



Securing a new
generation of child
health research leaders

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Children are not small adults.

Infants, children and young people need healthcare that is tailored to their needs. Their physiology and metabolism change as they grow and develop. This means a medication used in adults may be dangerous to infants and children; for example, aspirin should not be used in young children because of the risk of causing a rare but severe reaction called Reye's syndrome that can lead to damage to the liver and brain, and can be fatal.

The biology of diseases also differs between children and adults, so for example, a diabetes or cancer medication for adults may not work in children.

The same considerations apply to preventive measures like immunisation and optimal nutrition, and to the development of biomedical devices, limb prostheses, and health technologies.

Research is needed to develop medicines, vaccines, devices and technologies focused specifically on infants, children, and young people, and to push forward the frontiers of medical science and patient care; this work saves lives.

But that's not all.

Early-life exposures impact on adult health and the health of succeeding generations, contributing to the prevalence of diverse conditions such as obesity, cardiovascular disease, diabetes, vascular dementia and some cancers.

There has been an inexorable rise around the world in adults with these chronic, debilitating, non-communicable diseases that have their origins in early development. These are crippling health economies and systems, and adversely affecting health and economic wellbeing globally.

Solutions to these conditions are increasingly recognised to lie in early years' research in order that frailty and infirmity in adult life and old age can be averted.

Child health research is important to us all and to the health and economic prosperity of nations.



In the UK, public sector and industry funding for child health research is limited. Charitable support is generous, but the total size of the pie is small.

Scant funding for child health research is not confined to the UK; the same is reported globally, including in the US, Canada and Australia.

The problems are more severe in emerging economies. There is near total reliance on external support, not just for research funding, but also for know-how.

But the real problem is a shortage of child health research leaders, people with vision, training, ability and drive to take on the challenge of advancing preventive health and healthcare for infants, children and young people.





In 2012 the RCPCH published a report 'Turning the Tide' which discovered the following critical facts:



Less than £10 per child

- the individual equivalent of public and third sector funding directed at children's research in the UK (compared with £50 per adult)



Under 5%

- the amount of registered studies that involve children
- the amount of neonatal medications that have been evaluated in newborns
- the proportion of public funding going to children's research in the UK
- the number of clinical academic paediatricians as a proportion of the total consultant-level workforce



20 year low

- the proportion of staff in senior academic positions has fallen to less than 5% of the total consultant-led paediatric work force



Biomedical Research Centres

- There is only one in the UK exclusively focused upon child health

Why child health research needs leaders

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Clinical academics are healthcare professionals whose careers combine clinical practice and research. They work across universities and the NHS. There are also non-clinical researchers, working in basic science to understand the mechanisms of health and disease, and developing medicines, vaccines, devices, and technologies.

There are worryingly few paediatric clinical academics. In the UK the number has declined by 12% in the last decade.

Today there are just 70 professors of paediatrics and child health, and just under 100 readers and senior lecturers. This is not enough to lead the challenge of improving the life-long health and wellbeing of a quarter of the population, 18 million infants, children and young people.

Over the coming decade, the number of leaders in child health research will halve if there is no reversal of current trends.

A large number of young people start out on a research career, but too few stay the course. A major problem is that there are far too few positions available at post-doctoral level when the number falls sharply. This is a crucial stage in career development, when a gifted young person must transition to become an independent research leader, able to secure his or her own research funding, build a research team, and form collaborations with other research groups and organisations.

We want to break this bottleneck, and provide opportunity in a supportive environment for talented young researchers, whether clinical or non-clinical, based in the UK or overseas, to become independent research leaders.



The RCPCH Child Health Research Fellowship Fund

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Our mission as a Royal College is to transform child health through knowledge, innovation and expertise.

Our goal is a healthier future for infants, children and young people around the world.

Our primary roles have been to deliver education and training for paediatricians, advocate for the health and wellbeing of infants, children and young people, and their right to the highest standards of care and services, and improve the scientific basis of healthcare and the evidence underpinning treatments and services through rigorous research, development, and evaluation.

The evidence is clear: there is an urgent need to grow capacity in child health research.

We have established a Child Health Research Fellowship Fund to support a global increase in clinical and non-clinical post-doctoral research positions. We aim to identify and nurture a new generation of child health research leaders.

The purpose of the RCPCH Children's Research Fellowship Fund is to reverse the decline in child health researchers. This will deliver benefits to the health of infants, children and young people. Their health will define their wellbeing throughout life.

Children deserve healthcare that serves their needs, and preventive measures that safeguard their wellbeing. This moral argument for good child health is matched by clear evidence that health in early life leads to a healthy adult population and economic prosperity for nations.

We are committed to growing the leadership that is necessary for better health and wellbeing for infants, children and young people the world over.

In our 21st year, our mission will be to continue growing capacity for child health research.



The dawn of the 21st century is a time of hugely exciting biomedical advance and insight.

- Genome sequencing is now fast and costs less every day
- Dynamic non-invasive imaging techniques can probe the human body to cellular level
- Machine learning techniques and super-computing facilities are shining new light into previously hidden areas
- Research is peer-reviewed and regulated so that participant safety is foremost
- There is recognition that non-evidenced based care can be dangerous
- Above all, children and young people want to benefit from research, and they and their families want to be heard about their wish to be involved

These powerful new technologies and insights provide opportunity to involve infants, children and young people in research as never before.

New areas such as epigenetics are revealing the biological mechanisms that lead from early life exposures - maltreatment, poor nutrition, environmental pollutants, toxins, emotional deprivation - to the permanent programming of organ systems that will shape an individual's risk of health and disease through life, and that of the next generation.

The UK can be justifiably proud of a unique platform to integrate clinical research and patient care, the combination of a clearly defined clinical academic training pathway and the organisational structure of the largest, most successful, universal healthcare system in the world, the NHS.

For talented researchers these are opportunities to be seized to accelerate discovery and translation of new treatments and technologies into practice.

Reaping the rewards of these opportunities and strengths requires growing and nurturing talent, and building a new generation of child health research leaders.



Help us advance child health through research

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We have made progress; with your help we can make more.

In a few short years, we have made excellent progress in our goal of strengthening child health research:

In 2013

- we introduced research skills training into our curriculum and made sure all paediatric trainees are appraised in these areas
- we published a guide to Training in Research for the Benefit of Children

In 2015

- we launched the UK Child Health Research Collaboration - a forum for funders to partner to support research projects, programmes, and PhD studentships
- we formed our own Research Strategy Board

In 2016

- we launched the ground breaking Children's Research Charter giving voice to how parents, children and young people want to be involved in research
- we created a research funding database providing information on the RCPCH website for researchers

In 2017

- we established the Child Health Research Fellowship Fund

We welcome partners to help us develop the Child Health Research Fellowship Fund

We want to create a new generation of global child health research leaders to push forward the frontiers of medicine and preventive health.

They need experience, skills, and time to develop national and international collaborations, grow their research teams, and apply in open competition for research funding. We will support their salaries; they will bring talent, vision, a track-record of research achievement, and evidence of institutional support.



Aims and objectives of the Child Health Research Fellowship Fund

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Our aims are to

- Secure a new generation of child health research leaders in the UK and abroad
- Strengthen excellence in child health research
- Catalyse collaboration between child health research leaders around the world, and their institutions

Our objectives for this first phase are to fund post-doctoral positions at the following levels

- Clinical Lecturer level for individuals still in clinical training (maximum three years)
- Career Development Fellowships for non-clinical researchers (maximum three years)
- International Child Health Research Fellowships for researchers based overseas (maximum three years)
- Clinician Scientist level for more experienced clinical and non-clinical researchers who have the necessary track-record of research achievement and, in the case of clinicians, have been awarded a UK Certificate of Completion of Clinical Training or overseas equivalent (maximum five years)



A £10 million fundraising campaign

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We invite you to be a part of this vision that will influence the future of child and population health worldwide.

We aim to raise £10 million over the next five years to ensure that the next 50 years represents a period of exponential advance in safeguarding child health and wellbeing, and treating childhood disease.

Ensuring a strong community of research leaders is critical for future success

- Each three-year RCPCH Clinical Lectureship and Career Development Fellowship will cost around £240,000 (per annum £60,000 in salary support, £15,000 towards research consumables, equipment or software and travel, £5,000 administrative support)
- Each five-year Clinician Scientist award will cost around £500,000

We believe we have both obligation and duty to sustain a vibrant child health research community, and secure the child health research leaders of tomorrow to drive advances in child health.



Could you be a Founding Friend of the Child Health Research Fellowship Fund?

One way of making this a reality is to find 76 Fund Founders who will commit to a better future.

No. of donors	Annual donation	Five year commitment	Total	Cumulative giving
1	200,000	1,000,000	1,000,000	1,000,000
5	100,000	500,000	2,500,000	3,500,000
10	50,000	250,000	2,500,000	6,000,000
20	20,000	100,000	2,000,000	8,000,000
40	10,000	50,000	2,000,000	10,000,000
76 donors				10,000,000

In addition to receiving personal donations, corporate gifts or grants, we welcome your experience and knowledge to help us drive the future development of the Fund.

Founding Friends may be able to provide insight into other individuals, grant makers or corporate partners who would be interested in helping us. You may wish to take a more active role in our work by considering joining the Fund Development Board or nominating others that might be interested.

We aim to engage a broad base of support to make our vision for a better future for child health a reality.

We want to give young talent the best chance of success. We are flexible in our approach and are very willing to recognise the important contributions our donors may make by considering the creation of named awards.

Thank you for supporting our vision.

For further information please contact:
Jonathan Miall, Director of Development
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How the Research Fellowships will work

- Applications will be invited by national advertisement
- All applications will receive independent peer-review and will be awarded in open competition following interview
- Medically qualified appointees may spend a maximum of 30% of time in clinical work.
- Up to two years of a three-year award to an overseas applicant may be spent in the UK.
- The award will primarily support the appointee's salary, with a small contribution towards consumables, equipment, software and travel
- The award will not provide institutional overheads

Eligibility

- Applicants may hold a medical qualification or be non-clinical
- Applicants must have been awarded a PhD
- Applicants will have a track record of child health research experience and outputs commensurate with the level of award sought
- Applicants will be required to demonstrate that they have the support of a senior supervising academic who holds a tenured position with a university or eligible publicly funded research organisation or government research institute; overseas applicants will require a supervisor in the UK and their home institution; supervisors may not be based in private or commercial organisations

- Applicants will be required to provide a statement from the host institution/s confirming that the UK-based supervisor and their institution agree to administer the grant, and support the applicant
- Applicants must have a contract of employment with an eligible university or research institute and if applicable, NHS Trust, which spans the duration of the award

Assessment criteria will include

- Details of the proposed research to be undertaken during the fellowship and how this will be funded
- The feasibility of the proposed research
- The quality of the science
- The clarity of the proposal
- The potential for benefit to the health and well-being of infants, children or young people
- How the research will support the training and development of the applicant
- The nature of the institutional support and the quality of the training to be received
- The track record of the supervisors
- Evidence that the award will lead to long-term collaborations beyond the duration of the award

The Children's Research Fellowship Fund will be held as a distinct charity within the RCPCH.

The Fund will be administered by a designated Board with an independent Chair.

The Medical Research Council (MRC) has agreed, in principle, to consider joint funding any fellowships approved by the Children's Research Fellowship Fund through their career development initiatives. They have also agreed to jointly run the appointment process for Clinical Lectureships and Child Health Research Fellowships using its assessment and appointment procedures.



If we can achieve the funding we need, we can ‘turn the tide’ and secure a new generation of child health research leaders — talented, visionary young people who will advance the wellbeing of infants, children and young people, and their life-long health.

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