



RCPCH Podcasts

Building Capacity 1: Routes to get involved in research

[Music starts]

Will Carroll

Do you know what? It's business as usual. Every research study that's being done requires all of us to work together collectively to be successful...

Damian Roland

I also think that there is something about coming together, and this is why research networks are important...And my personal view is that having an interest in research and kind of quality improvement keeps you on your toes because it's not doing the same thing every day...

Jon Elliott

I mean, for me, most any good research question comes out of a very basic idea to start with, with a problem, something you want to solve, something that you want to see improved, be that within an area you've worked, somewhere you've been nearby, or something that you have an area of interest in...

[Music starts]

Leila Ellis

Hello and welcome to the Royal College of Paediatrics and Child Health Trainee Research Network podcast. We're recording from the TRN National Conference in Stafford where this year's theme is Building Capacity: Past, Present and Future. Across this short series we'll explore how resident doctors can become involved in research, the different paths that involvement can take and some of the skills needed to produce and use clinically meaningful evidence.

In this first episode, we're focusing on routes to get involved in research. We'll hear from Professor Will Carroll, Professor Damian Roland and Dr Jon Elliott, looking at the wider child health research landscape, the role of collaborative networks and opportunities within trainee-led research and quality improvement. I'm Leila Ellis from the RCPCH Trainee Research Network, and I'm delighted to introduce our first guest, Professor Will Carroll.

Will Carroll is an honorary professor of Child Health at Staffordshire Children's Hospital. He has gradually carved out a career in medical education and paediatric research to complement his years as both a general paediatrician and a respiratory paediatrician. He is the ex officio of the RCPCH Officer for Research and the RCPCH Officer for England West. Will, thank you for not only delivering an inspiring opening plenary this morning at the TRN National Conference, but also for your dedication to supporting resident doctors, both from a research perspective, but more widely.

So, one thing that you mentioned in your plenary session this morning was the research landscape with which we are in currently, and I think your title was building capacity, past, present, and future. So I think it was particularly pertinent how you reflected on, the funding landscape that we see now hasn't perhaps gone in the right direction. With I think was it around 5% maybe of you know all the funds going towards paediatric research when children and young people make up at least 20% of our population, and what that means for those of us coming up the career pipeline.

Will Carroll

Well, I look back and think of heroic failure as the best description of where we are right now, and I have to take part of the blame. It's been great actually having people like Nick Brown here today, and also Colin Powell, because we've probably shared that journey together, where we've been interested in research, we really care about the research, we want more research done in children, and we've, you know, cheered ourselves along, and we've tried to do our bit of work and worked very often on our own, and failed spectacularly to improve things.

I think it's really easy as a researcher, and certainly as a young researcher, just to stick in your lane, make your contacts, do your work, and think about yeah, okay, I'm doing my bit. But when you stand back and look at the big picture, it really is one of terrible, terrible failure for us. Yes, there are more treatments for children now, but have we got the right amount of research going on for children? I don't think so. I started looking back, and I thought of my own time as a consultant, and I started in research just before I was a consultant, quite late in my career, 2003 through to 2005 and I can remember at the time we were getting maybe about 4 to 5% of the research funding, and there were relatively few professors in child health, but there were fewer paediatricians, and I just seemed to think it would get better if we all worked and we did our own bit, and I watched and I waited and I watched and I waited, and it's really interesting now to look back and look at Nina Modi's paper with Helen Budge from 2013, where they started to really try and work out: Well, are kids getting a fair shake? Are our children getting their share of resources?

Let's be blunt: children make up 20% of the population. They make up 100% of our future, and if they're only getting 5% of the research budget spent on child health, we are letting them down, and paediatricians have been nice about it. We've sat and done our work. We've shouted from the sidelines about how important our work is, and we've watched other specialties and other groups shout for their own self-interest and take the money away from where I think it fairly should be invested. And I started as officer for research at

the college. This was something that Russell Viner was talking about, Nick Bishop was talking about, and then subsequently Paul's picked up the baton, and we've tried to make a difference.

But even when we count again, we're still at four to 5% of the research grant money and charitable money is going to paediatric research, and the rest is going elsewhere. And I don't think any paediatrician would think that's right or that's fair, and we have to find a way to move on from that situation. If we continue to do the same thing in the same way, we'll get the same result in 10 years. You'll be sitting doing a podcast, and you'll be saying, "Do you know what? I remember speaking to this old dinosaur, and he said it's only 5%, and we. We've gone on another 10 years, and we've worked really hard, and we've been collaborative. And guess what? We've got 5% of the research budget, and that can't continue. So we have to be clever. We have to be disruptive. We have to be smart.

Leila Ellis

We do, and I like how you frame that as a sort of a joint responsibility, right? So I think you know there's many who will be listening to this who are working, intensely to deliver the best standards of care, and have a hope for what you know the future of child health looks like, but there's a huge disconnect between that vision versus day to day practice, and yeah, it's wonderful to hear about the work the College does in this space. But what can we do perhaps to make this advocacy work both from a research perspective, but also from a practitioner's perspective, accessible and something that we collectively can move that goalpost.

Will Carroll

So it's there's two ways of looking at this, and Damian put it nicely. He said, "I think I want to ban the term academic, you know, from this discussion" because, you know, all of us, all paediatricians, should have research as part of their job, part of their activity, part of their responsibility. It's really quite easy to move yourself or persuade yourself that your that your job is doing the day job, that your job is looking after the patients in front of you, and that's where your strengths are, and your that's what you're going to do.

And I think that we need to move on together and say, do you know what? It's business as usual. Every research study that's being done requires all of us to work together collectively to be successful, and we've got to work as that big team, and that means there are going to be people in the team who are designing research, there are people in the team who are going to be leading research, there are people in the team who are going to be delivering research, and there are going to be people in the team who do all of those things. I have done bits of them over my time, but I would still consider myself very much on the delivery front.

Most of my successful research, most of the stuff I look back and think, "God, that's had a reasonable impact, is the delivery of what a hard-nosed academic adult physician might consider somebody else's research. My name is not on the paper. My name is not even in the footnotes. It might be in an acknowledgement somewhere. But actually, it has moved

things forward, and then we've got better treatments available for children, so we need to work collectively, and I think paediatricians are really good at that. Without wanting to play to the audience here, they know they're good at that. If we look at different departments, even with our own within our own hospitals, we'll see that paediatricians we're the archetypal team players. So we need to do this with research if we want to have better outcomes for our patients.

Leila Ellis

And Will, I think it's evident to anyone who's had the pleasure of hearing you speak how passionate you are about ensuring these opportunities are dispersed across the whole country, and you know you've dedicated your career to building research capacity in areas that might not otherwise had sort of that degree of input. So, what would you say to those who are perhaps working in a DGH who don't necessarily, you know, have all of the fancy trials opening? And I know you've done some work with commercial research, and how do we bridge the gap there between what's going on in tertiary centres and other areas that perhaps don't necessarily have as much sort of access to the same funds, and I guess that kind of ties into to another sort of pivotal point of your plea this morning was well to do research in a way that is supporting or addressing the health inequalities that we are seeing in in our population of young people. We need to have research capacity across the country.

Will Carroll

Absolutely. I mean, let's be clear. For research to be relevant, it's got to apply to the whole population, and only a relatively small number of patients are looked after in specialist children's hospitals. So, without having a pop at specialist children's hospitals that do a great job. And often their focus, of course, is just on children. So they're not competing with their adult colleagues for resources. If we want our research to mean something, it's got to be done where the children are, and the children are being seen in primary care, in secondary care, in non-specialist settings, and in schools, in churches, that's where the kids are, and that's where the research needs to happen. And therefore, the research is going to be just as important if it's in Oxford or Cambridge or UCL. It's just as important in Doncaster and Darlington, and Dartford, and we've got to make sure that those research opportunities are open to all paediatricians.

How do we get that to happen? How do we get from where we are to that utopia where every single child who's seen in secondary or primary care is eligible to take part in research, and people are going to take the time to speak to families about it, and we get better treatments, and we have more evidence. Well, we get to that utopia by working together. We get those teams in Oxford, Cambridge, UCL, the centres that are doing great work in research, Southampton, for instance, and we link them up, and we link them up with people working in centres that maybe haven't had the opportunity before, but have got the appetite to do it. And we say, right, it can be done if we work together, but it's got absolutely. I can't stress this enough. Got to be that we start that journey with a vision that the partners are equal partners. When it comes to whose name goes on the paper, whose name goes on the grant application, where the credit is shared, it is shared equally and

fairly across those. Too much I've looked back in my career and seen there's work that's been done, and the people who've actually delivered the work haven't necessarily got the credit.

Leila Ellis

Yeah, it builds into a whole conversation again that we touched upon in some of the panel discussions this morning around metrics within in research space, and you had so wonderfully spoken about the associate PI scheme that's run by the NIHR as an opportunity for those who might you know want to take that next step in getting involved in in trial delivery. Can you tell us a bit more about the scheme and you know the success that you have seen it contribute to?

Will Carroll

Okay, I'm going to put my NIHR hat on now and say, oh yeah, the associate PI scheme is just fantastic. It's a really good opportunity for people who either have only done a bit of research before, maybe had a bit of a break from research, and want to get back into it to really get into their stride and be able to demonstrate to people externally that they're capable of delivering that research. So many of my discussions now, and particularly with industry and commercial studies, I go to a meeting and the meeting is an interview. I'm being interviewed for can will deliver this project. Okay, we've seen he's got some names on papers, but can he deliver my project? Has he got the wherewithal, the organizational skill to do what I need him to do as a collaborator? Now we use the term principal investigator for that, but to get accepted as a PI onto lots of studies, the first thing they want to know, and this is classic chicken and egg, what have you PI'd before? And if the answer is nothing, then often you get a flat. Well, I don't know. Maybe, maybe, maybe you need to try again.

So this is this is a route in, and there are several routes that we've managed to make. One of them is that in my own hospital, where I've got more experienced colleagues, or maybe colleagues who've done quite a bit before, but have had a break and they just want to get back into it. We, I put my hand up and say, well, well, I'll co PI, so I'll work alongside you with this, so that we get accepted as a centre, and then I will work you through maybe some of the more difficult things that are going on. If we get a problem or get a sticky bit, I'll say this is how we perhaps solve that problem, but the associate PI scheme is a formal way of doing that, and it allows someone really at any stage of their career to come in and work alongside an experienced principal investigator and learn how to do it.

Subsequently, when they put their hand up and say, "I'd like to be a PI for this study. I'm interested in doing it. Then they're going to get a much better hearing from either the commercial partner or the chief investigator who's running the study.

Leila Ellis

And something else I want to pick up on, Will, was that you have done some work, that shows the extent of willingness of so many colleagues and the desire to get involved with research, particularly within general paediatrics and community settings, and to deliver research that matches the needs of our population, we need people to have time to do

that, right? So, the big question of how do you get time in your job plan to contribute to your research?

Will Carroll

Yeah, absolutely. I and it's and it's not an unreasonable question. I think for a long time I was I like to call myself an amateur researcher, and I described my job plan historically as being 50% clinical, 50% teaching, and 50% research. Of course, the 50% research was, in fact, entirely unfunded and done at weekends and evenings because I just enjoyed it, and you couldn't stop me from doing it. As the years have gone by, I've also worked out that that in itself, that deluded optimism that that's going to change anything, is actually wrong. Of great mistakes I've made, you know, doing it all unpaid, doing it all unfunded.

Whilst I kind of enjoyed doing that, it didn't really move the dial for everybody else, and it left a situation that when I stopped doing it. Of course, there was no resources to keep on doing it, so we need to get the resources, and we need to be smart about getting those resources. So, how are we going to do that? Well, let's just look at the possible options for getting resources, which then can then go into job plans. Number one, do commercial studies. That's actually really, really hard. It's really hard on lots of levels. First of all, it's very time-consuming, and I'm going to be honest and say, all the commercial studies I'm doing take me a lot of effort and lot of time, and the reward for the amount of effort is relatively low. But it's secure income, and actually, if you can build your department so that it's a centre that the industry will come to for commercial studies, that really does set the whole department up.

Let's aim a bit lower. Let's think about where else we can get going in our research journey. So for many years, I was an enthusiastic local principal investigator for studies. I'd find out that some of my friends were doing a study and it sounded interesting. We'll take Colin Powell. So Colin did the magnetic study that looked at nebulized magnesium. That was one I was involved in as a principal investigator. It sounded fantastic, really interesting. I thought the question was a good one, and I said, "Yeah, I'll help. I'll recruit patients, and that income that was generated from me recruiting patients to that study, I didn't even know where it went. I didn't even know we were generating income. If I was honest, I just did it because it was fun. But let me tell all your listeners, hello, listener, that actually that money, that study-it's an NIHR portfolio study-and that study was generating income for my hospital research and innovation department. Did I get any of it back? Well, no. Did the team get any of it back? Yeah, actually, we did. We got research nurses that allowed us to deliver more research going forwards.

Now I need my paediatricians listening to get smart about this and say, yeah, okay, I'm going to look carefully at what studies we do, and it's all about the numbers. Don't do a study which is going to take you a year to recruit one patient. They're good studies potentially, but maybe they're not the study for you if you want to be establishing your department and getting some time in your job plan. Look at a study that you can recruit a significant number of patients to, where there's an intervention and there's a weighting system. Now, that's available for your listeners. You can look online and you can see the

webinar from NIHR, which talks about the funding model. But understanding the funding is really important. For me, the sweet spot at the moment for us paediatricians is what we call small observational studies. They're studies with less than 10,000 participants, but where the intervention doesn't take you so much effort that you can get relatively large numbers. That will generate the year after income to your trust from the research delivery networks, the RDNs, and that then can make its way into your job plan.

Do you have to invest upfront to get that time. Quite often, yes, there are other ways of getting research time straight away. But most often, you're going to need to invest a little bit at the outset and be successful and prove you can do the research. And heck, prove you enjoy doing the research. You might do it and find, oh well, you know, I thought it was going to be so different than. In truth, a lot of my time spent as a principal investigator is spent completing the delegation log, managing the signatures, enjoying a giggle with my research nurses when the three patients we'd selected that might be eligible for this study day have not arrived because they had something else to do on a sunny afternoon. We've got to be realistic about it. It is. It requires a great amount of continuous optimism, but there is a route forward. And I would say to everyone listening: understand the funding. Understand the funding. That's where the resources are to help you keep doing the research. And I've taken several colleagues now through that journey, and it's just it's just great to see it, actually, is to see people who know they would like to do more research. We get them involved. They start to recruit the patients, and then seeing the money come back and think, right, okay, now there is time to put into people's job plans. Now there are studies that actually have that person named with individual time for helping to deliver that study; it is there for all of us. But it's only by working together that we're going to make it work.

Leila Ellis

So Will, could I ask you to now pop on your education hat and within the paediatrics curriculum, what do you think, either currently works really well, or what might we look to shift around in terms of building research capacity within the future and you know immediate future and long-term future workforce?

Will Carroll

What a great question, and what a big hat to wear-the education hat, certainly syllabus and curriculum are just huge topics on their own. We've worked for a long time actually to get and keep research in the RCPCH curricula and in the syllabus and in progress. Plus, it's there. It's I always find it incredibly interesting to read that two-dimensional curriculum and look at what it says, and it's just a few words. And you think, yeah, but in what depth do I need to know that? How much do I need to know about this topic area, or can I fulfil it with turning up to journal club, reading three papers is that what I really mean by research competencies, and I think the reality is that from a collegiate perspective, we have to keep that syllabus broad to allow the heterogeneity that there is within our communities to succeed.

But of course, I would say that research is everyone's business. So, should every paediatrician know about consent? Yes. Should every paediatrician know how to take informed consent for a research study? I would say yes. Should every paediatrician know how to read a paper and truly, truly understand what it's telling us. Not just take at face value what's written in the introduction and conclusions. I think we tackled some of this, and I can remember the wonderful Helen Budge amusing me greatly as we prepared people for what was the ST7A, then the start examinations when we started to talk about critical appraisal and what you needed to know and being able to appraise a paper, you do need to be able to do this properly. Helen taught me, and I now trot this out when I'm getting my younger academic foundation program doctors writing their first paper, for instance, and say, "Right, the introduction. You don't need to read that. That's just their opinion of where we sit, and the discussion. Nah, you definitely don't need to read that. That's just their opinion on what they think, and they're both going to mislead you."

Let's be honest. So it's all about the methods and results. It's all about the methods and results, and for me, that's something that if we could make sure every paediatrician understood before they went to journal club, it would be great because it's all about the methods and results. And then for years, I loved doing journal club, particularly in Derby. It was an amazing journal club we did there, and just picking apart, everyone would turn to you and go, "All right, well, what's this statistical test?" And I'm also fond of quoting Jeff Drazen at this point, who's the editor in chief of the New England Journal of Medicine, saying, "Do you know, do you know what a landmark study is? A landmark study is one that you can understand without statistics."

And I think that you know we have to. Get to that point now. If the statistics are too complicated that you need someone else to explain them to you, the work is probably not that important. And I can be guilty as charged. I've published lots of papers over the years with quite complex statistics in it, like the generalizing estimating equation. And I look back with a degree of amusement and horror equally, going, "What? Who was I trying to kid?" If you can't tell the answer with a chi squared test or a t-test, it's probably not that important.

Leila Ellis

Well, on that note, I'd like to say another huge thank you for all that you do for coming to the Training Research Network conference today, and to signposting to one of the many wonderful resources out there for colleagues to explore. Thank you for joining us on the podcast.

Will Carroll

Thanks very much.

[music]

Leila Ellis

So I'm delighted to be joined by our next guest, Professor Damian Roland, who is the past chair of Peruki, where he led on developing the research group into a self-sustaining organization that delivers care through over 70 affiliated children's emergency departments in the UK and Ireland, alongside his role as a paediatric emergency medicine consultant at the Leicester Royal Infirmary and the systems clinical director for urgent and emergency care at Leicestershire and Northern Hampshire, ICS and the NHS England lead for the deteriorating child. Damian, thank you so much for joining us today at the RCPCH TRN conference. Welcome to the podcast.

Damian Roland

Yeah, thank you very much. I'm delighted and honoured to be invited.

Leila Ellis

So we have had a wonderful morning where we have laid the landscape out for paediatric child health and what that means for those resident doctors in training and those with an interest in research and academia, and one thing that I wanted to ask you to start with was, what do you see as, being fundamental for those trainees in the research landscape?

Damian Roland

Yeah, so there's loads we discussed this morning, and I think that a couple of the key things that came up for me, and this has been one of my hobby horses, is the difference between an academic career and a research career, and we've not got this completely right yet. Everyone should be interested and be involved in research, and by research I mean undertaking studies that give us answers to the vex questions that we have in child health: which children need antibiotics, how long do you give treatments for? Who needs no treatments at all? How do we improve systems in both acute and community care?

And you don't need to be what I think has previously been referred as an academic to be able to be part of that. What you're trying to do is understand kind of the research landscape and infrastructure, help consent caregivers and children to studies and deliver high-quality research, and we get a bit distracted because this term academic comes up. It was interesting. We just discussed this in the session about it. It is a bit divisive. It comes with a bit of well, I'm an academic and you're not. Or people think of ivory towers when they think of academia, and that's the wrong thing to do.

And if we are going to be successful in child health in the future, we need every resident doctor to be as trained as they can be in understanding research processes, research governance and research delivery, regardless of whether and I think we need to remove this term academic, but regardless of whether they go on to have a career where all they're doing is studies or not.

Leila Ellis

I also really liked something that you mentioned in your talk of the concept that a study is only as good as the question that that is asked of it, And I think that's something that when we think about exposure to research and how we can create that pipeline for

colleagues going through training to have the skills and the foundations to ask the right questions. So, do you have any tips in that space?

Damian Roland

Yeah. So it's really difficult. What is a good kind of research question? And even kind of people have been doing this for this years for years will argue between themselves. The example I gave in the lecture is the thing that resident doctors see all the time is different management pathways in the same hospital by different clinicians, and I see this in my own hospital, and I see it in other hospitals. And the data bears this out. So let's take actually this is a good example of a resident doctor-led study. So in PERUKI, people were interested in the management of peri-orbital cellulitis, not an uncommon condition. Child comes either to the assessment unit or the emergency department with a slightly swollen red eye. What do you do? Do you do nothing? Do you give some oral antibiotics and send them on their way? Do you do blood tests? Do you admit them for kind of a couple of days for fear of them getting orbital cellulitis? And the guidelines completely differ. The management strategies completely differ.

And good questions are to begin with I think for all of these research networks is looking at where is that variability and how do we reduce it because if we're going to improve outcomes for children we need to do that and before I forget underlying all of that is the impact of deprivation and inequality and what we've been really bad at and I include myself in this. I'm trying to get better, but it is difficult. Is in any studies we need we are doing, we need to really understand the most disadvantaged groups, because it's all very easy to improve outcomes for those who are most eloquent, but actually for the children who are of the from the poorest backgrounds, they suffer the most from the heterogeneity of clinical opinion and clinical outcomes.

Leila Ellis

So, talking about Peruki and your experience in establishing and supporting the network to grow to the size that it is, I guess there's the aspect of coverage and making again these research projects more accessible to every child, no matter which hospital they present to, but also the opportunity to actually ask those questions, where we need to have wide coverage and a wide pool for recruitment to capture those rarer presentations. And what's the focus of PERUKI in delivering that agenda?

Damian Roland

Yeah, so I mean Peruki was given a slight advantage because of just the huge volume of children who present to emergency departments, it's now like 6 million a year, I think, in urgent and an emergency care across the UK. So we're not short of patients. But I think what you're alluding to is how do you pick up those outcomes which are relatively rare, and that that happens a lot in paediatric EM practice.

So we may have 1000s of children presenting with fever and a sore throat, but the incidence of Group A strep is very small, and so and this is at the forefront of our mind because literally just a couple of years ago we have this Group A strep surge, and there

was lots of different practice on who got swabbed. Do you do rapid point of care testing? Who needs antibiotics or not?

And these are the questions that I think resident doctors can get really stuck into, because you can take a group of different emergency departments up and down the country, you can set some standards for what either you are auditing. So you decide to begin with this is a true audit. You're just looking at performance against a given standard, or you can do a service evaluation for these types of patients presenting. How do their pathways differ, and what are their outcomes? And both of those are a great place to start because it's easy to set some measures. It's easy to pick your inclusion criteria. You can measure the outcomes, and some of those outcomes are probably going to be rare at an individual site level. But if you do it over multiple hospitals, and especially now up to 60 or 70 in Peruki, you can then start picking up those outcomes. It's a great place to start.

Leila Ellis

Damian, we've spoken a lot today about health inequalities and accessibility of research, and these are certainly priorities at a national level. How do you see the next five years planning out for child health research?

Damian Roland

Yeah, so it's relatively exciting times now. That the listener may go, "Oh, that's kind of slightly odd, but it's exciting for people who are watching how the landscape has changed to research, the big thing that is going to happen is something called the Children and Young People's Modern Service Framework. So there's a couple of big-ticket items that the government have chosen that they want a 10-year plan for. There's going to be one for sepsis, one for frailty, one for cardiovascular disease, but children and young people have their own, and that is going to drive, I think, a review that's happening at the moment of looking at the things that we need to do, the things that we need to do better, and the things that we don't know when we need to know, and I think from that we're going to find that hopefully there's an explosion of interest in kind of research and novel ways of doing things.

The RCPCH have partnered with the NIHR to create some long-term program grants. So that's now running, I think, once or a couple of times a year, where they're putting not an insubstantial amount of money behind groups who will look at some trajectories for common child health conditions over three to five years to answer some of the most vexed questions, and I think those things together are going to provide opportunities for resident doctors to get involved, either research at a local or national level, perhaps in a way that hasn't been available before. Will Carroll talked about how only 5% of total NIHR funding goes into child health research when children are well over 20% of the population, and that's something we need to address.

Leila Ellis

Absolutely, and I think you know through networks, it feels like we have the foundation and the infrastructure to really deliver on that tenure.

Damian Roland

Yeah, and I think there is something. It's difficult. I suspect being a resident doctor at the moment isn't easy. You've got the spectre of kind of confrontation with the public through strikes getting going on. There's a lot of uncertainty about career pathways. I know that consultant jobs perhaps sometimes aren't as easily available as they were, and so things aren't easy.

I also think that there is something about coming together, and this is why research networks are important to deliver something that keeps you on your toes and excited and interested in clinical practice. It's a disaster if we end up having a generation of doctors coming through who are burnt out even before they've become a consultant. And my personal view is that having an interest in research and kind of quality improvement keeps you on your toes because it's not doing the same thing every day, and that's why I think it is important resident doctors engage with each other, and you need to help each other. I mean, that's one of my other points in the lecture. The disaster here is if people go it alone. I'm going to do this for myself for my own individual career. That will not work. You need to get with a group of like-minded people, get your egos off the table and say, "What can we do together to help each other get to a specific endpoint?"

Leila Ellis

Wonderful, thank you very much.

Leila Ellis

So our next guest is Dr. John Elliott, who is currently an ST7 neonatal grid sub-specialty trainee working at Addenbrooke's Hospital. He has been co-chair of the NeoTRIPs National Neonatal Study Group for over two years, overseeing the implementation and running of research and quality improvement projects in neonatal medicine throughout the UK. Welcome to the podcast, John. Thank you for joining us.

Jon Elliott

Thank you very much for having me.

Leila Ellis

So, we are at the RCPCH Trainee Research Network National Conference today, and this morning we have heard from a number of wonderful speakers, yourself included, and you shared with the delegates and those in attendance about the work of NeoTRIPs. So I wonder if for the listeners you could introduce NeoTRIPs.

Jon Elliott

Absolutely. So NeoTRIPs is a national trainee-led neonatal research and QI initiative. So we're a completely trainee and well resident doctor-led committee and kind of regional subcommittee. And what we aim to do is run projects throughout the UK. Multi-centre studies that can collect neonatal data from essentially as many units as want to get

involved as possible. We've been around since 2018, 2019. Originally as a pan-London group, we expanded to UK-wide in 2022, and in the last few years, we've also added a QI arm. So essentially, we aim to run one research, one QI project at a time, and yeah, involvement kind of throughout the network of neonatal medicine in the UK.

Leila Ellis

It is amazing the work in the projects that are coming from the group. How can trainees that are interested get involved?

Jon Elliott

So a huge variety of ways, to be honest, and it depends how you want to get involved with research, or whether you more want to get involved from a management point of view. We're really, really keen to improve resident doctors' engagement in research in any way that they can, be that in kind of writing and developing research projects, data collection or helping project management. Whenever we run a project, and we will be starting at least two new projects within the next six months, we will advertise to every neonatal unit in the country to get involved. And how that will be is it will go through to the college tutors, who will then look to recruit a local lead at each unit, and that means that that trainee will be the lead for that trust for collecting data and passing on that data, and that is fantastic research experience, and it's a really good way to get started on a program of research.

We also then have our large committee ourselves, and we have a regular turnover of members. But as a trainee-led committee, eventually members become too senior, CCT, move on, and so these positions become available. And that includes the central committee itself. So those are those of us who run the NeoTRIPs network, people in charge of the research arm, the quality improvement arm. We have some education projects ongoing as well, but we also have a network of regional leads. So we have two to three resident doctors covering each region of the country who help with oversight of the trusts within that region. So there's a whole host of involvement from that perspective.

And finally, and probably one of the most important ones, what people really want to hear about is actually submitting a research project to us. So how we'll work from both a research and quality improvement perspective is we will put out a project call. We will say we are looking for projects to take on, and if you have an idea for a research project or a QI, you can submit that to our network. And if it is accepted, then we will help you run that. And that might be a really fully formed project idea with a consultant on board who has fantastic research outputs. In which case, it's we can help you run that with the networks. We can essentially help you use our network to collect that data. But you can also apply with an idea that isn't quite as well formed. Maybe you don't have as much research experience. Maybe you have an idea that you're desperate to solve, and we have availability on that committee to help you fine tune that, help you work with it, help you find a mentor to work with you, and towards the end help you with writing manuscripts, submitting, and things. We're really keen to get involvement from anyone who wants to, anyone that has a good question and really help break down those barriers, if we can.

Leila Ellis

That's wonderful. And today we've heard about the concept of a good research question. So, what advice do you have for those who are listening and might? Not necessarily had a lot of exposure to research, but, in their clinical setting, have seen you know there's some challenges, or they want to try and build up sort of evidence in a particular area. How might someone go about defining a research question, but also then testing whether it's a good one at that early stage?

Jon Elliott

Absolutely, that's a really good question, and I think, I mean, for me, most any good research question comes out of a very basic idea to start with, with a problem, something you want to solve, something that you want to see improved, be that within an area you've worked, somewhere you've been nearby, or something that you have an area of interest in, and then it's about developing that into a more firm research question.

From a management point of view at NeoTRIPs, when we have research questions posed to us, we accept them anonymised, and then we essentially rank them against a set of criteria to see which are going to be run. And the things we're looking for is a research question that is pertinent to our time, important to the specialty, and also that it's achievable. And specific to our network is achievability has the extra side of will this be achievable by a group of resident doctors? And also that it has an appropriate time frame and something that is achievable within a time that is set out. Something that isn't going to run for too long, but also at the same point, it isn't something that you're expecting to achieve within a shorter time frame that's possible.

Now, those are all things that we help with, but at the same point, I think an advice that anyone that has an idea about this would be to seek out a local mentor, seek out someone either within your trust, someone that you've worked with before, someone in a local university, someone with some research experience. It can even be a fellow resident doctor to help you pin down your concern, your query, your complaint, the thing you want to solve, and try and work that into a research question that is a little bit more focused and something that we can work with and something that we can push research to answer. I know from my own experience that's often been other trainees at the same level as me, who have simply had more experience within the world of research and are brilliant sources of advice with things like that.

Leila Ellis

And talking about scale of the projects, so again, I think a lot of us, when we think of a project, might think about you know what can we do in the hospital we're working in, or the trust, perhaps, or even the region, but kind of again with NeoTRIPs having you know a footprint across the whole of the UK. What's some of the factors you might consider in you know how wide that scope of recruitment is, and who else to bring on board?

Jon Elliott

So, we always look to recruit across the country. Obviously, we only run within neonatal medicine. The only variance we really have with that is there are certain projects which, and this happens relatively rarely, we will only run within tertiary neonatal units, and that's often just because we might be looking at a research question which is only really pertinent to groups of patients only looked at in tertiary neonatal units, such as the extreme prematurity group, knowing that you won't be keeping those in level two or level one units beyond kind of the first few hours of life.

With regards to scope of the project, we actually cover quite a large variety of this, and really the main consistency between them is that we are looking to run them nationwide, and we're looking for projects that are able to be run nationwide. Occasionally, we have projects suggested to us that we look at doing. We start with doing feasibility with units, and that means asking kind of all the units in the country, "This is an idea for a project that we've had proposed. Do you think you could run this?" And looking to make sure that there's a large enough section of units. Now, that might be because of the systems they use, their access to data, the capability and availability of the staff on the ground.

But outside of that, some of the projects that we run can include things like the current ongoing 22-weeker study, which is looking at management and outcomes of 22-weekers in the country, which has the potential to be hugely important and obviously is quite complicated. Full proper research that required ethics approval, but actually, a lot of the projects that we run are more around service evaluations and what start out as you could argue relatively simple questions, such as how many units in the country are currently using probiotics for their preterm infants, but actually, when you expand that to a national study, you come out with really important data that can help drive change in many local units. So the scale of the question and that you're looking for doesn't matter so much as long as it's a well thought out, it's pertinent, and it would benefit. From being run as a national multi-centre study.

Leila Ellis

I think that picks up on something you mentioned in your lecture today, in the way in which we've seen the quality of neonatal care improve from a clinical perspective by having the operational delivery networks. Actually, I guess we're seeing a similar thing from the research angle, in that, if we can sort of connect those groups and ensure that you know the questions we're asking can be applied in in all these different settings, then hopefully we will also be able to move the research forward in a productive way.

Jon Elliott

Absolutely, and I think neonates and look it's not unique as a specialty in this, but it is so fast moving, and a lot of the changes we've had clinically within the last 10 years-I mean, even changing the limit of viability-comes with massive, sudden changes that it's-it can be difficult to keep up with. So, working within the national consensus to improve the kind of similarity of care between units towards the best practice.

Leila Ellis

Brilliant, Jon. Thank you so much for joining us today and introducing us to NeoTRIPs. Where can people go to find out more?

Jon Elliott

Yeah, it's neotrips.org. So that's n-e-o-t-r-i-p-s.org. And when we are doing project callouts or looking for recruitment for committee members or regional leads, we make sure to disseminate through all our social media channels, but also to pass it on to all of the college tutors throughout the country, so you should have those passed on.

Leila Ellis

Excellent, thank you very much again, and we look forward to seeing the work from NeoTRIPs.

Jon Elliott

Thank you very much for having me.

Leila Ellis

That's the end of our first episode of Building Capacity: Past, Present and Future. One message has come through clearly from Will, Damian and John. There are many ways to take part in research and you do not need to be following a traditional academic pathway to contribute. Research might begin with delivering a study locally, getting involved with a collaborative network or simply recognising an unanswered question in your own clinical practice. We've also heard how much difference good mentorship and strong research networks can make, both for trainees and for ensuring research reaches children and young people across different settings. In the next episode we'll build on this by looking at alternative research pathways.