



Science and Technology Committee

Corrected oral evidence: Clinical academics in the NHS

Tuesday 29 November 2022

10.15 am

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Members present: Baroness Brown of Cambridge (The Chair); Viscount Hanworth; Lord Krebs; Lord Mitchell; Baroness Rock; Baroness Walmsley; Lord Wei; Lord Winston; Baroness Manningham-Buller; Baroness Sheehan; Baroness Warwick of Undercliffe.

Evidence Session No. 2

Heard in Public

Questions 13 - 21

Witnesses

Professor Rosalind Smyth CBE, Chair, Medical Research Council Training and Careers Group; Professor Waljit Dhillon, Dean, National Institute for Health and Care Research (NIHR) Academy; Dr Katie Petty-Saphon MBE, Chief Executive, Medical Schools Council.

USE OF THE TRANSCRIPT

This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

Examination of Witnesses

Professor Rosalind Smyth, Professor Waljit Dhillon and Dr Katie Petty-Saphon.

Q13 The Chair: It is a great pleasure to welcome the witnesses to the committee's second evidence session for our inquiry into clinical academics in the NHS. We are very pleased to welcome Professor Waljit Dhillon, dean at the National Institute for Health and Care Research Academy; Katie Petty-Saphon, chief executive at the Medical Schools Council; and Professor Rosalind Smyth, the former chair of the Medical Research Council's training and careers group. The session is being broadcast on parliamentlive.tv. A full transcript will be taken and made available to you shortly after the meeting to make any small corrections that you would like to. If you do not get a chance to say something you would like to say to us or if you think of any evidence or data that would be useful to us, we would be very pleased to receive written evidence from you after the session.

At this point, I will kick off with the first question. As you know, the inquiry is looking into clinical academics—and, indeed, the broader group of research clinicians—their role in the NHS and whether their research roles are under threat. We are also interested in establishing the impact that they have on and how critical they are to the NHS. I would very much like you to start by outlining briefly why it is so important to have the NHS engaged in research.

Professor Waljit Dhillon: One of the most important things is patient outcomes. This was highlighted at the last session as well. The most research-intensive hospitals have the best mortality outcomes for our NHS patients. That is the first and probably most important thing. There are also multiple reports that every pound invested in medical research brings back to the country for ever around 50p. So there is a health and a wealth benefit.

The other issue is training medical students. We need to increase the number of medical students. We are struggling with delivering the curriculum for all those new medical students, and clinical academics are the people who will predominantly deliver that. In terms of new treatments, new drugs and new devices, we will not be able to move forward unless we have those innovators.

Professor Rosalind Smyth: As clinical academics, we are in a very privileged position because we understand the clinical problem. We can ask the questions, and we also have access to the methods and techniques to give the answers to those questions.

I will give you an example. A colleague of mine at the Great Ormond Street Institute of Child Health is a paediatric neurologist; she is a specialist in movement disorders. There is a group of children with cerebral palsy who have very disabling athetoid movements. She noticed that, in this group of patients, there were certain things suggesting that perhaps they did not have cerebral palsy. Their condition was not associated with birth trauma; it was progressive, so was getting worse

over time, which does not happen with cerebral palsy; and, in some cases, the parents were related.

She was able to identify that there was a genetic problem causing these very disabling movements. She was able to identify a number of the genes responsible. She was then able to study the mechanisms by which these genes caused the clinical abnormalities that were observed. Now, she is working on developing specific genetic therapies. This has offered real hope to these families and has enabled them to have access to proper genetic counselling and testing.

The Chair: That is a great example. Thank you very much.

Dr Katie Petty-Saphon: As I understand it, it was actually a Lords amendment to the original NHS Bill that set out its tripartite mission. The three pillars of the NHS were supposed to be research, education and patient care. Bevan recognised from the outset that pushing the boundaries of knowledge improves patient care, with earlier diagnoses and more effective treatments.

I have brought with me to give to the clerks some publications we have done from medical schools; I think Professor Stewart also mentioned some examples last week. Over the past 160 years since medical schools became regulated by the GMC, we have doubled life expectancy and slashed child mortality. It is really because the clinical academics have done these amazing things. Although Bevan saw research as the engine for the NHS, at the moment, the stewardship arrangements, because the clinical academics fall between two stools, are not allowing the careers of young people to flourish.

Q14 **The Chair:** So far in the inquiry, we have perhaps been struggling a bit with the difference between clinical academics and clinicians who engage in research. I do not know whether you would like to give us any indications of the important differences. Also, who is responsible for encouraging a broader research-engaged workforce, and what more should the NHS be doing to encourage this?

Professor Rosalind Smyth: Clinical academics and clinicians who are engaged in and passionate about research are very important members of a clinical team. They work together and they work collaboratively. Clinical academics should have more dedicated time to do research. In the right environment, clinicians who are research active should have dedicated time within their working week to undertake activities, recruit patients to studies and so on. It depends on having a supportive NHS trust environment. Sometimes, in some places, the pressures of the NHS are such that the priority of looking after patients can never go away. That has to your first priority as a clinician, so it then becomes difficult.

Professor Waljit Dhillon: There is an important distinction in that clinical academics have some protected research time but, if it is 50/50, it will be 70/30, so there is pressure on clinical academics. Then, if you are a full-time NHS consultant, you will have a full-time job that is about 125% to 150% of hours, so actually there is no spare capacity.

We do not need to rehearse the service pressures in the NHS at the moment. Because patients are coming through the front door, they clearly have to be managed; that is where the research then suffers. There is a huge waste in the system of people who train in medicine, do some research for an MD or PhD, then go back to full-time practice. That is great, because they will be better doctors and give better patient care, but that is a huge untapped resource in the UK.

In a recent report that Paul Stewart referred to last week, the Academy of Medical Sciences talked about 20% of clinicians having 20% research time who were continuing to be productive in their research. You have a huge resource workforce there that could add value. At the moment, all those people are so pressurised by the service that we cannot deliver. There is a big distinction there. Clinical academics do not have the time and are pressurised, but full-time NHS clinicians who really want to be engaged in research just do not have any time at all.

The Chair: In a better situation in terms of numbers, what needs to be done to make sure that this time is allocated?

Professor Waljit Dhillon: That is a really good point. While we have such pressure on the NHS, trusts, healthcare and social care—whichever part of the healthcare system you look at—are so pressurised to deliver the healthcare. There are many underrepresented areas of research in health and social care. For example, I work with healthcare scientists. If we say to them, “Here’s some research money; please buy out some time for somebody to do some research”, they do not want it, as they cannot deliver the service and therefore do not have the personnel who would have time to do research. There are such acute pressures in the service that, although research is part of the NHS constitution, it becomes lip service in practice. Until you get that right for the NHS workforce, there are always going to be those pressures, particularly for people who are essentially full-time NHS clinicians with no research time.

Dr Katie Petty-Saphon: Time is clearly the major issue. Another difference between clinical academics and their NHS full-time consultant colleagues is that clinical academics tend to be the leaders who introduce new evidence-based clinical services. Also, if a consultant had a case that was highly specialised, they would tend to go to the clinical academic colleague to discuss it because those are the people who tend to be the clinical opinion leaders, collaborating between countries and between trusts and also industry. Clinical academics have a different range of experience, which is very useful, particularly for difficult, specialised situations.

- Q15 **Viscount Hanworth:** We have heard of declining numbers of clinical academics in recent years; this has been both an absolute decline and, more significantly, a decline as a proportion of NHS consultants. We are wondering whether the circumstances of the funding may have some effect. There is also the question regarding medical research staff employed by universities. University staff are seeking pay parity with primary school teachers, who are paid somewhat less than doctors. Could this, or other separate pay structures for the researchers we are talking

about, be a factor?

Dr Katie Petty-Saphon: There are definitely different pay structures starting to emerge. It is absolutely essential that clinical academics employed by the universities are on the same pay scales as NHS consultants. There would be no clinical academics employed by universities if that were not the case. The problem for the clinical academics is that the training is longer so, over their lifetime, it is possible that they will not earn as much as their NHS colleagues. There are all sorts of insecurities in the career pathway, but pay parity is essential.

The problem at the moment is that it is just starting to be eroded. There was a change in the contractual arrangements in April, which meant that clinical academics do not have the contractual right to apply for local clinical excellence awards whereas NHS-employed consultants now do. It is even worse for GPs. Since PCTs were dissolved a long time ago, NHS England has not got round to sorting out a contract that would allow academic GPs to apply for local clinical excellence awards. There is erosion happening; it has to be guarded against because you have to have pay parity.

Professor Rosalind Smyth: The NHS consultant numbers have gone from around 37,000 in 2011 to more than 53,000 currently, whereas the number of clinical academics which is around 3,000, has gone down slightly, but the overall proportion of clinical academics in the consultant workforce has gone from 8.6% to 5.7%, which is why we are all here today. We are a shrinking proportion of the overall population.

From my international work, I would say that the UK has one of the best clinical academic training pathways in the world. The training is critical because, once you get people into a job in a university that is equivalent to an NHS consultant in a hospital or general practice, they are much more secure. That training pathway has been very carefully planned and is a pathway from exiting medical school to entering into a permanent position, but it is vulnerable. It is particularly vulnerable for women, people in certain parts of the country or people in hard-pressed specialties. Then, when you bring in the great pressures that there are on the NHS at the minute, the Covid pandemic and so on, that heaps more vulnerability on it.

These are people who are aged between 30 and 40. They often have small children. They may have a partner who has a job fixed in a certain location. They have a mortgage to pay, and they want to take the less risky route. The less risky route is staying in a defined pathway in the NHS where what you have to do is become a competent, safe specialist and not, in addition, address all the requirements that the university quite rightly places upon you.

Viscount Hanworth: Do you see any attempts to address these circumstances, or is there an obtuseness on the part of the people who should be taking action?

Professor Waljit Dhillon: I completely agree with the point that has been made. The pay scales, particularly for allied health professionals, are a problem. For most doctors, there is pay parity across the NHS and universities but, for allied health professionals, we need a career structure, which we do not have.

The other issue affecting the NHS at senior level and clinical academics is pensions. Dr Hussain, who spoke last week, is a relatively new consultant, mentioned a tax bill that she is getting for a pension she may or may not take; it depends on the years you live after you retire. For pension reasons, the average age of a consultant retiring in the NHS is now 59. I have heard from colleagues that the average age at which a clinical academic should be retiring is about 55 for financial pension reasons.

I quote our Chancellor, Jeremy Hunt, when he was chair of the Health and Social Care Committee, and a report that his committee did on workforce in health and social care, published on 25 July this year: "It is a national scandal that senior doctors are being forced to reduce their working contribution to the NHS or to leave it entirely because of NHS pension arrangements ... the Government must act swiftly to establish an alternative scheme and prevent the early retirement of consultants from the NHS."

A similar problem for judges has been resolved, but this has not. A recent BMA survey suggested that up to 40% of senior consultants are thinking about retiring from the NHS and clinical academic work in the next year. That is an acute crisis that we need to tackle. In addition to that, as Professor Smyth has said, the number of clinical academics has not increased in line with the number of NHS consultants.

Viscount Hanworth: We all think that the pension issue is quite extraordinary.

The Chair: Did you say that clinical academics are likely to be retiring at 55 versus consultants at 59?

Professor Waljit Dhillon: The tax pension system is very complicated. You have to get a financial adviser. Both the financial advisers of two senior colleagues I have spoken to—one is running perinatal mortality for the country at the University of Oxford and one is a professor at UCL—have said that they need to retire at 55 or they will be penalised because of the pension tax. That is complete madness.

The Chair: There is not any reason why it should be a younger age for clinical academics than for clinicians generally.

Professor Waljit Dhillon: No, it is the same problem.

The Chair: Thank you very much for clarifying that.

Q16 **Baroness Walmsley:** We are now moving on to questions about funders. What do you view as the role of funders such as the MRC and the NIHR in supporting both clinical academics and clinicians who want to be engaged in research? Can you give us some examples of any programmes you are running to support these activities?

Professor Waljit Dhillon: We are in a really strong position, as was mentioned earlier. For me, coming up from medical school to where we are now, the UK is at the top of its game. We are producing more high-quality papers with impact in patient healthcare than the US, for example. We have less money but our impacts are much higher. We have an NHS that is incredible when it is working as a single NHS where you can get things done up and down the country. The incredible outputs from Covid were mentioned last week. We are world-leading in what we can do when we get it right and reduce bureaucracy. That could all disappear if we do not continue to build the next generation and keep the senior leaders.

On funders, Ros and I have sat on the MRC panel together. There are conversations between MRC and NIHR. It is probably the closest relationship we have had. For example, we have a joint scheme to bring back clinicians who have gone back into the NHS, both doctors and allied health professionals. It is called the clinical academic research partnerships—CARP—scheme. I will not bore you with the details—we will send you those later—but it is for people who have done a PhD or an MD and gone back to full-time service. They can apply for a grant for three years, and we can extend that to six years, to be able to come back into research part time. Those are the kinds of models we need to be creating.

As far as the funders are concerned, MRC and NIHR at least have great schemes in place. We can send you lots of details all the way up from predoctoral to professor, but it is the numbers of people we need to get through. One of the things that we need in terms of geography, levelling up and diversity is the talent pipeline.

As somebody from an ethnic minority background whose parents migrated in the 1960s, I was going to be an inner city GP. There were no doctors in my family. I went to medical school with a supportive family, and the Medical Research Council funded my intercalated BSc. That was my first taste of research. If I had been asked, "Why do you want to do any research if you want to be a good doctor?" I did not know the answer to that at the time. The BSc was the kick start to the rest of my career, which was 18 years of personal fellowships and then becoming dean. Personally, I would not be sitting in this chair had I not had that support early.

In terms of equality, diversity and levelling up, we need to have those research opportunities. If you are a medical student now, you are paying £9,000 in fees and £10,000 in living costs. You are not going to do that if you come from a working-class background in order to do a BSc that you do not see the value of as a naïve medical student (as I was).

In addition to that, in terms of equality, diversity and inclusion, Higher Education England has stopped a BSc counting in terms of points for junior doctors jobs. It still values academic commitment but that sent a big message to medical students up and down the country not to do a BSc. Imperial is one of the five medical schools that mandate a BSc but most medical schools do not, therefore the number of people being

exposed to research is a real problem. At NIHR, in conversation with the MRC, we are looking at the new medical schools, where there is very low research exposure for medical students. How do we get those really bright people and the leaders of the future? It is a really exciting place to be but we have everything to lose and so much to gain.

Professor Rosalind Smyth: I would endorse what Waljit has said. The MRC has increased the amount it is giving to support clinical academic careers from £20 million in 2017 to £38.5 million currently, so it is very focused on this. The training and careers group, which I chair, is very focused on diversity, including gender and geographical diversity.

The MRC has also focused its support on particularly vulnerable groups. The Academy of Medical Sciences runs the SUSTAIN programme, to which the MRC contributes, which takes a cohort of women through and gives them leadership development and support over a two-year period. It is also funding starter grants for clinical lecturers. I chair that panel, which is run by the Academy of Medical Sciences. It gives young people a chance to get their first grant, get their foot on the ladder and then move up through the university system.

The problem is that there are people working in hospitals in parts of the country where the voices they hear are from clinical supervisors and clinical guides who do not have much familiarity with the clinical academic track. They feel isolated. They are advised to get their clinical competencies, so that is what they become focused on.

I have been mentoring several women clinical academic trainees across the country over a number of years. This is a recurring issue. They say, "I've been advised of such and such and, because of that, I want to move into a full-time clinical role, perhaps doing some research". I hope I can persuade them to think, "Actually, maybe I can do it. Maybe it is possible". It is just about building that confidence and reassurance, enabling people to take what they see as a much more demanding pathway than they would do otherwise. The funders are on it. They are alert to it, but it is about targeting that funding where it is most needed for those individuals who feel isolated and vulnerable.

Q17 Baroness Walmsley: Before I move to Dr Petty-Saphon, can I ask a couple of supplementary questions that she may want to address about areas of patchiness? We have heard that the ability to engage with research is particularly bad for those in primary care, such as GPs, but also nurses and allied professionals. We have heard that they just do not have the time to engage with research. Is there anything more that the Government and funders of research can do to engage with them and enable them to do it?

The other question is about regional and devolved nation inequalities. We have heard that there are these inequalities, and the situation might vary depending on whether there is a wealthy medical school nearby or a trust that is in a good financial state to set up the positions. The trouble is that this can entrench health inequalities in the local area. We know that research produces better results for the patients but, if you do not have

the research, you do not have those good results. Again, what could the Government and research funders do to ensure that clinical academics can be employed everywhere around the UK, across all the regions and devolved nations?

Dr Katie Petty-Saphon: To answer the first half of the question, although we are not a funder, the Medical Schools Council tries to share best practice. We have been central in working with the other stakeholders to develop the 2018 guidance; Principles and Obligations in UK clinical academic training in medicine and dentistry.

We have set up a new website called the Clinical Academic Training and Careers Hub—CATCH—so we are trying to demystify what goes on and get the information across. With the GMC, we have also created the UK Medical Education Database, UKMED. Again, that allows researchers to probe from the data what influences people to take certain decisions. If you recruit people from deprived environments, are they going to go back and work there? We can now track these things. That was the first part, to add to what Ros and Waljit said.

I agree that inequalities are a really tricky problem. There is no such thing as a wealthy medical school or trust. That was in the dim and distant past, I fear, but clearly there are more established research centres that have resources and can support local people in trying to get things done. The problem is that, as one expands the places where people can train and do research, the smaller centres are inevitably not as well equipped as long established sites.

Because the universities are competing for the same pot of money, the funders are naturally going to want their money to be spent most wisely so will probably try to go to the more established centres. We need a positive strategy perhaps to ring-fence some money for the devolved regions or give benefit to a hub-and-spoke model where the established centres are actively encouraged and rewarded for working with communities elsewhere.

Baroness Walmsley: Can the Government do anything about that, or is it really up to the funders to set up that sort of mechanism?

Dr Katie Petty-Saphon: The Government could get involved where they are providing the money. Clearly, you would not be able to do that for charities, but there could be mechanisms. It seems to me that, particularly in primary care, we have a complete shortage of academic GPs. There might be some way for budgets to be used within the NHS to embed academic GPs in primary care in disadvantaged areas without the partners. GP practices are small businesses, in a way, so if they did not have to pay for the academic GP but they were there as an extra pair of hands, had students there and could try to influence the culture, that might be one thing the Government could do.

Baroness Walmsley: We might recommend to the Department for Levelling Up that something be done in that direction.

Dr Katie Petty-Saphon: Yes.

Professor Rosalind Smyth: I spent more than 20 years of my career in Liverpool bringing up a young family and pursuing a clinical academic career track. I felt very supported in that environment, but I was not in a position to move until my children went to university. People in those situations need to stay where they are, and we have to ensure that people can train in centres right across the country.

The MRC Training and Careers Group are very focused on that. The MRC is very focused on levelling up and making sure that more of the funding goes outside the greater south-east. There are no stronger arguments for that than the training and careers argument, given that you are often geographically fixed as a trainee. It is possible. There are some challenges, but funders are doing what they can to address them.

Professor Waljit Dhillon: If I can pick up the point on allied health professionals, as well as public health researchers and researchers in social care—we are health and social care now—NIHR has been really committed to this space, and MRC likewise. In terms of equality of opportunity for research in all healthcare professions, frankly, it is not there. For doctors and dentists, research has historically been a good thing to do. We have some structures in place. It is not sorted but at least there is a structure.

For allied health professionals, traditionally, there has not been a research background and there is no career structure at all. All the problems we have for doctors and dentists are even worse for allied health professionals, public health and social care researchers. We are actively looking at ways to improve this and completely committed to this. In fact, we had a nursing research summit in the summer 2022. On 24 November 2022, there was an allied health professionals summit where we got stakeholders and people on the ground together to ask, “How can we make this work?”

The other big issue for allied health professionals, for example, is that there are no university structures or joint appointments. That becomes very difficult. A lot of allied health professionals have to leave practice to do their research in order to have a career. That defeats the whole point of being a clinical academic, which is that your research feeds practice and your practice feeds research. If you see the clinical problem on the ground for your patients, you take that back to your research and see how you can make that better.

There are numerous examples of that. I was at a training meeting talking to the trainees. We had about 560 trainees in Leeds last week. A midwife was talking about her project looking at the psychological effects of people with drug addiction having their babies being taken into care. I thought, “How did she come up with that research question?” She told me she had seen it in her practice. We need people who are doing practice and research but we need the career structures for those allied health professionals.

In terms of geography, it is really important that we maintain excellence and do not just give money out. We do not want to be giving money out for poor research because that will not have an impact. We need to

maintain excellence, but how do we get that across the country? Again, we are working with the MRC, and the DHSC has given approval for new schemes for those underrepresented areas. In fact, in the Budget in autumn 2021, there was another £30 million for those underrepresented groups. We will be working over the next year or two to ask, "How can we get those really bright people at undergraduate level, pull them through and give them a research opportunity?" For example, I spoke to some maths graduates; because they had had this opportunity, they were now going into health economics.

Viscount Hanworth: Could you define "allied health professional" for us?

Professor Waljit Dhillon: It covers nurses, midwives, physios, occupational therapists, healthcare scientists and dieticians—everybody in the NHS and health and social care who is not a doctor, basically. All those professions have very little career structure but they are vital.

Baroness Walmsley: Did any recommendations come out of the conferences of allied professionals that you mentioned earlier that we could look at?

Professor Waljit Dhillon: We are trying to work with the stakeholders. It will not be a "one size fits all" for each of those professions because they all have different backgrounds. What we know, for example, is that there are physiotherapists in our schemes. All the NIHR fellowship schemes are open to anybody in healthcare and social care. In fact, we have specific schemes now in public health and social care to bring those people through. I was up in Sheffield at their academic training event two weeks ago. They are starting to pull together the trusts and the universities to ask, "How can we make this an attractive career structure?"

The other big thing in the NHS and social care that we have not talked about is retention. People come and go. The chair of the GMC said in a tweet recently that it is not doctors who do not want to do medicine any more; it is the NHS and social care that is not a fit place for bright young people to have a career. It is putting people off. We need to re-establish that. We do not want to go back to the good old days but, when I was a junior doctor, at least there was a team approach; you felt part of a team and supported by the NHS. I am really proud of what the NHS can do. I just fear that we are going to lose that.

Q18 **Baroness Manningham-Buller:** I wanted to ask a question about the pipeline, but the panel has already covered bits of that. Indeed, Professor Dhillon's last point was about putting people off and the difficulty of balancing these two aspects that we are exploring.

Although you have covered some of these things in bits, let us take it as one. We heard last week that there are significant concerns about pipeline. Do you know how many people are now being attracted to this and what the fall-off is? You touched on it earlier, Professor Smyth. The committee is interested not only in about being absolutely clear what the problem is but in what our recommendations to address it could be. How acute is it? Clarify the problem and what this committee should

recommend to address it.

Professor Waljit Dhillon: On a positive note, with all the changes that NIHR, MRC and other funders have made over the past 16 or 17 years since NIHR began, we are in a really great place, as I said. On research professors, at the top of the NIHR, these are £2 million awards for the next leaders. In the last round, we had four women and two males being appointed. That is a massive shift from where we were, and this is not because of levelling up or anything else. We put people in the room, they compete against each other and, once you do that, you get those people coming through. We are in a great place.

The reason there is a talent pipeline issue is that, over the past few years, there seems to be a reduction in the value of research for medical students, for example. I mentioned the intercalated BSc. In my head at least, 20 years ago, there would have been no point in me doing a BSc even if I got a scholarship to do it because it does not seem to count now. Obviously, that is naive, but I was naive when I was 18.

People are seeing the service pressures, as Professor Smyth said, and are then potentially being put off from doing a BSc, which would be their first taste of research. Mid-way through your training, there are the pressures of general and specialist training, academic pressures and pressures if you want a family. That is almost too much for a lot of people. Then there are the security issues in terms of long-term posts.

Baroness Manningham-Buller: Would you like to see a BSc more included in other universities? You mentioned Imperial but what about beyond that?

Professor Waljit Dhillon: With what we are doing, for example in new medical schools, that is an acute emergency that we are trying to address now. I had this discussion with some of the trainees recently. If you asked any medical student, "If you got a place at any medical school, would you go?", of course they would. They are not going to medical school to do a BSc or research. They do not come to Imperial necessarily to do research— they come because it is a good medical school—but, compared to the research opportunities at Imperial, which has a mandated BSc, at a new medical school, where there may be very little research infrastructure, you are going to miss those really bright people who think differently and will innovate in the NHS. That, for me, is what we need to change acutely. We do not necessarily need every medical student to do a BSc but we need every medical student, and other healthcare and social care professionals, to be exposed to research with a short placement.

Baroness Manningham-Buller: So that there is the possibility of doing it.

Professor Waljit Dhillon: Then you light the spark and you say, "Great". That is what happened to me, which is why I am passionate about it.

Professor Rosalind Smyth: The pipeline is under threat. From the MRC's perspective, we have not seen a fall-off in the numbers of people

applying for clinical research training fellowships, to do a PhD, or clinician scientist fellowships, which are postdoctoral. The proportion of women declines as you go up the ladder. It is about equal at CRTF, then it is 40% at CSF, then it is much lower at senior fellowship level.

The MRC is part of a very effective funding ecosystem that operates with NIHR, the charity funders including the Wellcome Trust, to support these clinical academic trainees. Some parts of that system are under threat—particularly medical research charities, which have lost quite a lot of income during Covid and currently. When there are threats such as that, that will reduce the overall number. The pipeline is suffering at the minute.

Baroness Manningham-Buller: Do you have any solutions that we could suggest to mitigate the suffering?

Professor Rosalind Smyth: Maintain the funding and increase it, if that is possible, because there will be a loss from charity funding. Look at important funding streams around mentorship support. Make sure that the environment that surrounds people when they are making decisions about their next step supports them into an academic post, rather than just focusing on the clinical side.

Baroness Manningham-Buller: You were describing the women you are mentoring who are not getting that input.

Dr Katie Petty-Saphon: The pipeline is in terribly bad shape because the clinical academic workforce is ageing. There are 1,060 clinical academics who are aged 55 and over and only 750 who are in the 35-to-45 age group. We have 300 fewer academics to replace those who are going to retire in the next 10 years.

Baroness Manningham-Buller: Who are possibly retiring partly because of the pension issue.

Dr Katie Petty-Saphon: That will certainly add to it; that is right. If you go back 10 years, it was the other way round. There were 280 more young clinical academics in the 35-to-45 age group compared with the over-55s. This problem has been getting worse for the past 10 years and not enough has been done.

What could we do? You have already put out some ideas. We mentioned the terms and conditions. It is very unfortunate that when the negotiations happened over the consultant contract, they gave the contractual right to apply for local clinical excellence awards to NHS consultants and completely forgot about clinical academics. Similarly, I know of a trust where they gave a Christmas bonus to staff as thanks for all the effort they had put in during Covid and they forgot about the clinical academics, who did not get a bonus. Small things like that mount up. Clinical academics need to be more central and more part of the team. That is really important.

Q19 **Baroness Rock:** I would like to come on to the competing interests and incentives. We have heard a lot that part of the issue with clinical academics, as well as research at the interface, is co-ordinating all the

different interests and incentives involved, with universities, postgrads and deans having different interests from research funders. Obviously, these are different again from the NHS trust or hospital that the consultant is associated with. Can the panel give us some solutions on how we can align these competing interests and incentives on behalf of all parties?

Professor Waljit Dhillon: At the very top level, as I said, research is part of the NHS constitution, part of what trusts are supposed to deliver and part of what integrated care boards are supposed to deliver, but service takes such pressure and there are no metrics for that. As part of all those organisations, we could make research one of the mandatory things that we judge against, like the four-hour targets that no longer exist. We could ask, "What are you doing for research? How much spend is there? What is your research output?" Research could be part of assessment criteria just like delivering patient care, just like somebody coming through A&E, the number of operations you have or the number of out-patient waiting slots you have.

That is not just for the major hospitals; that is for smaller hospitals and the district general hospitals as well. Covid showed what we can do. It is incredible what this country did during Covid. Most clinicians on the wards who were full-time NHS consultant were participating in research. We can do this but we need the drivers in place.

As Paul Stewart said last week, we have moved from the recommendations when the job plans came in. If you divide a 40-hour week into ten, four-hour blocks, you are supposed to have 7.5 of those blocks dedicated purely to delivering care, with, for an NHS consultant, 2.5 for delivering research, teaching and continuing professional development. As that gets squeezed, you are telling your workforce that research and things other than service are not important. It is about the drivers for those institutions to be able to say, "Research is really important". The way we get ourselves out of the mess we are in now for clinical service pressure is research, innovation and doing things differently. If we carry on doing what we have always been doing, we will not make progress. We need to move more into digital health et cetera, which we can talk about another day.

Professor Rosalind Smyth: You have hit the nail on the head. There is a need for a culture change in the NHS. As a number of us have said, the structures are there. They exist. There is a set of principles, as has been outlined. For example, if somebody is in a research post and needs to go on maternity leave, the fact that they have moved into the university to do their research post means that their time is accrued, they are entitled to full maternity leave and so forth.

That is all there but, if you will, it is the micro-nuances that are made in people's everyday working lives that have to change. If you want to be a successful clinical academic, you have to be able to make yourself unpopular. You have to be able to say, "I am sorry. I can't come and do that extra clinic because this is my research day. I have a whole stack of experiments planned and that is what I need to do today". That is

unpopular. People who do not feel comfortable with saying that end up not pursuing their research in the way that they should do and, therefore, end up not being successful as a clinical academic and then choosing the more straightforward option to pursue the entirely clinical route.

We need to change that culture at every single level from the top down but also from the bottom up so that the middle managers in the NHS know that their bosses value this, that this is important and that there are certain lines that should not be crossed.

Baroness Rock: It is very much around the importance of culture and changing that culture.

Professor Rosalind Smyth: I think so, so that everybody working in the NHS—there is a huge range of people—gets that this is important, that this person is working clinically on such and such a day and that they can be contacted about clinical matters, but, on other days, they are working in the university. That is what they should be allowed to do.

Dr Katie Petty-Saphon: As well as the culture, it is about raising the profile of research. There are some very simple things that could be done. For example, trust boards rarely discuss research and education. If one simply had a framework for trusts to demonstrate how they were doing compared with neighbouring trusts, for example, in terms of the patients recruited and commitment to research—and the same things for education—that would help to raise the profile.

The Integrated Care Systems that are being set up do not necessarily align closely with university research strategic priorities. If you had better alignment between the ICSs and the whole healthcare research system, that would be better. As everyone said, there are systems there. There is a body called the Office for the Strategic Coordination of Health Research—OSCHR—which Lord Kakkar chairs. That brings together all the funders across the four nations; it really is important to try to work together. Perhaps that could have more of a role in promoting clinical academic careers and trying to do something on that front.

Q20 Lord Krebs: In a way, we have already discussed the point I was going to ask about, which was to do with pay, pensions and career progression for clinical academics. I want to recast my question slightly and ask you each to give a succinct answer, if you can. I have heard in the past 45 minutes about a range of headwinds that face you if you want to become a clinical academic, including pay and pensions. We have talked about the pressure to do clinical work and how that can prevent you engaging in research. We have heard about the need for mentoring, role models and support; training opportunities and career structure; a culture in the NHS that recognises the importance of research; and the infrastructure and environment in the institution that would foster research by clinicians.

I just wonder whether it is possible for you to say which of this list of headwinds are the most important two or three. Maybe you would say that they are all equally important and you cannot dissect them out, but I just wanted to ask that question.

Professor Waljit Dhillon: I will stick with your challenge of the top two. The pension issue needs addressing really quickly to stop the senior workforce going. Then it is the talent pipeline, as we have discussed, in terms of early research for all healthcare professionals and everybody having some opportunity to research. In the postdoctoral period, there is a need for increased funding so that people do not jump into an NHS consultant post or the equivalent.

The Government introduced the HEFCE clinical senior lecturers scheme 10 years ago. There were 50 posts a year for five years, at 50/50 NHS and research, then the university would take them on. That scheme was stopped quite early, in my opinion; it would be very easy to look back at that. I know a number of people who were on that scheme. It is the stepping stone where you say to a university, "Do you want to take on a clinical senior lecturer?" If they say, "Well, we haven't got the money", you say, "Here's half the money for five years; half comes from the NHS. You've got embedded clinical academics". Professor Lucy Chappell was one of the recipients of that award, I think. She is now the CSA and the head of NIHR. I know of a number of other examples of people going through that scheme. That would be an easy way, at a relatively low cost, to boost the workforce and address all these challenges.

Professor Rosalind Smyth: The first thing is greater security that, if you pursue a clinical academic training pathway, there will be a university opportunity at the end. The MRC has its fellowship schemes but the clinician scientist fellowship was four and is now five years. What happens beyond that? Do they have to move? What will happen if there is no university role to apply for?

The second thing is culture and supporting people to be as resilient as they can but also not to need to be resilient because everybody understands and provides a supportive environment.

Dr Katie Petty-Saphon: It really is about trying to resolve the difficulty at the postdoctoral phase at the moment. More than 50% of people doing PhDs are women but, afterwards, there is this big gap where it is really difficult to get a clinical lectureship. If we had more funding at that stage and there was a more obvious way into the career, for the two reasons you have already been given, that would be a big step forwards in helping.

We could also raise the profile by saying, "If you have the ability to be a clinical academic, you're going to have a much more interesting career than you would with 40 years in out-patients". It has a lot to offer as a career; perhaps just making sure people realise that would be helpful, too.

Q21 **Baroness Warwick of Undercliffe:** Right at the start, we looked at the huge benefits and value not just to patients but to the health system more generally and, indeed, the country, of the research done in the health service. We then looked at the enormous number of problems. I wonder whether I could go more broadly for this final question. When considering the NHS as a test bed for research, are we actually using it to its full potential? I wonder whether you could give us some specific

examples that we could use in our recommendations to illustrate that.

Professor Waljit Dhillon: As I mentioned, the NHS is amazing and people underestimate how much impact it has. You are seeing experts for free. In America, you would be paying thousands and thousands of pounds. Everybody is committed to delivering the care but, if we are going to make the system better, we need to have research as part of that.

The NHS is sitting there as a test bed. We have the patients. We can do complex studies in this country that other places cannot. Other places are good at doing healthy volunteer studies but, because of the network we have in the NHS, you can have a study up and running in NIHR-funded infrastructure up and down the country. We can get trials up and running and deliver them, particularly with complex and difficult-to-reach patients.

The problem is that, if you are prioritising only service and not research, you do not have the people in the system. I go back to the example of Covid. It is unbelievable what was achieved by this country above all others in delivering benefits for patients. When you start reducing the bureaucracy, you have everybody on board. That had its downsides as well because all we did was Covid. We cannot do that for every single speciality but, if we move towards the NHS being about delivery of care and the best for our patients, but also research and innovation to get better care, we will move forward. We need a shift in the dial from 1% funding for research in the NHS. Most organisations that want to develop would spend 10% of the money in their organisation on research. We have a long way to go. You then target that money and the infrastructure to those underrepresented areas, pulling people through in multidisciplinary health and social care.

Dr Katie Petty-Saphon: In order to take real benefit from the NHS and the vast amount of data that is there, we need the IT systems to work between the NHS and universities. Effective digital connectivity is essential. If some effort could be put into that in the NHS, that would really help.

Professor Rosalind Smyth: I am incredibly proud and privileged to have worked in the NHS for all my career. The big advantage is that we have one NHS. If you go to America, there are loads of separate hospitals and different systems. If we want to do studies in the NHS, we potentially have access to all the patients in the country. The NIHR has done a huge amount to maximise the potential of one NHS for recruiting to multicentre trials, but we need to do more to accelerate the big data opportunities and harness, in an entirely safe and confidential way, the data potential in individual trusts. For children, we can link that to educational data and see whether they are at the same year at school that one would expect. It is incredibly powerful. People are working very hard but there are obstacles. If we can break down those obstacles and resolve the issues, we will have a health service that is the envy of the world.

The Chair: A very big thank you to our witnesses. You have left us a mixture of inspired and depressed by the evidence you have given us. Just to remind you, if you think of anything that you wish you had said or any data that you think we would find useful, we would be very pleased to receive that from you as formal evidence. That is the end of this evidence session.