



College Strategy 2021-24

In conversation with Emily Arkell, Director of Quality and Improvement and Professor Paul Dimitri, Vice President for Science and Research Child health research matters in medicine – part 1 of 2

Emily Arkell 00:05

Welcome to the RCPCH podcast where we examine issues that matter to paediatricians and the communities they serve. My name is Emily Markel, and I'm the Director for Research and Quality Improvement at the college, and I lead the team that supports all aspects of research for our members. We've started a new series of podcasts where we sit down with college senior leaders, and fellow members to bring you four episodes that take a deep dive into our college strategy from 2021 to 2024. In this episode, we're talking with Professor Paul Demetri, who's the Vice President for Science and Research. Professor Demetri is also professor of Child Health and a consultant in paediatric endocrinology and the Director of Research and Innovation at Sheffield children's NHS Foundation Trust. Welcome Professor Demetri.

Prof Paul Dimitri 00:51

Thanks very much, Emily, thank you for inviting me to speak today. It's great to be here.

Emily Arkell 00:54

So we've got some questions that we want to ask you. And we're going to start off with the state of Child Health and research. And what I'd like to ask you first of all, is how would you describe the current state of Child Health Research?

Prof Paul Dimitri 01:09

Thanks very much, Emily. It's a really interesting question. And it's fair to see there is a high degree of variability in child health research in the UK at the moment. There is some

fantastic research taking place in child health in the UK, and that's in clinical as well as basic science translational and applied health and technology based research. So the UK has a strong reputation in the fields of paediatric research, whose internationally renowned research centres of excellence, and leads the way in some areas of discovery science. And the UK is also the go to place for a lot of drug discovery and pharmaceutical led research. In addition, we have an international track record in patient and public involvement in research. And we also ensure that the voice of children and young people is fundamental to all the research we do and that's, that's really important that we are inclusive of the voice of children, young people to make sure that the research that we do, works for them, and fits with their needs. But there are there are some significant challenges as well. And there's much current excellence in UK child health research, but this is predominantly in biomedical fields, focusing on molecules and rare diseases. That was such a hugely important but by no means sufficient, and there are the intractable complex issues such as childhood obesity, drug, adolescent mental health, safeguarding and learning disability that have blighted the UK for decades, but they remain less studied. And not only do they have significant impact on the health of children, young people, but the strong evidence that these conditions track into adult life, and may be more amenable to prevention and treatment at younger ages. There's also a mismatch between current healthcare utilisation and research spend 24% of the population in England is under 20 years of age, but yet they consume 11% of the NHS budget. And in addition to that, children with chronic disease and disability, and children with mental health problems account for a substantial proportion of the social care and education budgets, around 50% of children are recognised to have special educational needs. And despite this, the UK health research analysis analysis in 2018, showed the over over five year period UK research spend was only in the five years was only 5%. And that turning that around that 95% of UK research, the UK research budget is for a lot of research. So there's a real mismatch between the number of children, young people in the population, their use of health care and the research spend in the UK at the moment. There's also another problem and that that is that in the last decade, there's been a reduction in the number of clinical academic paediatrician. Does you know, a recent recent RCPCH survey showed that only five and a half percent of consultants had an academic appointment. And 80% of paediatric consultants have no research associate professional activities. And that's really concerning if we're going to improve research in the future. And since 2000, so we're talking over the 20 year period or so. The number of university employed clinical academics and Child Health has risen has reduced by around 50%. And the child's health academic workforce at the moment is top heavy, there are fewer senior lecturers now than professors. So there is a real problem now with clinical academic training to get those that we need to do the appropriate clinical paediatric

research over in within our own profession. And then finally, just to say that we must ensure that trainees and clinical academic posts are competitive at a senior level under the whole trainee paediatric workforce, get some experience and research that. So essentially our workforce is research ready for the future, to take on new research projects, perhaps in some of those intractable areas of paediatric research that I've already mentioned.

Emily Arkell 05:18

That's really helpful outlining all of those issues and some of the concerns that we've got about investment in child health research. So just moving us on what impact does that have for the future of the health of the nation?

Prof Paul Dimitri 05:30

Now, that's, that's a hugely important question, Emily. And I think the answer lies in the size of the population and the need to sustain health in the future. So many people have heard me say this before, but children and young people make up nearly 25% of the population, there are 100% of the future. What happens to them in early life determines what happens to them in the future. What happens to their health and health care in adulthood? And children, young people are the productive workers of the next 40 years, and they are going to be the parents of the following generation. And so those intractable issues in paediatrics that I've talked about in your previous question, so those such as obesity, mental health, disability, and safeguarding issues received lifting attention at the moment in health research, but they have major costs in childhood. So approximately 20% of children in fact, 27% of those in the most deprived areas are at our base at the age of 10 to 11 years. Yet the and the annual cost of obesity to the NHS is 4.2 billion pounds with wider costs estimated at 27 billion pounds to significant impact on NHS and the NHS services. To give you another example, the annual cost of safeguarding is around 2.3 6 billion pounds. And the annual cost of children's social care is around 10 billion pounds. Then to think about mental health, so serious mental health issues affect 10% of 11 year old children and just emphasise that get 10%. One in 10 children, two in a class of 30. There are already three children potentially with serious mental health issues. And that taken across the whole children, young person population that's around about 16% of of young people with mental health issues. And we are seeing an increase in the number of children young people admitted to specialist inpatient units as well. So each of these leads to high ongoing costs to the states across the the lives of children, young people, but also in adult life as well. So that's just one area of significant impact. Then we start to think about health inequalities. And this clearly is a significant focus for the RCPCH that health inequalities underpin all the issues, these issues and the situation is getting worse in the current economic climate. inequalities in health

outcomes have widened from 2017 to 2020. Infant mortality in England has risen particularly for those living in the poorest areas, and inequalities in obesity in England at around about 11 years of age have also widened as well. But when we consider that the first two principles laid out in the Marmot review in 2010, but to give every child the best start in life, and that's hugely important, secondly, to enable children and young people and adults to maximise their capabilities and have control over their lives. Yet a decade later, the 2020 Marmot report that revisited this. This was the report entitled health equity in England, the Marmot review, 10 years on, highlighted that the current situation has worsened. Despite the fact that this was five up over a decade ago, people can expect to spend more of their lives in poor health improvements, the life expectancy have stalled. And in some areas, these have declined. And the health gap is growing between wealthy and deprived areas. And this provides a compelling argument to focus on early years research and intervention to improve population health. So again, we can see from that health inequality side, the impact on the future health of the nation. So it's hugely important now that we consider supporting an increase in the capacity in the UK paediatric workforce and focus on increasing the capability to deal with these intractable issues of Paediatrics that may go some way to address the massive NHS spend in these areas and the inequalities that exist. And so by supporting research, this is going to be hugely important in closing that health inequalities Gulf and improving the overall health of the nation. Okay, thanks,

Emily Arkell 09:49

Paul. There's some really eye watering figures there about the cost of obesity and safeguarding to to the to the country each year. And also I think some of the things you said about health inequalities will really resonate with people listening to this, particularly as we're going through the cost of living crisis and how that's going to impact on families and children. So how have we felt found ourselves in this situation?

Prof Paul Dimitri 10:09

Yeah, it's an interesting question. And we, we found ourselves in this situation, I think we've we've known about this for some these issues for some time. And these have been highlighted in previous RCPCH reports. However, in healthcare, there are so many competing factors that draw our attention away from these to what's happening here now, but I think it's fair to say that the pandemic has really drawn our attention back to these areas and has really driven the need to focus on I think, it's fair to say the workforce demands have been that for many trainees, they are simply called pull to the coalface at the moment don't really have a chance to experience or undertake research. And, and for some of them, they'll get very limited research experience due during their training. In

terms of reports, in the past cited bounties, to research involvement of include balancing research and clinical duties. That's particularly with with ongoing staff absence, and again, the pandemic exacerbated that. There is a need for support in terms of mentoring and supervision. And then there is also a challenge in terms of getting that support to apply for and undertake high quality research. I think going back to that issue about clinical duties, there is real difficulty in aligning research with rotating, clinical placement, placement. And then there's the burden of regulation. So you know, the paperwork and application that that needs to take place in relation to clinical studies. And I think that burden of regulation and the the governance that has increased exponentially over the last decade or two, has really meant that people have avoided research because they just don't have time to do. Research funding, as mentioned earlier, is also challenging. And, you know, we see, as I mentioned earlier, only 5% of research spend is on paediatric research. And I think we need to understand why this is the case. Is it that other clinical areas have been prioritised? Or is it because applications to funders are not deemed to be competitive, or to a high enough standard compared to those submitted by our colleagues working in adult health care. So if it's the latter of then we must ensure that our UK paediatric workforce who wish to lead and research in a competitive position to do so. And we also need to work with funders to ensure that there is much more of a focus on paediatric research by which funding is is referred ring fenced in those much needed areas described those those intractable areas that have blighted Paediatrics and Child Health for so long. also suspect that applications for paediatric research are dwarfed by the applications relating to health care in areas such as cancer, heart disease, stroke, and dementia. And these are, of course, much needed areas of focus and affect a large proportion of the population. And and so paediatric research applications simply cannot cross the finish line. However, and I raised the point here, that's hugely important. Many of those areas that do receive attention, possibly more so than the applications that our colleagues in paediatrics submit, many of those problems have their origins in childhood. And we need to think about that. And that connects with health inequalities, and the issues I've spoken about in the previous questions that actually those health inequalities lead to some of those problems that we're seeing in adulthood. And therefore, we need to tackle them much early on. Things like heart disease, stroke, and dementia, and to some degree cancer have their origins in childhood. Therefore, rather than deal with the problems in adulthood, we need to deal with prevention in childhood, that piece about sustaining health, rather than focusing on disease. And so, you know, when we think about those were the tough nuts to crack. I mean, these are this is not easy around prevention, about health inequalities. And historically, we've not focused enough research, we've not focused enough research attention in these areas. And we've also not had the research workforce to do this. And in some respects, these areas are not common

to paediatrics. We haven't focused on those intractable areas. Therefore, we haven't developed to work. But we must ensure that we lead the way in paediatrics to ensure that the work we do towards these solutions start early on in childhood rather than dealing with them or the consequences them later on in adulthood.

Emily Arkell 14:47

Okay, thanks, Paul. So there's some real challenges and complexities to all of this. So if we look forward to the solutions, what do you think needs to happen to improve this? And how can investment in child health risk should be encouraged.

Prof Paul Dimitri 15:01

Yeah, it's a good question and a difficult question, Emily. But I think the best way for me to answer this is possibly in four different areas, we need to think about it in terms of time, and focus, funding and our commitment. So just taking that first one thinking about it in time in terms of time, we need to ensure that UK paediatricians have time to develop research proposals and deliver research and to gain experience in in research as well. And, and it goes back to that issue about demands on our time being enormous. That, you know, workforce pressures are huge at the moment. But ultimately, we need to work towards a seismic shift in our workforce to ensure that we allow time for research that will ultimately improve the lives of the babies, the children, the young people that we look after. And so we can allow research to take place in third show time anymore, we have seen remarkable improvements in children's health care as a result of excellent research. So if we make time for that research, and for those researchers, we will see an exponential rise in those improvements. We also need to make sure that research funders recognise the importance of child health and child health research, in part as a means of improving the long term health and health care of our population. And that focus is required on child health, like it never has been before, particularly when we go back to that issue of health inequalities. So that that comes back to the second of those areas about focus. And then we move on to the third, which is funding. And all of this, of course, requires funding. Funding needs to be allocated or ring fenced to ensure that there is a true commitment to supporting the right areas of research, to deal with issues that are of national importance and reach the right communities, those communities that are most in need, are most at most risk of poor health. So we don't repeat this cycle over and over again, through generations where poor health outcomes lead to subsequent poor health outcomes in children, young people, and so on as they get older. So we have to break that cycle. And then, coming to this commitment, the commitment is about ensuring that a short term view is not taken. There has to be a recognition that if we focus on the right areas of

research to improve the health and health care of children, that that we are committed to ongoing support to increase research capacity, and also the capability in these areas and to ensure that there is a multi professional and multi sectoral commitment to do this, that it's not just UK paediatricians, but it's other areas of healthcare, such as public health, social care, research, psychiatry, mental health, commissioning, education, and so on and so forth.

Emily Arkell

My conversation with Doctor Dimitri continues next week in part two of our episode when we discuss what improvements need to be made to support more research and paediatrics, additional research projects, and how Members can get involved in research.