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 2 of 2

Emily Arkell
Welcome back to episode four of our college strategy podcast. I'm Emily Arkell, the director for research and quality improvement at the college. We rejoin my conversation with Professor Paul Dimitri discussing the importance of child health research and what the college is doing about it.

Emily Arkell 17:54
Okay, thanks. So you've really clearly articulated what needs to happen. But are there any bright spots on the horizon at the moment?

Prof Paul Dimitri 18:01
Well, you know, it's fair to say I always try and look for opportunities and keep an optimistic view to ensure that we can achieve a lot and have a lot of impact. So perhaps, in my previous questions, I've made it sound a bit more like doom and gloom. But, you know, as I said previously, I think there's already a lot of excellent research in paediatrics already taking place in the UK, and that we must ensure that we publicise this well and recognise those who are making a significant impact on the lives of children and young people through research.

So there is already an optimistic and optimistic view. And we're currently working with the infrastructure leads within NIHR towards solutions to increase what the research workforce capacity and to facilitate multi sectoral research with a critical mass of researchers for multiple different professions, including those I mentioned earlier, paediatric and child health, education, public health, social care, commissioning psychiatry, and of course, allied health care professionals, they are going to be hugely important in the research capacity and capability. It's

fair to say that there is unanimous recognition from the NIHR that we need to focus on children to reduce health inequalities and deal with some of those most challenging areas of child health. And so we're aiming to increase the capability of delivering research in those intractable areas of Paediatrics mentioned by working with the NIHR infrastructure leads and other stakeholders and ensure that this is not a one hit focus.

But there is sustainability in this critical mass of researchers and research in these intractable areas. In terms of thinking of other areas where there are bright spots on the horizon across the UK, we're also leading the way in med tech and digital developments and there are some amazing technologies been delivered through research that will revolutionise patient care and the way in which our UK paediatricians will will deliver paediatric health care. So I've been working with is one of the major national funding bodies Innovate UK who are part of the UK research infrastructure also known as Ukri, who have adopted child health as one of their leading areas of strategic focus and that's a massive step forward. And given the fantastic advances in technology, I believe the future is bright, direct UK Paediatrics and there are some great opportunities for UK paediatricians to think about new developments, whether current unmet needs and problems.

I'm also working towards ensuring that all UK paediatric trainees have some exposure to research, and they have access to resources during the training, and working with the Vice President for training and education to signpost trainees resources in NIHR, learn and NIHL learn is a rich environment and research resources to facilitate basic and in depth learning and research. And it's access accessible to all doctors and actually all healthcare professionals in the UK. So it's not specific to NIHR. It's available to all working in, in the NHS, but also working towards research questions been included in the Status assessment. And I'm working with the RCPCH trainees network and the NIHR Children's National Training leads to ensure that we can offer research experience and trainees and training to all trainees.

So there are many bright spots on the horizon, Emily, and I think we need to harness opportunity, as well as looking at what we are doing in UK paediatrics of UK paediatric research at the moment to celebrate what's happened already, and to use that as a springboard for work in the future.

Emily Arkell 21:36
Thanks, Paul, that was a really interesting and fascinating talk through the state of child health research in the UK. I'm going to move on now to talk a little bit more about what the college does in in the area of research. So what did What work does the college do in science and research at the moment?

Prof Paul Dimitri 21:59
Thanks. I believe that's a really important question is the research component, which we've spoken about in other equations is only part of what the RCPCH is focused on. Just give some other examples were commissioned by the Health Care Quality Improvement partnership on each kit to deliver national audits to drive quality improvement across units nationally, currently in three key areas. So those are diabetes, neonates and epilepsy.

These are hugely important pieces of work and they are led by teams of project boards that include paediatricians, lay members, and members of our audit and quality improvement team at the RCPCH. And importantly, the outputs of that work is providing benchmarking and comparison of units across the UK to drive improvement to ensure that the UK offers the best and equitable health care for babies, children, young people. It's also part of the work that we do overall in terms of quality improvement in areas such as safeguarding children's mental health and health inequalities. And I'd really recommend that our members visit Qi sent the QI central portal at the RCPCH to find out what we're doing, and to learn about the resources available to them. Another example is the work that we do with a British paediatric surveillance unit team or the ppsu.

And as our members know, this is a world leading centre for rare paediatric disease surveillance, and enables doctors and researchers to investigate how many children in the UK and the Republic of Ireland that are affected by particular rare diseases, conditions, or treatment within within each year. And again, I would encourage members to input the data into the B ppsu. Surveillance that comes out every month to make sure that we get rich data to be able to gain further understanding. And the last few years we've we've also introduced a number of awards and fellowships to recognise outstanding achievements and excellence in research and to support new research in paediatrics, so those include awards such as the James Spence Medal, the BPS us, Sir Peter decide research bursary, the Dr. Simon Newell early independent researcher award, the Dr. Michael Blake, our Memorial Prize, and the labour award, or the best scientific paper in paediatrics, also recently, and I helped introduce this was the RCPCH NIHR paediatric involvement and engagement in research award, which celebrates team work in NIHR research.

In terms of fellowships to support research, there's the RCPCH, a new life Clinical Research Fellowship Award, and the RCPCH Medical Research Council, clinical research training fellowship. So we've also been rapidly responsive to support guidance when acute national issues arise, such as, quote, The COVID 19 pandemic and the recent issue that our members will be aware of acute hepatitis

and it's These times we've worked together with other national stakeholders and experts in the field at speed and I can't emphasise that enough the speed to ensure that we support UK paediatricians and paediatric subspecialties with guidance to ensure that the best but also equity of care exists across the UK in these particular areas.

And then just a few other final areas, were doing a lot of work to increase the digital capabilities of the RCPCH. So we've recently appointed a chief digital officer who will be leading a team on a number of different projects that will enhance the digital capacity and capability of the RCPCH and to deliver on a number of new digital resources for UK paediatrician. And then also to mention the ongoing work with the academic toolkit that was originally developed by my predecessor, Mr. Nick Bishop, sport trainees wishing to pursue academic careers. There are lots of other areas that we're working on, but it's just really difficult to cover those in this podcast. But I would encourage members to visit our website to find out more and to learn about what we do in science and research at the RCPCH.

Emily Arkell 26:10
Wow, there is a lot going on. Thank you for trying to cover that in such a short period of time. So practically, what can where can pay tuition is going to participate in research? Yeah, so

Prof Paul Dimitri 26:21
that's a great question, Emily, and probably one that is, again, is very difficult to cover in this podcast. But you know, I look at this in terms of almost like layer. So I will say that there are those that just want to participate in research, those that want to lead on research projects, and those that want to develop their own research either at a local, regional national level. So there are opportunities locally to get involved in in research projects.

So to give you an example, NIHR put out expressions of interest in different areas for UK paediatricians and paediatric sub specialists to apply or to put in an expression of interest to become a principal investigator in those areas of research. So you know, that that gives them the opportunity to lead locally on research. There's, there's also the opportunity to do this in terms of becoming a chief investigator on a project at a national level. And again, that those opportunities exist through NIHR. And then there's leading on your own research project as well. So it's about writing research protocols, and submitting those for local regional national funding.

And, you know, this is where I go back to this element of time, it's important that we give UK paediatricians that wish to do that the time to be able to develop those protocols to be locally, regionally or nationally competitive. And then there's other some other ways in which this can be done. So there's fellowships so this tends to be focus towards trainees but consultants and other UK paediatricians can can do this as well. So there are fellowships and a number of different bodies such as NIHR, MRC and wellcome but also some of the major charities as well, such as Diabetes UK, and versus arthritis. And then there's also the associate pa scheme, which is an NIHR scheme that's been set up to support research within a in an area within NIHR by allowing the chief investigators to apply for associate pa status, and that's been ratified by the RCPCH.

And then what they can do as chief investigators can do and bring on trainees or allied healthcare professionals to undergo six months of experience within those projects alongside having to complete modules within NIHR learn that will give them a taster of, of paediatric research. Thinking about other areas of paediatric research and this technology based research, so funding comes from organisations such as the Small Business Research Initiative, Innovate UK, and charities and again NIHR through their invention and innovation scheme. There is basic and translational research. So there are funding bodies like the E PSRC, MRC and wellcome the support research in those areas. And then, you know, there's lots of other different funding bodies that I would recommend that that our UK paediatricians look at, but actually, some of it is just about finding out how you get into this.

And I would encourage our members to speak with two other researchers that have experienced in this field to speak to their r&d departments that I more often than not very helpful in supporting research and researchers. And also there may be some regional support such as the NIHR regional design service, and then trainees I would also encourage them to come along to our trainees research meeting, which usually takes place in October. That's supported by the RCPCH and NIHR. And the plan is for this year's theme, will be to support trainees in Getting into research how they get involved. So that very much aligns with with your question about how are UK paediatricians and paediatric trainees can get involved.

Emily Arkell 30:10
Thanks, Paul. So my next question neatly dovetails with what you've just finished saying that. I'd be interested to hear a bit more about you. And how did you start out in recently? That's

Prof Paul Dimitri 30:19
an interesting question and probably probably a good one that's that nonimmune amenable to a short podcast, but just to give you a flavour of how I started out, so I'm a I'm a paediatric endocrinologist. And actually, when I went into paediatric, endocrine, or wanting to go into paediatric endocrinology, there was a requirement that I needed to get some research experience. Now I was already interested in research, but actually that encouraged me to, to undertake a PhD, and I did this in the field of endocrinology and metabolic bone. And it was an enormously valuable experience. And actually, you know, that that PhD, and my experience with researchers has really been been the foundation the springboard to get into a number of different areas of research.

And, and I would strongly recommend trainees to do research. And if they have the opportunity of research degree, either an MD or a PhD, I've really valued that type of, of getting getting, getting experience in research. The other the other area, just sort of highlight is is research leadership, because actually, there's doing research that is partaking in research or leading on research. And then there is been a Research Leader. And actually, some time ago now it's, it's pretty much a decade ago now, I was appointed as Director of Research and Innovation at Sheffield Children's Hospital. And that was a fantastic introduction into research leadership. And what that did was, it gave me the experience in the field of research leadership, but it also gave me the opportunity start looking at other opportunities at a regional national level. So again, it was a fantastic foundation for me to get into others other areas of research leadership that I'm currently in, no.

Emily Arkell 32:11
So you're fantastically busy, with lots of different pieces of work and projects. But what research are you doing right now at the moment.

Prof Paul Dimitri 32:19
So let me divide that into probably two areas. And again, for the sake of brevity, just to sort of give you some highlights. So in terms of the research I do at the moment, it's actually, it's come from my interest in subsequently me developing infrastructure in child health technology research. So I lead on a number of different projects that are funded regionally and nationally, to develop devices and digital platforms to support different areas of child health. And that has really come from me setting up research infrastructure, which takes an enormous amount of my time. But some years ago, I set up the Teach network.

So that's technology, innovation, transforming child health, which started in 2014, by me, working with colleagues across the country, to set up a network that would support the development, evaluation and adoption of child health technology. Knowing that there's a, there was a real need there that we couldn't rely on repurposing technology from adult health care that we had to make sure that digital platform devices and data and data analysis was very much Paediatrics and Child Health specific. So as I say, I've got a lot of a number of different grants in those areas. I'm also the NIHR clinical research National Children's Specialty, which, again, I was appointed to some years ago, but has been enormously helpful in bringing together the work of the RCPCH and the NIHR. In Child Health Research. Just going back to the infrastructure part for a minute in terms of child health technology.

I received funding a few years ago off the back of the Teach network to with for infrastructure funding to expand the network and the research focus on child health technology. So I lead one of the 11 med tech or NIHR, med tech and in vitro diagnostic cooperatives, of which we host in Sheffield, the only paediatric med tech and in vitro diagnostic optiv called NIHL submited, which is the Johnson young young people med tech tip and we do technology, childhood technology research in a number of different areas. We've got seven key opinion leaders in those areas, and different technology foci in in those specific areas. So you know, so there's research leadership, leading and developing research infrastructure, and also the research grants they I lead on and collaborating as well. So I'd love to be able to speak about all of those in much more detail but unfortunately time against this, but, as you say, busy, but enormously important areas of paediatric and child health with a desire to the one and make improvements and advance Paediatrics and Child Health and Health Care.

Emily Arkell 35:14
Thanks, Paul, my final question to you is, why is being vice president of science and research important to you?

Prof Paul Dimitri 35:21
So thanks, Emily. That's a great question. And I think I could probably n maybe just two simple statements. It the greatest advances in science come from research and what we do in research and our other scientific endeavours makes a difference, a huge difference to the health and healthcare and lives of the children and young people will look after.

So to do this, we need to ensure that UK paediatricians, including our trainees, have the best opportunities to be able to do this. So I hope that answers your question as to why I took on the role as Vice President of science and research at the Royal College of Paediatrics and Child Health.

Emily Arkell 36:06
Thank you ever so much, Paul, for talking us through the state of child health research and talking about your career, but also how we can help support some of our paediatricians and members, in participating more in research, I think the things that really resonate with what with me with what you've said this morning, are about the points of entry where clinicians can get involved in some of the work that we do.

So things like making sure that you're inputting into your BPSU orange card each month, taking a look at the QI central portals on our website, but also some of the research awards that some paediatricians might want to consider applying for if they're active in research at the moment, and there's lots of opportunities to volunteer as well. So I think the other thing was just to mention or is around some of the committees that we have at the college where paediatricians and members might want to consider getting involved in and starting to shape some of the work that we do at the college.

So thanks again for your time, and I look forward to working with you in the future to implement some of the things you said today.

Prof Paul Dimitri 37:10
Thanks very much, Emily, and thanks. Thanks for the invitation to speak with you today.

Emily Arkell
Thank you for listening to this podcast. If you would like to get involved with research at the college, please visit our website at www.rcpch.ac.uk to learn more about the work we do and find support for research activities.