Interview: Tom Solomon CBE FRCP FMedSci

Professor Tom Solomon took up the role of academic vice president of the RCP in August 2024. He is a professor of neurology, seeing patients in secondary and tertiary care.

Based at the University of Liverpool, he studies brain infections and is director of the UK's emerging infections research unit, funded by the National Institute for Health and Care Research (NIHR). He leads The Pandemic Institute and is also vice president – international at the Academy of Medical Sciences. He shares his reflections on his first year at the RCP, and the work he has done – including recently launching the RCP's research resource kit.

Can you tell me a bit about your background and what drew you towards neurology and infection research?

I trained in Oxford, where a lot of people were doing research, and became interested in overseas health problems. I had the chance to go to South-East Asia for a Wellcome-funded PhD. There were really interesting health problems; patients with undiagnosed brain infections, which we discovered were due to Japanese encephalitis and dengue.

I also spent time working in the USA, with a Wellcome career development fellowship, and then set up the lab in Liverpool. I increasingly became involved in emerging infections research and global health.

In 2014, the government put out a competition for the UK's emerging infections research unit, funded by the NIHR. We won that competition in Liverpool, and I became the director. We were thus heavily involved in the UK research response to Ebola in Africa and Zika in Latin America. Then of course, when COVID-19 emerged, we were right at the forefront of the research response.

In your role as academic vice president, what are your main hopes and what do you want to do?

As academic VP I oversee the RCP's Communications, Policy and Research directorate. The comms work includes events – the most recent Med+ and Medicine conferences had the largest in-person and online audience since the pandemic, and some brilliant speakers. Both were a great success. The second important item is that there's an inequalities issue. The people who are producing the least pollution are often those who are most sensitive to it; these are people living in the disadvantaged communities of our society, but also the extremes of life – those very young (from conception) to the very old, who can develop diseases like dementia later in life.

The policy side is really important and interesting work, engaging with politicians and other stakeholders; putting the college's agenda forward, for example around medical workforce issues, smoking, alcohol, junk food, and climate and health. I have a lot of policy experience at the most senior level of government, and working with the RCP team who are very experienced in this area, plus our special advisers and advisory groups, is really rewarding. I would like to see the RCP grow its influence.

In terms of research, there are three areas we are focusing on: research for all; supporting clinical academic careers; and AI and digital.

The 'research for all' initiative builds on the fabulous work of my predecessors, Ramesh Arasaradnam and Cheng-Hock Toh. It's clear that more people want to do research, including resident doctors, but they are not getting the opportunities. We have to push and make this happen. It is not just because clinicians want to do it, but because of the vital importance of research to the NHS. Research-active teams mean better outcomes for patients. The pandemic brought this into focus, but almost everything we do in the NHS is underpinned by research. And this isn't just about fancy new treatments. It is also about different models of care to help the NHS; this is where RCP members and fellows have a great deal to offer. It is important that the medical community is joined up here, and we have already led on a position paper on research, which is endorsed by the Academy of Medical Royal Colleges.

The second area is protecting clinical academic careers. The numbers of doctors employed by universities is declining sharply. Every step of the pathway is being threatened. We need to fight that. I am convinced that the RCP has a greater role to play here.

The third part is the AI, med tech and digital piece. There is tremendous potential. It is rapidly becoming reality to help us address some of the issues faced by the NHS. But you can't just introduce things without showing how they work, why they work, that they are cost effective. There are questions around the role and responsibilities of clinicians as newer technologies are introduced. If the computer says something [incorrect], and therefore the treatment is wrong, where does the responsibility lie? There's a role here for the RCP and

other colleges to ensure that clinicians and patients are involved in these critical discussions.

Those are the three big research agenda items. And we're already making progress on all of them.

What can RCP members and fellows do to start engaging with academia and research?

We have members at all levels, from medical students through to resident doctors, consultants, and of course specialist, associate specialist and specialty (SAS) doctors and international medical graduates. I think there is scope for all of them to get involved.

We are working to increase flexibility for residents to get time for research; it is also about finding the right mentor or role model, talking to people with experience and following in their footsteps. The NHS has a statutory duty to facilitate research, and the NIHR gives trusts research capability funding to support NHS clinicians' research. In job planning, consultants should ask about resources and funding.

Our recently produced Making the case for research: resource kit for doctors helps doctors at all levels to make the case for undertaking research as part of their training programmes of job plans.

There are other funding mechanisms, like the NIHR Research for Patient Benefit programme, which I chaired previously. We funded some brilliant NHS consultant-led studies.

There is increasing recognition that more clinicians should do research, because it helps strengthen the NHS and helps with staff retention. They are happier, and happier doctors work longer and better. People enjoy research time; developing ideas, going to conferences, talking to colleagues, and seeing the value of their work impacting on patients' lives.

You've often worked in engaging non-doctors and the public with healthcare and scientific research. Which has been the most fun approach that you've taken?

One of the most fun things I did was run the London Marathon. A charity, Encephalitis International, had a place – which is hard to get – and their runner dropped out. So they phoned me and said: 'Tom, you run a bit, don't you?'. I didn't run much back then, but I could just about make it around the block.

The charity had about 2 hours to name their runner, or lose their place. I was flying and when I turned my phone on at Johannesburg airport, messages came through saying, 'Congratulations, you're signed up!'.

I started training there and then; I was sort of panicked. My wife recorded me running, then we stitched it together. I was training everywhere, in Malawi, Liverpool, on the beach. The video got a lot of coverage; we raised £21,000 for charity, but it was a good way to engage the public.

My training included running between hospitals in Liverpool, wearing my white coat. People assumed I was running dressed as a doctor – so I thought I better had. I got the Guinness World Record for the fastest marathon dressed as a doctor.

But that record was beaten. Somebody ran it faster. So we created the world's largest organ made of people; the 'world's biggest brain' for World Encephalitis Day. That got another Guinness World Record. We did it as a science–art project, explaining encephalitis, producing a video.

Public engagement is fun, but it is also really useful; not just educating people, but learning from the public what they want us to do, and getting them involved in research.

I'm looking for my third Guinness World Record – so if any of the readers have a suggestion, they should let me know. Maybe it's something we could do at the RCP …

What is the secret to engaging resident doctors to become involved with the work of the RCP?

Resident doctors are having a really tough time. They are right at the frontline of all the NHS pressures, which impact the balance between service provision and training. The team spirit of the firm structure, that close relationship with other colleagues, is largely gone. Many struggle to maintain work–life balance and they are paid considerably less than previous generations.

The RCP has been helping address these issues, not just for the benefit of the resident doctors, but for the benefit of the NHS as a whole. We are looking at this through our 'Next Generation' initiative led by PRCP Professor Mumtaz Patel and Dr Sarah Logan. Residents at all levels are on the 'Next Gen' oversight group. Other opportunities include the RCP Resident Doctor Committee and many other college committees and activities; and of course the fantastic Chief Registrar Programme, run by education and quality improvement colleagues.

Beyond that, we engage resident doctors through the regional Update in medicine days, other conferences, and the incredibly popular RCP Player. There is so much fascinating stuff on there. It's brilliant for CPD and an excellent member benefit. Getting people into our buildings, the RCP at Regent's Park, London and at The Spine, Liverpool for the conferences and other meetings, is really important. They need to feel that these buildings are theirs.

How have healthcare and research changed in recent years, especially during COVID?

Some things have changed for the better, and some for the worse.

[One thing] that has changed for the better is more use of remote consultations; that saves time, money and travel. Face-to-face contact will always be important – people need choice – but the remote approach is good for the planet and increases accessibility. There's been greater recognition of disparities and health inequalities, highlighted [during the pandemic]. That gives us increased impetus to address it and the RCP has been calling for a cross-government approach to addressing health inequalities.

The whole system has been strained to breaking point – and has broken, sadly … For years we've talked about the point when the NHS can't cope, but it's not really coping now. The pandemic tipped it over the edge. A system with no slack can't cope when strained.

We saw the value of the NHS as a research system, studying major questions that the world struggled to address. We showed how quickly we make good decisions about what research to fund, get work done and results out … we learned how to do regulatory stuff quicker. We now have to hold on to those benefits.

New technologies, like mRNA vaccines, were teetering along slowly and exploded during the pandemic. Now these vaccines are being used to treat cancers. That's a leap forward. Home diagnostics, a lot of the big data projects. They've really now come of age … There are so many areas of science that have leapt forwards, it's been really exciting.

And finally – if you weren't a doctor, what would you be doing?

I wrote a book, called *Roald Dahl's Marvellous Medicine*, about my time with the world-famous author. As a house officer in Oxford, I looked after Dahl and became a family friend. He was often asked; if you weren't a writer, what would you have been? .

He said he would be a doctor, because he was very interested in medicine and even invented some medical devices.

When I wrote my book, about my relationship with Dahl and his amazing medical interventions, my editor said: Dahl was a writer who wanted to be a doctor, and here you are a doctor who has become a writer. It was true, I think if I had not been a doctor or scientist, I would have done something creative.

As well as writing, I have had a couple of family shows at Edinburgh Festival Fringe. The first was based on the book, and it had a sell-out run. Unheard of! The second was about COVID and had 5-star reviews. I put both shows on at the RCP. In addition, I have done quite a bit on radio and television. Not just tough encounters on *The Today Programme*, *Newsnight* or *Question Time*, but also fun stuff like *Christmas University Challenge* – mind you, that was more terrifying than anything else!

This feature was produced for the August 2025 edition of *Commentary*, the RCP's membership magazing You can read a web-based version, which includes images.