecast change in all-cause disability-adjusted life years (DALYS) out to 2040.

For neonates and infants, we see forecast falls for burden from most major causes of disease by 2030 and 2040, continuing the falls seen in the decade to 2017. For children 1-9 years, we forecast rises in burden due to neonatal disorders i.e. consequences of prematurity, epilepsy and other neurological conditions and ADHD, although most of these rises are relatively small. In contrast, there are significant declines in more traditional causes of burden including cancer, congenital causes, injuries, asthma and infections. For adolescents and young adults, we forecast increases in mental health, substance use and neonatal disorders (consequences of prematurity) and falls in burden due to injuries, asthma and most medical causes.

Forecast increases in DALYS from particular causes are likely to indicate a need for additional workforce or a change in training focus. For paediatricians, there will be a need for broader training that includes increased numbers with skills in dealing with mental health problems, broader adolescent health issues as well as the consequences of neonatal survival, such as neuro-disability and epilepsy

#### *Healthcare activity*

The large increases in emergency activity and outpatient attendances documented across the past decade in young children, of the order of 60-80%, have placed great strain on children and

young people's services across the UK, as the children's workforce and service structure has not increased to match it.

Our most conservative scenario, in which there are no substantial changes in terms of child poverty or health system organisation over the next two decades, predicts increases of 50-145% in emergency department attendances and 20-125% increases in outpatient attendances. An alternative scenario where policy action reduces child poverty significantly over the next two decades has a beneficial impact upon these forecasts, although the forecast impact is less than 5% for all activity. These changes will require significant additional workforce and health services resources. In contrast, integrated care scenarios dramatically reduce projected future activity across all admission types, suggesting markedly lower needs for future additional workforce and capacity. Managing all ambulatory care sensitive conditions outside the hospital system (a high integrated care scenario) could potentially reduce total admissions to at or below 2007 levels by 2040.

If drivers of increased activity are not addressed, there will be further rapid increases in children and young people's (CYP) emergency and outpatient activity over the next 20 years, requiring significant additional investment in both services and workforce if quality is not to fall. Without concerted action to reduce child poverty, healthcare activity will increase, and outcomes worsen. Contrary to these pessimistic scenarios, our findings suggest that development of integrated care for CYP at scale in England has the potential to dramatically reduce or even reverse these forecast increases, reducing strain in the system whilst improving outcomes for family and young people's experience of care.

### *Workforce*

Most of our workforce projections cannot be viewed in isolation from projected healthcare activity. However, we note three key findings. Firstly, we have forecast less-than-full-time working in paediatric trainees to increase from 30% in 2019 to over 60% in 2040. We welcome and encourage this flexibility, as discussed in our working lives report. However, this is of major concern with regards to paediatric trainee full-time-equivalent numbers if the current cap on the number of training places available is not reviewed.

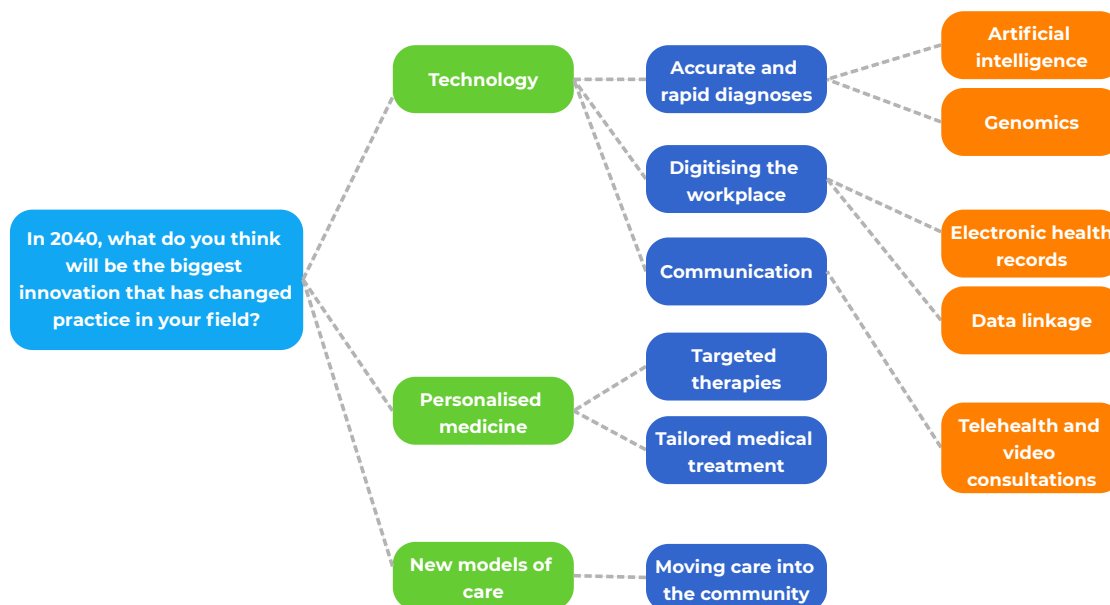
Based on recent trends we have forecast that there is a risk of significant decline in the Specialty, Associate Specialist and Staff Grade (SAS) doctor workforce group by 2030. This is an important workforce group who need urgent support to avoid this trend from becoming reality. There are also concerning trends ahead for community paediatricians, who are forecast to decrease from around 18% of workforce to 12% of workforce, based on the last ten years of trends. Elsewhere in the project we have discussed the need for more paediatricians to be working in the community to meet the needs of children and families in the future, and this trend therefore needs some attention.

Visit our Paediatrics 2040 website for a full summary of our data and evidence work.

<https://paediatrics2040.rcpch.ac.uk/our-evidence/data-and-evidence>

## Future impact of innovation on paediatrics

### What our members said...



**Figure 2: Results from our survey of members (n=290) to the question “In 2040, what do you think will be the biggest innovation that has changed practice in your field?”**

### What our dedicated innovation and technology research says...

Innovation is not simply the development of new ideas; it also involves being able to successfully spread things that work. COVID-19 has unmasked the latent potential of a number of technologies that needed a platform to implement them at scale.

The ability to host clinics and meetings remotely has existed for years, we just haven’t adopted it. However, in response to COVID-19, reconfiguring whole health systems to respond to different demands has truly required some innovative thinking. Sometimes this has been to the disadvantage of children and young people who have had to be side-lined due to the need to create significant capacity to care for adults. This inequity in innovation and for children is not a new thing though.

Children and young people are often an afterthought in development and delivery of innovation. In order to realise the potential for technologies in 2040 the landscape of research and development needs to change to support paediatrics. This will involve giving paediatricians more time to spend on innovation activity and adjusting governance frameworks so unnecessary barriers are removed.

We’ve learnt a lot in this working group about the relatively scant amount of evidence that specifically exists around new technologies for children and young people - we conducted a literature review, looking at the impact of technology on the delivery of paediatric care in the last ten years. However, the review did identify six useful themes for successful technology development in paediatrics.

### *Clear guidelines*

An emerging theme from many studies was the need for clear guidelines or protocols when introducing new technologies in health settings. This includes ensuring protocols are context or country specific as health policies will differ depending on location. Many care providers expressed the need to have more training on using innovations, whether face-to-face or online. Not all healthcare providers will be “digitally literate”, and so when implementing new innovations training and clear guidelines are necessary.

### *Continuity of care*

Children and young people expressly prefer consistent care from the same clinician or community/paediatric team, and to not have to repeat themselves if they are referred to another professional. Where this isn't possible as a child moves along a care pathway, clear protocols and pathways that are specific to children and young people will support continuity between professionals and services.

### *Confidentiality*

Privacy and confidentiality are raised in many of the studies we looked at, with concerns around data sharing through technology bringing increased risk of confidentiality being lost. Ensuring these are addressed given the necessary utilisation of some digital approaches will be critical.

### *Digital poverty*

Child poverty is at an all-time high in the UK. Many young people do not have access to a stable internet connection or appropriate device for getting medical support. This needs to be considered in the implementation of all new technology to ensure that underserved populations will not be further isolated.

### *Personalised care*

Interventions that take a more personalised approach or include their target population in the development of the intervention often report more positive findings, including those that specifically target younger populations as separate from older adolescents and/or adults. This was also observed in studies that adapted innovations to suit the language or cultural needs of their target population.

### *Technology to supplement, not replace*

Participants (both care providers and care recipients) often state a preference for interventions that used a blended approach. Patients report they find it more comfortable and easier to engage with a clinician at in-person appointments.

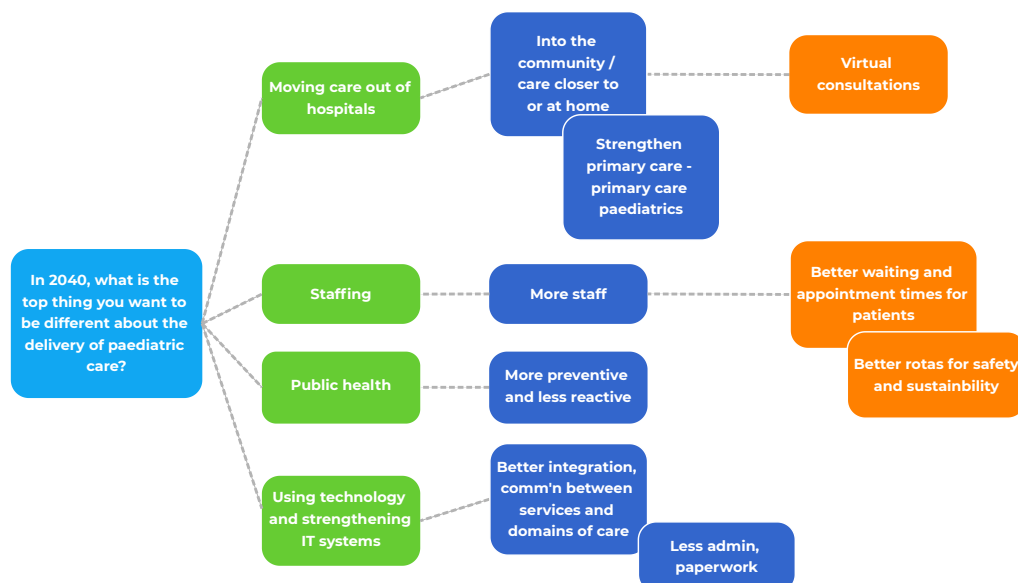
This theme reinforces the importance of implementing a personalised approach to delivering paediatric care, as participants will have individual preferences about how they receive it.

Visit our Paediatrics 2040 website for a full summary of our innovation work.  
<https://paediatrics2040.rcpch.ac.uk/our-evidence/impact-of-innovation>



## Scenarios for future models of care

### What our members said....



**Figure 3: Results from our survey of members (n=295) to the question “In 2040, what is the top thing you want to be different about the delivery of paediatric care?”**

### What our dedicated models of care research says...

In the future, we think that the underpinning philosophy should be that all paediatric models of care are child centred. Evidence points towards a whole population approach, and our group have highlighted six broad patient segments which can be used to inform the patient pathway. Service themes (such as safeguarding, mental health care, transition) cut across all of these segments.

#### *Healthy child*

The healthy child needs to stay well – both in terms of their mental and physical health. Across the UK, we need a clear agenda to ensure the welfare of children is a part of central and local government plans – alongside a clear focus on families in order to reduce inequalities and the proportion of children living in poverty. Early years intervention concentrating on the first 1000 days of life from conception through to two years is a critical time to prevent physical or psychological harm from developing as well as reducing exposure to adverse childhood experiences that can impact on long term health attainment. Education is central to improving life chances, and ill children too often experience a reduction in educational opportunities. Hence horizontal integration between health services, local government (social services) and education is needed to provide and maximise opportunities for all children.

#### *Vulnerable child*

The last decade has seen a dramatic increase in referrals to child development centres or child and adolescent mental health services (CAMHS) when there are concerns regarding social communication disorders, such as autism (ASD) in children, behavioural issues and attention

deficient hyperactivity disorder (ADHD). Throughout the United Kingdom the services offered for community, neurodisability and CAMHS differ depending upon place, which means it is difficult to generalise on appropriate models of care. However, the pathways for these children are complex, often involving social services and education as well as medical provision.

The failure to provide timely and effective services increases the vulnerability of these children, resulting in increased risk of harm especially to their mental health and resulting risk of self-harm and suicide. Their social vulnerability is evident in multiple environments and pathways that ensue. Timely diagnosis and intervention are needed to ensure educational attainment is achieved, alongside a reduction in social vulnerability and improved mental health. There is evidence that integration of services with a multidisciplinary team-based approach - where competencies are more important than role definition - results in a timely cost-effective service provision with improved health outcomes.

### *Child with single long term condition*

The number of children with a single chronic long-term health problem has increased significantly over the last two decades, with asthma, diabetes, inflammatory bowel disease, eczema and epilepsy contributing. The escalation and clinical pathways for asthma and many other long term chronic health problems are diverse across the four nations, some of which may depend upon services available, however there is far too much unwarranted clinical variation which is in part also due to non-adherence to clinical guidelines.

A number of new care models have developed to reduce clinical variation for single chronic health problems to ensure the child is seen in the right place at the right time by the right professional. The intended benefits include improved health outcomes (including reduced morbidity and improved quality of life) and reduced use of unscheduled and scheduled care through promoting a proactive management strategy rather than a predominantly reactive approach.

### *Child with complex needs*

There is a significant knowledge gap relating to incomplete and imprecise definitions of children with medical complexity (CMC) and although CMC account for a small proportion of children they account for a significant proportion of health care resources. There are principles that all services need to incorporate to be effective in supporting CMC, including care mapping, care co-ordination, responsive care, ethical/moral imperative, and communication.

To help understand and deliver the most effective and efficient health care services, we need to be able to differentiate the needs of the children. Clinical coding is a way of understating the complexity of patients consistently across all health care settings

We need to be clear that any new model of care for children with long term health problems is an 'enhanced care model' that will improve quality of life and include experience measures for families, patients and health care professionals.

### *Acutely mild to moderately unwell child*

There has been an unprecedented increase in emergency department attends in the last 15

years. Integrated care systems are tasked with reducing unwarranted clinical variation in quality and access to services with vertical integration between those organisations outside of hospital such as primary care into secondary care.

A practical approach is to look at patient flow across a system and produce solutions that engage across places and embed change to resolve the following:

- Increasing demand for primary and secondary care which is unsustainable
- Unnecessary access to primary and secondary care
- Uncoordinated care between healthcare settings
- Confused patient (and parent/carer) knowledge about when and how to access appropriate services

### *Acutely severely unwell child*

Infants and children who are acutely critically unwell require urgent recognition that their symptoms and signs are potentially life threatening and immediate treatment is required. This means parents and carers having the information to recognise how unwell their child is, knowing something needs to be done, and having the health services available to meet their needs. The health literacy of parents and availability of information for families is crucial in meeting these needs. Primary care staff similarly need to recognise an ill child and have the skills and tools to enable the necessary action. Not all children who present are physically unwell, with mental health problems in children increasing in number and severity.

The landscape of urgent and emergency care provision for children has changed significantly in recent years and continues to evolve at pace, albeit with much complexity and variation across the UK. This has been further exacerbated by COVID-19. As a result of this, paediatric staff are now looking to work in an integrated way with NHS 111 and primary care to maintain less attends whilst ensuring good clear advice is given to help support management.

### *Key components of any paediatric service*

We have also highlighted what we think are the key components of any paediatric service, regardless of complexity. We encourage local teams to use this list when implementing paediatric services:

- Functional vs dysfunctional team
- Multidisciplinary approach
- Patient centred care
- Child and family engagement
- QI activity

This is in addition of course to fully integrated care, which we hope will be implemented in all aspects of paediatric care and services by 2040.

Visit our Paediatrics 2040 website for a full summary of our models of care work.  
<https://paediatrics2040.rcpch.ac.uk/our-evidence/models-of-care>

## Future workforce requirements

### What our members said...



Figure 4: Results from our survey of members (n=294) to the question “In 2040, what is the top thing you want to be different about the working lives of paediatricians?”

### What our dedicated research into working lives says...

In 2020, paediatricians have shown extraordinary resilience, and we now need to think about how to continue that support for each other into the future. COVID-19 has reminded us that it is more important than ever to take care of ourselves, so alongside this report, we’ve also published a detailed report on wellbeing and looking after each other.

Paediatricians are concerned about their working lives. Every day, they feel the impact of the lack of staffing. They reflect on how the change of paediatric working conditions impacts their clinical practice. Morale can be low and they are aware of changes in society having an impact on their way of working, with concerns of wider social issues, including inequality and poverty impacting on child health. These challenges are not going to go away overnight.

Despite all this, we remain optimistic for a brighter future, and much of our dedicated report on working lives is about celebrating the successes of new ideas from around the UK that our members want to see more of. Although we want to be aspirational in our vision for the next 20 years, we also need to be practical in recognising what there is to do in order to achieve what our members want to see.

Our working group identified four themes as the essential “ingredients” for the future working lives of paediatricians in the UK.

## *Flexibility*

A desire for flexibility affects all stages of job and career planning. It offers potential to recruit paediatricians who better represent their patients and keep more clinicians working at more stages of their career. Delivering flexible working and training will bring challenges for workers, employers and regulators, but we hope flexible working will improve care for workers and patients alike.

The changing workplace over the coming decades will demand increased up-skilling for clinicians, and much work is being done on improved career flexibility. Greater flexibility within the path to graduating as a doctor may translate into a broader talent pool from which to recruit the paediatricians of the future. Burn-out and rust-out are significant risks – especially as the retirement age recedes – and the potential to regularly retrain or reinvent one's career will be an important facet in keeping the workforce motivated and engaged. Increased opportunities for career breaks and flexible working patterns should be available to clinicians at all stages of their careers.

However, flexibility within paediatric careers can only be delivered in sufficiently resourced working environments, with opportunities and choices becoming more limited for those who work within systems that become stretched. Inadequate workforce planning and failure to expand healthcare professional numbers in line with population need poses a real threat to the delivery of flexibility for paediatricians as we look towards 2040.

## *Looking after each other*

Between 2011 and 2018, more than 56,000 people left the NHS, citing work-life balance as the reason. Consequences of burnout are widespread to individuals, patients and society, and can include problems with mental health, reduced quality of patient care, and reduced healthcare productivity.

Improving wellbeing in the workplace is not a one-size-fits-all exercise but involves many different approaches and initiatives. Defining individual wellbeing is a challenge and creating it is not a recipe that requires the same ingredients to make for all individuals. It is however clear from the literature that there are certainly overlapping, fundamental principles which are required for people to not just survive but thrive. For example, by truly tackling issues with equality and diversity, we will improve the wellbeing of large groups of paediatric doctors: with the support of frameworks and tools for those with disabilities and with understanding of inclusivity, we can promote inclusivity and wellbeing.

To make paediatrics sustainable, physical, mental and psychological sustenance is essential. Although a lot of this may not seem like rocket science, it's surprising how many of our members report it lacking from their working lives. In 2040, we'd like to see staff feeling able to take proper breaks to refuel on nice, healthy food, and rest and recharge. Managers, leaders and deaneries (or UK training bodies) should ringfence resources for wellbeing initiatives and consult with their staff on what they would like to see more of in their workplace.

### ***Knowledge, skills and experience***

For paediatricians at all stages of their career journey, we have identified four key areas for focus in the future: using technology, communication at scale, evolving clinical skills, and non-clinical skills development.

COVID-19 has already showed us a future where we will learn how to be telemedicine experts and how to triage patients remotely. UK paediatric training bodies need to keep abreast of technology development, and ensure paediatricians are adequately trained in virtual working and able to share those skills through virtual teaching.

In the future, paediatricians will need to continue to acquire clinical and non-clinical skills to look after acutely unwell children, children with complex medical conditions, children's mental health and safeguarding. We also expect they will need analyse and review these skills alongside using new technology - and making safe assessments and communicating effectively when using technology for remote consultations with families and other professionals.

With the potential of large data production, particularly through personalised devices and genetic testing and screening, departments should make sure they are giving their paediatricians adequate training in governance, data protection and sharing, and confidentiality, which will be crucial as technology and innovation develops further.

We should aim to be truly global paediatricians that are aware of global events and part of helping and creating change globally - whether that is supporting healthcare teaching or developing systems internationally, supporting development of knowledge about clinical conditions, or advocacy on climate change.

### ***Working together***

The last year (2020) has taught us so much about how we work and how we work together and doing so successfully has been more important than ever. When working together, we can better consider the whole child and make every contact count.

The COVID-19 pandemic has spearheaded a move to virtual meetings, surgeries, clinics and conferences. Much needed flexible platforms have been created, with enormous potential for virtual and home working, sharing practice and protocols, collaboration with far away colleagues and reducing stress through reduced commuting. In the future, we expect that collaborative working and training with other specialties (e.g. mental health and primary care) will be the norm, particularly working more closely with partners in the community to prevent unnecessary admission and referrals to hospital.

Visit our Paediatrics 2040 website for a full summary of our working lives work.  
<https://paediatrics2040.rcpch.ac.uk/our-evidence/working-lives>

## Voice matters

### What members of our RCPCH &Us network said...

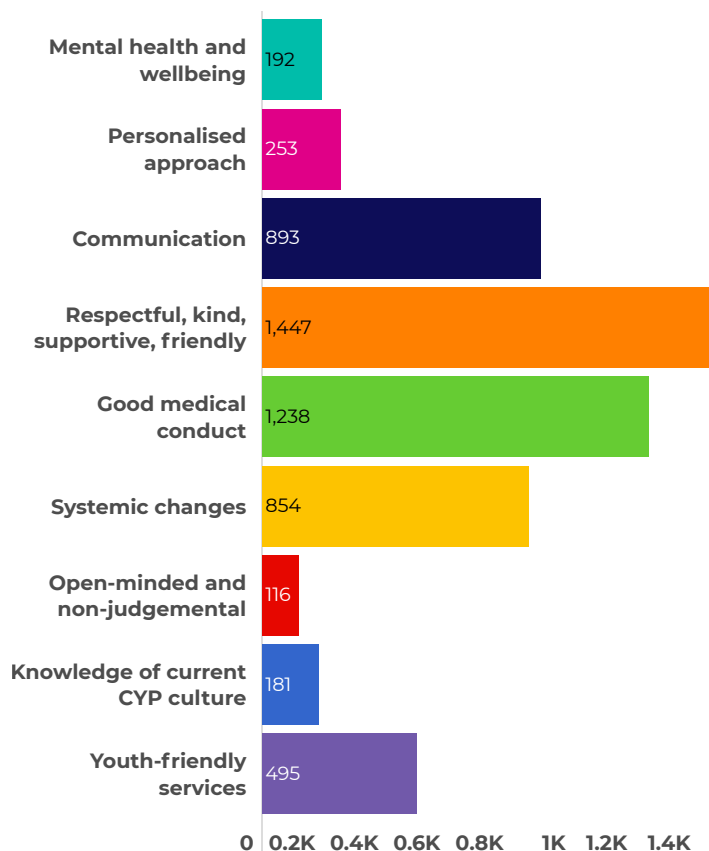


Figure 5: results from a series of consultations with children and young people asking the question “What knowledge, skills and attitudes do doctors need when working with children and young people?”.

### What our dedicated voice matters research says...

Children and young people’s voice is at the heart of everything we do at RCPCH. Guided by the United Nations Convention on the Rights of the Child, we support children and young people to have their voices heard in decisions that affect them (Article 12) and work with them to help shape services so they have the best healthcare possible (Article 24).

The [RCPCH &Us network](#) brings together children, young people up to the age of 25, their parents/carers and families to work with clinicians, decision makers and each other to educate, collaborate, engage and change to improve health services and child health outcomes.

To support voice across the Paediatrics 2040 programme, a mixed methods approach was developed, working with a diverse group of children, young people and parents/carers/advocates across the UK. Children and young people were involved across the four nations, from rural and urban locations, primary, secondary and tertiary care settings, schools, charities, local authority programmes, national and regional forums and more.

Around 900 children and young people have been involved, sharing thousands of ideas, experiences and hopes for continuing the good care they receive into the future, and working collaboratively to find solutions where there are areas for development.

From the quantitative analysis of over 3000 ideas, the top three areas were:

- Doctors and services who are respectful, kind, supportive and have a friendly approach.
- Doctors who demonstrate good medical conduct where children and young people feel listened to, understood and that their doctors are aware of their holistic needs, culture and experiences.
- Doctors and services who demonstrate flexible and adaptable communication approaches, that is responds to the age, situation and needs of the child or young person.

The qualitative analysis highlighted similar themes relating to communication and having a personalised approach, but also identified the need for true multi-disciplinary working which includes education, local retail businesses, employers, extended support networks, and how to address health inequalities as a collective rather than in silos.

Finally, the youth authors chose to focus on mental health, both for themselves and the staff that support them, and how doctors work with children and young people. They reviewed the data, held discussions in the nations and through a solution focused approach have developed infographics for each subject which provide the data, themes key learning points for the doctors and services of the future.

Visit our Paediatrics 2040 website for a full summary of our voice matters work.

<https://paediatrics2040.rcpch.ac.uk/voice-matters>

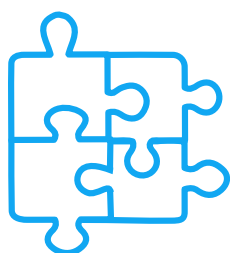


### 3. What we want to see

Through our two years of research, we've reached a number of conclusions across our four workstreams about what paediatric care might look like in 2040.

As we start to think about life beyond COVID-19, we are now at a pivotal moment to change how paediatrics will look for the better over the next 20 years. Ultimately, we want to see a healthier future for all children and young people in the UK and beyond.

In particular, we want to highlight three areas for focus in paediatrics and child health, to set things on course for a better future and to reach our vision.



#### Integration

We want to see existing data systems integrated (both within and between trusts/boards), so we don't have to invent new ones each time, and data collection is routinised.

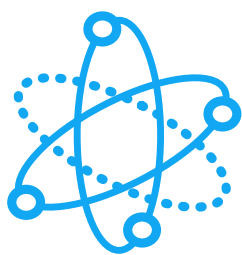
We want to see more training in paediatrics integrated into the training pathways of other specialities, especially our GP colleagues, with reciprocal opportunities for paediatric training also explored.

We want to see development of integrated care for children and young people at scale across the UK. This has the potential to dramatically reduce or even reverse our forecast increases in attendances, reducing strain in the system whilst improving outcomes for family and young people's experience of care.

We want to see research integrated at all levels of new paediatric care pathways in primary, secondary and tertiary care. COVID-19 has shown the importance of this, but we want to see this for all paediatric research in the future.

We want to see global integration of care to support the best clinical decisions. Technology means that doctors are able to work remotely, sharing knowledge, guidance and research in a multidisciplinary way and we want to see more of this.

We want to see significantly improved integration across physical and mental health, challenging management to enable working across professional and organisational boundaries, to provide the best possible care for children and young people. This is in response to our forecasts of future burden of disease expected in 2040, especially among adolescents.



## Innovation

We want to see a culture of research embedded across paediatrics, ensuring children and young people are prioritised and innovative practice is designed both with them and specifically for them.

We want to see more instances of collaborative, interdisciplinary research focused on paediatrics and child health. We noticed a lack of health economics work relating to child health outcomes, and we think this needs funding and prioritisation.

We want to see everyone contributing in creating an environment that will let innovation flourish. COVID-19 has demonstrated how change can happen in a short space of time, and we want to see that harnessed, with a willingness to adapt and take a patient-centred approach.

We want to see significant innovation and shift in the national approach to addressing the impact of global health issues impacting child health, including poverty and climate change.



## Inclusion

We want to see children, young people and families involved in the design, development and integration of different innovations and health technologies. Evidence points to co-production being an essential element of better delivery of care.

We want to see paediatricians and other paediatric professionals finding ever-closer ways of working together.

We want to see all paediatricians feeling like they are part of a cohesive team, with true inclusivity, attention to diversity and modern leadership. Inclusion of different working models and of multidisciplinary team members within paediatric teams will enable us to better support the populations we look after.

We want to see children and young people (CYP) adequately included in government spending. Without concerted action to reduce child poverty, our data forecasts that there will be further rapid increases in CYP emergency and outpatient activity over the next 20 years, with falling quality of care as a result.

## 4. What we will do next

Although the Paediatrics 2040 project will be closing in its current form, the conclusions from this project will feed into future RCPCH strategy and become embedded in College work. There are already a number of activities across the College that have been committed to which will continue to support our vision of a healthier future for children and young people.

### Supporting our members

- Through our policy and research teams, we will continue to work closely with our paediatric speciality groups, particularly in encouraging them to collect robust data on healthcare activity to ensure all areas of paediatrics are more visible in future planning.
- Through our cross-functional team of staff, we will continue to prioritise work on our equality, diversity and inclusion action plan.
- Through our training and curriculum teams, we will continue our work setting a vision and direction for the future of paediatric training through our Progress+ and Paediatrician of the Future work.
- Through our policy team, we will continue to support use of our Facing the Future standards for paediatric care, sharing best practice from around the UK for the benefit of paediatric teams.
- Through our quality improvement team, we will continue to support the sharing of practice and improvement around the UK to support future models of care.

### Advocating for children and young people

- Through our policy and research teams, we will continue to update our State of Child Health resource, collecting essential data about the health of children across the UK.
- Through our strategic projects team, we will shape our College work on climate change, including supporting members and advocating for children and young people.
- Through our media and campaigns team, we will continue to advocate for a healthier future for all children and young people at opportunities where we can have influence and impact.
- Through our public affairs and policy teams, we will continue to work with stakeholders to make sure children and young people remain firmly on the health policy agenda.
- Through our children and young people's engagement team, we will continue to promote the inclusion of children and young people's voice in decision making and the rights of every child to the best possible health.

# Acknowledgements

The Paediatrics 2040 project has been led by a dedicated project board, who have been crucial in shaping this work across the last two years.

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Visit our Paediatrics 2040 website for a full list of acknowledgements and contributors:

<https://paediatrics2040.rcpch.ac.uk/methodology/who-has-been-involved>

**Paediatrics 2040**

**Our vision for the future of paediatrics in the UK**  
Executive summary report

February 2021

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