HOUSE OF LORDS

Preterm Birth Committee

Corrected oral evidence: Preterm birth

Monday 20 May 2024

3 pm

Watch the meeting

Members present: Lord Patel (The Chair); Baroness Blackstone; Baroness Cumberlege; Lord Hampton; Baroness Hughes of Stretford; Baroness Owen of Alderley Edge; Baroness Seccombe; Baroness Watkins of Tavistock; Lord Winston; Baroness Wyld.

Evidence Session No. 17 Heard in Public Questions 230 - 238

Witnesses

I: Dr Jessica Boname, Interim Head of Population and Systems Medicine, Medical Research Council; Louise Wren, Director of External Affairs, Association of Medical Research Charities.

Examination of witnesses

Dr Jessica Boname and Louise Wren.

Q230 **The Chair:** Good afternoon to our witnesses. Thank you for coming to help us today with your evidence. Although it is a short session, we regard it as important, because we need to know about research areas and we want to get information that will help us in our report. Before I start the session and questions, would you introduce yourselves so that we get your name and designation on record?

Dr Jessica Boname: I am the acting head of the population and systems medicine board at the Medical Research Council. Previously, when I joined the MRC, I had the portfolio for women and child health, so I have a bit of history in research funding in this area.

The Chair: Thank you.

Louise Wren: I am director of external affairs at the Association of Medical Research Charities. We are the member organisation for just over 150 medical and health charities funding research in the UK. You have already met a number of our members at previous evidence sessions. Also, for the record, my youngest son was born 10 weeks early a few

years ago, so I have some personal experience of the topic. That is not why I am here today, but I wanted to mention it and say that I am really grateful to the committee for inquiring into this important area.

The Chair: Thank you for that information. How premature was your son?

Louise Wren: A 30-weeker.

The Chair: He is doing well?

Louise Wren: He is a wonderful two and a half year-old, who is having tantrums like any other two and a half year-old. He is doing very well, thank you.

Q231 **The Chair:** It is good to hear that, particularly about the tantrums. Thank you. We have heard a lot of evidence about research that is going on, on the maternal side and on the neonatal side. My first question is to the Medical Research Council—so UKRI. What kind of research is the Medical Research Council funding on the maternal side of preterm labour and on neonatology and preterm births?

Dr Jessica Boname: We fund everything, including mechanistic underpinning, understanding of pregnancy and diseases that may manifest in preterm birth, through to more translational activities, which include early phase clinical trials to test different diagnostics or different ways of treating preterm birth. It is quite a large portfolio of activity and is resourced through different funding activities. The board underpins mechanistic research all the way through to co-funded activity with NIHR. We work in partnership to fund clinical trials.

The Chair: Can you give us any of the areas and the amounts of money that you are talking about?

Dr Jessica Boname: The spend that we had over the last five years has slowly been increasing, from £7.5 million in 2018-19 to just under £13 million in 2022-23. That is for preterm birth and perinatal health. The funding for just preterm birth has averaged about £4.6 million per annum over the last five years. It has been rather static but continuous funding.

The Chair: Most of it is related to preterm births, rather than the prevention of preterm babies. Is that correct?

Dr Jessica Boname: It is a combination of things. We code our activity for the portfolio to see whether it is research relevant to preterm birth. Some of it will be about prevention. In the examples I have, there are not a lot of examples of prevention of preterm birth. It is more in the mechanistic understanding of what is going on.

The Chair: The amount you quote does not sound much compared with other areas of medical research funding. Would that be a true statement? Is that because there are not enough applications or that the quality is not so good? What is your assessment?

Dr Jessica Boname: I agree. Compared with other areas of research, it is relatively low, but when we look at success rates—the marker of how many applications we receive relative to how many we fund—the preterm birth research sits at about 34% or 35%, and is above the average, which is 20%, for our applications across the board. It is fair to say that we fund excellent research when it comes in, but we do not receive that many applications.

The Chair: In the evidence, we have heard that you have a programme grant in neonatal preterm research, but we have no programme grants in any research related to the maternal side. Is that correct—we do not have reproductive health programmes?

Dr Jessica Boname: I would have to look. I would have to find out whether we have any programmes, because I do not have that level of detail in front of me. We fund according to research excellence and according to the applications we receive. If we receive very high-quality, excellent research applications and we have sufficient funds to be able to fund, we will fund programmes.

The Chair: Coming to the Association of Medical Research Charities, we were made aware of a significant grant, an international, global grant from the Wellcome Trust called Leap. We heard a lot from other charities, such as Bliss, Tommy's and the research charity at the Chelsea and Westminster Hospital, which fund their own areas of research identified by their own research teams. Can you give a general feeling about what the Association of Medical Research Charities funds? Presumably, it is not based on excellence; it is based on ideas that come through.

Louise Wren: Absolutely. The ideas that come through and the research that our members fund is absolutely excellent. What is interesting is that you met the four of our members with a laser focus on pregnancy, stillbirth, preterm birth and neonatal care. We looked at the portfolio, and an additional 30 of our members are funding in and around this space to a greater or lesser extent. That is important to recognise, because funding does not always come from the sources that you might expect.

I want to flag a special arrangement recently at Tommy's where it has established a centre for preterm birth research that brings together five universities with researchers who are expert in the space. It is a critical mass and brings together different teams that are specialist in the area. It is so important as a beacon for further collaboration and further investment.

The Chair: That is good news. Go ahead.

Louise Wren: I was just going to agree that it is, yes. It is wonderful news.

Dr Jessica Boname: In conjunction with that Tommy's centre, MRC has funded a biobank for reproductive health to support and provide resources for the research community to build strong research grants.

The Chair: What you just told us about Tommy's now working with five different universities is interesting. We found in our discussions of the evidence that there was lack of focus in the areas where research ought to be focused to identify causes of preterm labour and other issues. I may come back to that.

Baroness Watkins of Tavistock: I want to identify whether it is St Thomas's special trustees that are funding the five universities they work with or whether it is Tommy's, the charity.

Louise Wren: It is Tommy's, the charity.

Baroness Watkins of Tavistock: How much money is that?

Louise Wren: I can get those figures for you and send them over.

Baroness Watkins of Tavistock: That would be really helpful, because it will be less than if it was the other body, which is extremely wealthy. That is why I was asking. Thank you.

Q232 **Lord Winston:** We are finding that the amount of money spent on research in this area is pretty disappointing. It is important to understand that if you look at women's health overall, and what we have heard about the amount of money being spent on research into women's health, the massive area is understanding the mechanism of labour and the phenotype of premature birth. We did not get the impression that very much fundamental, basic research was going on in that area; £4.6 million, or thereabouts, given to preterm birth research is a tiny amount compared to the need to have really good genetics and chemistry going on in a major unit. Jessica Boname, could I ask you first what you feel about that?

Dr Jessica Boname: I agree that the level of funding seems to be quite small, but, as I said before, we can only award funding for the applications that come in to us. In terms of research breadth, that is what is coming in to us. We have a high success rate for applicants who apply.

We rely on the research community to identify the areas of biggest need—the most important unmet need—and to make the argument and present the case for why the research is needed, and the evidence that the methodology and the feasibility of the studies will be high. That is the governance around how we decide what we will fund through response mode—investigator-led research. It is unfair for the research councils, or it would not be right for us, to be telling the community what we need to spend our money on. It is important that we have a strong, vibrant response mode where we can be agile and respond to the needs of the research community and the country.

Lord Winston: That is a very helpful answer. Do you feel, as we have found in other Select Committees, that, for example, enough clinical academic research is going on generally in this whole field? It seems to me very much that clinical academic medicine has suffered a great deal.

Certainly, our research council found that medical academic research is inadequate; there is not enough basic research going on and we are not attracting enough people. Do you share that view? You have done extremely well in funding so many projects, but the money is very thinly spread, is it not?

Dr Jessica Boname: It is very thinly spread. I agree with you on the lack of clinical academics who are undertaking research. That is a problem we see across the breadth of our research portfolio. There has been an OSCHR review of the problem. It is currently consulting other stakeholders to see how we can address that issue. It is an issue that has been recognised for a number of years. It is proving difficult to attract strong academic clinical researchers to come into the field in the first place or to remain, once they have started to do research, in academic research. So, yes.

Lord Winston: Could I ask you to speculate, if you would, on whether you feel that is because of the way the health service is structured to deliver clinical needs, so that comes very much as a priority, or because we do not attract enough people who can do a PhD and then go on to do something that would be a bit more basic in this area of research?

Dr Jessica Boname: I am probably not the best qualified to speculate on a clinical academic career. I did basic research. I have a PhD, but I did not do a clinical degree. However, I have heard it said that one of the barriers to doing clinical academic research is the number of hours people have outside their programme of work. The number of hours they are allocated to be able to conduct clinical research seems to be an issue and it is something for the wider community—the NHS, the NIHR and the research councils—to investigate and try to solve.

Lord Winston: I think this committee might well agree with you about that. What about the Association of Medical Research Charities? Presumably, you are already funding on a slightly different basis, because most of your funders are relatively small charities. Are there any big ones included in that group that are doing basic women's health?

Louise Wren: Absolutely. It is 34, if you include the charities with a laser focus on these areas. Within that group, there are charities of all sizes. I can share the list with the committee after this session. Absolutely, the big charities are in there as well.

Lord Winston: Jessica, could I return to you with one other question before I conclude, because there is a lot to get through? You say that you are funding 35% of the projects, which by UKRI standards is very high. As you say, it is usually about 20%. Are you tracking the projects that you do not fund, or do you just accept the fact that you are not funding them and leave it to somebody else to deal with? Is there a risk that we might be missing some of the research that we should be funding but are not?

Dr Jessica Boname: We do not actively track applications that do not get funded. We allow people to come back, and we see people coming back, for what we call a resubmission. By allowing people to resubmit grants and by them taking into consideration the critique of the reviewers, it should improve the chances of funding and, indeed, we see an increase in the strength. I do not know about just preterm birth applications per se, but in our research portfolio as a whole we see that often some of those applications are successful. The ability to refine research by iteration is a really important way of improving the chances of getting funding.

Lord Winston: One of our active leading research people in this country is David MacIntyre, working at the Institute of Reproductive and Developmental Biology at Imperial College. He says that exactly the same problem is true in the United States as it is here: inadequate research going on in this area of women's health. Do you agree?

Dr Jessica Boname: I am not sure whether the funding is inadequate. It is what we have in resource to be able to fund excellent research across the piece. I agree that we do not have as much money as we would like to have to be able to fund all the excellent research that comes through to us. I am not sure we can do anything about that right now unless we get more money in the research and innovation space.

Lord Winston: Thank you.

Q233 **Baroness Blackstone:** To follow up Lord Winston's questions, you have made the case very clearly, Dr Boname, that you fund a high proportion of the applications that you receive, and that it is a matter of not enough applications rather than poor allocation of those who apply. Is there something about this specialty that leads to fewer people doing research? There are many other areas of medicine where the proportion of clinical academics and even the proportion of clinicians doing research is quite high. Is it low in obstetrics, and what might be the reason?

Dr Jessica Boname: I do not think I am best qualified to answer that.

Baroness Blackstone: I realise that is not a question for you. I may need to ask somebody else.

Dr Jessica Boname: Maybe the Royal College of Obstetricians and Gynaecologists.

Baroness Blackstone: I should have declared an interest. I am the chairman of the trustees of the RCOG. I can certainly take it back to them and ask what they think.

Louise Wren: Might I add something? Preparing for this committee was interesting, because a number of the barriers I want to discuss with you are not specific to preterm research at all, but it is important for the committee to recognise them. The first is research in the NHS and the second is clinical academics.

It is important to make sure that research is not viewed as just a "nice to have" in the NHS. It is a key part of improving care. It is a key part of improving treatment. The AMRC does a lot of work to make the case for embedding research as part of the health system, which is not an easy task, of course. It is about making sure that people who are interested in research are supported, and that people who are delivering research have protected time, and seeing this as a critical part of the NHS. It is not just clinicians, but nurses, allied health professionals and GPs. In this context, midwives are critical.

On clinical academics, I know that the committee is well aware of the issues and the plummeting numbers. We have already discussed it today. The OSCHR group is looking into this area, so the findings of that group should be implemented, when they arrive. I understand that they will soon be launching a subgroup looking at nurses and midwives. It is really important to watch that space, because they are a critical group and not much focus has been delivered there in the past.

Baroness Cumberlege: I am really interested that you should mention midwives. When I have been on the patch and talked to a lot of them, I have been very surprised by how well informed they are and how they want to drive the service further forward. On the research front, with preterm births specifically, because this is the area that we are trying to hone down to some degree, how many applications have you received in recent years on this particular part of neonatology and preterm?

Louise Wren: It is a really good question, but I am afraid I do not have the data. It is something you would have to speak to our members about.

Baroness Cumberlege: There is no reason why you should. You can always write to us, if you want to do that.

Q234 **The Chair:** May I come back briefly to what Lord Winston brought out? It came out in several sessions of evidence, particularly related to research, and we had a lot of sessions. There is a lot of research going on, mostly funded by charities, but it appears that, in a way, the charities are funding more research compared to the excellent research that you fund from MRC. I do not know about the amount of money put in, which Baroness Watkins alluded to.

First, it appeared that there was no focus on the amount of research going on, having identified the key areas that research should be focused on, and, secondly, that there is no discovery science being researched or funded. When you have a programme grant, as there is in neonatology, PhDs—like you—and other interested scientists work together with clinical academics, which forms a team of basic scientists and clinical academics. If that does not happen and so the clinicians work on the clinical aspects, and the research then focuses on the causes of what happens down the line, it is less valuable.

What is important is that at the same time there is some discovery science research being carried out—for instance, on the causes or the

mechanisms of parturition and how it differs from mechanisms of cellular and molecular biology in preterm labour. Unless we fund that, we will never find a treatment for preterm labour. Just the same as in neonatology, what you are funding now will, hopefully, find a treatment for reducing complications such as intraventricular haemorrhage and respiratory related complications in preterm babies, so is it time for the MRC and the AMRC to get together to identify and focus on areas of research that then can be funded? The five universities and Tommy's may well do clinical aspects of some research, but I am pretty sure that they will not do any discovery science research. UKRI and MRC did it in ageing science. Why can you not do it in preterm labour and preterm neonatal research?

Dr Jessica Boname: Thank you for the question. It is very interesting. We work in partnership to be able to maximise the amount of research that we can fund. One aspect I can highlight is that the charity Borne co-funds with us early fellowships to try to encourage researchers to enter into research on preterm birth.

As to how we fund research, we supported the James Lind Alliance objective-setting exercise a number of years ago. That exercise helped to identify the important areas of unmet need in research in pregnancy. Part of that identification of areas of unmet need has happened. We rely on our research community to bring us the important questions. We support interdisciplinary research, where we see academic clinicians working with basic scientists, midwives or other allied health professionals to try to bring the most important and relevant expertise together to bear on a problem, but we rely on the research community to bring those ideas through to us.

You are correct in saying that we have supported interdisciplinary activity through UKRI, which brought all the councils together to support ageing research. There is a possibility that something might happen in the future. We have not identified that scenario of unmet need.

Lord Winston: I am very sorry. I certainly do not mean to be at all critical, but I am unhappy about that response, which seems to me to be passive. Surely, as a research council, you should be identifying the key areas where there is a real need for better science.

Dr Jessica Boname: Yes.

Lord Winston: Surely, making your call for projects, for example, or a call for areas, is something that research councils do, and certainly the MRC does that quite regularly in other areas. As far as I am aware, nothing has happened in this area, which is a massive national need. We are looking at something that causes huge damage to a large number of young people right through their life as a result of being born prematurely. Many babies die in consequence. It is very unsatisfactory not to say, "Look, this is a big problem we need to do something about".

Dr Jessica Boname: I agree that we run workshops where we identify priority areas. Usually, those are areas where the response mode mechanism is failing, so we are not getting success rates that are in line with our average. We would argue that that response mode is supporting the community effectively. I note that we have recently had a change in the chair of the population and systems medicine board. Louise Kenny came in as chair in April. One of the things that we will be doing in the future is re-evaluating our priority areas and looking at whether we need to refresh our current priority strategy areas. I cannot presuppose what those areas will be. It is a decision for the whole board.

Lord Winston: That is helpful, thank you.

Q235 **Baroness Watkins of Tavistock:** My questions are about the barriers that are perhaps preventing you funding and conducting more research in this area. You have explained about the amount of finance you have. What I am trying to understand is this. You are supporting so many grants, but I do not know whether the magnitude of those, relating to investment, reflects some others. In other words, if one in five gets something in relation, say, to ageing, is it still tiny, or is it a substantial amount of your total budget?

Can you identify two or three factors that make it difficult? I believe one of them might be about recruiting to trials. Once I know I have cancer, I will be pretty keen to be recruited into a trial, but if you suddenly go into labour, there is a slightly different scenario about whether you will be recruited into a trial. Could you pick up those two issues?

Dr Jessica Boname: Yes. We fund a range of size of grants relevant to preterm birth and pregnancy research. We fund small activities and quite large ones. One strategic activity that involved cross-council working was identifying clusters of multiple long-term conditions research. One of the grants we funded, which was fairly substantive, was to somebody studying obesity in pregnant women and the effect that had on their pregnancies. That was quite a substantive amount of funding. I believe the original scale was £2 million or £3 million over four years. We have some fellowships that were funded previously; they have finished now. We have a lot of very small-scale activities.

I think your second question was on ability to recruit people to studies.

Baroness Watkins of Tavistock: Is that a barrier to applications in this area?

Dr Jessica Boname: I do not think so, because we have a number of longitudinal population studies that recruit people when they become pregnant. The resources and information collected from those women are available or made available to other researchers to be able to understand. Once they have given birth, the information about their pregnancy and a number of other factors will be made available so that they can use that information for epidemiological studies to try to find out more.

Implementing or putting in place interventions during pregnancy is a different matter. I am not aware of any studies that MRC funds, per se. We fund one mechanism of funding in partnership with the NIHR called the efficacy and mechanism evaluation programme, which sometimes looks at interventions that might be relevant to preterm birth. That is a very broad activity, and only one or two studies would be funded within that activity.

Baroness Watkins of Tavistock: The previous two questions covered a lot about the difficulty of the clinical academic workforce. You have acknowledged that and, as you say, there is the recent OSCHR report. Regarding international collaboration, have you received requests for funds in relation to preterm birth in international studies at all?

Dr Jessica Boname: Yes, MRC undertakes research where the research is needed and in the context where it is needed. Preterm birth is the subject of a number of applications that we see in an international context, often in low and middle-income country research where other factors are driving preterm birth, and the strength of signal is larger there. In a way, it can provide information that is relevant to the UK context as well.

Baroness Watkins of Tavistock: Thank you.

Q236 **Baroness Blackstone:** Could you tell us a little about the way in which industry collaborates with public bodies in the development of research on pregnancy generally, and more specifically on preterm pregnancy?

Louise Wren: I was going to say that collaboration is incredibly important, so I was pleased to hear that the committee might ask about this area. It is important to have a deep understanding of what different partners bring to the collaboration. One of the best ways to attract industry and drive more collaboration is to address some of the barriers that we have talked about already. The UK population is very diverse. If we make clinical research as diverse as possible, serving all of the population affected by a condition, that will be attractive to industry and will drive more investment into the UK.

On a practical level, there are things like the NIHR challenge on maternity and inequalities. Industry can be involved in the consortia that that scheme will accept applications from. The Tommy's centre acts as a beacon for collaboration, because it is a shining light of universities with specialisms in the area. Things like that are incredibly important for collaboration.

Dr Jessica Boname: MRC has in place something that we call the MRC industry collaboration framework. It sets out a number of things to consider when academic researchers are going to undertake research in partnership with industry. We do not tell people how to do things; we explain the things to consider. Often, intellectual property is an important consideration when working with industry, so we set out a framework that allows academics to put in place the safeguards and agreements that

they need to ensure that the academic partner gets adequate recognition for the foreground IP—the intellectual property generated through the research that we have funded. The MRC is not allowed to fund industry directly; we have to work in partnership with an academic collaboration.

Baroness Blackstone: I understand that. We had representatives giving evidence who said that the pharmaceutical industry would like to do more research, but they find it extremely difficult to do so. Are there things that both charities and public health organisations can do to facilitate that kind of collaboration and make it a bit easier for them? If you look at outcomes, very few new drugs have been developed as a result of research on pregnancy and on preterm birth specifically.

Dr Jessica Boname: We look actively to partner with industry on some activities. The MRC recently launched something called the AstraZeneca industry partnership for academic clinicians. It is to provide funding to allow academics to go to AstraZeneca facilities and use their experience and exposure to clinical drug development to support the academic pipeline, to help people to understand what is required and how they might do things. We have previously done similar partnership activities. When we are able to, we try to encourage industry-academic collaboration, because translation of outcomes from the basic research that the MRC funds, the mechanistic research, will do nobody any good unless the outcomes are translated into policy or practice, or new drugs, therapies or diagnostics. It is important that we facilitate the pathway to translation of research.

Baroness Blackstone: I should probably know this, but I do not. Which of the charities that you deal with in this area are the most likely to raise money for research and then to collaborate with the pharmaceutical industry, the MRC and the public side of health research provision?

Louise Wren: I do not have stats on specific charities, but the important message is that public and charitable funders can and do partner with industry. The vast majority of our members are funding in collaboration, whether that is with organisations like the MRC or industry and far beyond. I can send those details over to you.

Baroness Blackstone: That would be helpful. I know that they do it. I am asking who they are.

Louise Wren: I would need to have a look at that, and I can get that data to you. It is recognising that no one organisation and no one sector can do it on its own; the problems are too hard and the money needed is too great. We are all on the same page on that.

Q237 **The Chair:** Thank you. Can I plant a suggestion with you? I would be interested in your response. Following the questions that Baroness Blackstone and others, including Lord Winston, just asked, industry will get interested in producing a product that could be used for treatment once it understands the science behind it to produce a drug. An example in preterm labour is that we had to have the basic science, the discovery

science, to identify the molecular basis of the surfactant production that reduces the risk in neonates of respiratory distress syndrome, and subsequently the identification that giving steroids at the appropriate time and in appropriate dosage to women in preterm labour will produce surfactant to reduce the risk of respiratory distress in preterm babies and the subsequent use of surfactant in neonates. There are lots of other examples.

Industry involvement will come if there is an opportunity to understand better the cellular and molecular basis of parturition. While we have a programme grant and therefore an institution in Edinburgh for preterm birth babies, unless we have some kind of strategy that produces the collaboration of the MRC and the AMRC to identify key areas, including the prevention of primary and secondary labour and preterm births, we will not progress this very far. Lots of research is being carried out, but it is actually a shot in the dark and a fishing exercise. Am I being hypercritical or am I making any sense?

Dr Jessica Boname: I would argue that the role of the research councils and government funding is to derisk the translation of really interesting and insightful but early biomedical mechanistic research into products, so that industry will be able to find the hook that it is looking for and the feasibility of taking that through to successful clinical trials. The role of the MRC is to help derisk applications and help them along the translational pathway so that industry will come on board. One of the steps is funding the underpinning research to provide outcomes. The other thing is to allow them to work together to take forward translational activity. It is derisking work so that industry will take things through to clinical trials.

Louise Wren: It is also important to draw on some of the evidence that is already available. Jessica mentioned the James Lind Alliance priority-setting partnership. There is one under way at the moment on premature babies born at less than 25 weeks. Some researchers did a neonatal priority-setting project a couple of years ago, and that was published in the *BMJ* with top research questions for interventional trials, which I can share with the committee. It is important to build on the evidence base that is out there as well, because much of it is still relevant.

The Chair: Thank you. Lord Winston has the final word.

Q238 **Lord Winston:** Yes, just a brief word. Might I ask Louise about the AMRC? Do you look at the impact factor of the research that you are funding? Do you have any idea how valuable the publications of those researchers are in real terms for premature birth? It is my impression that not a great deal comes out of the sort of research that is mostly supported by charities, which tends to be much more on clinical care than it is on the science of reproduction. Do you think you could let us know?

Louise Wren: There is a limit to what I can say as a member body. Our charities take impact incredibly seriously. The AMRC takes impact incredibly seriously as well. Often, our charities are doing incredible

research, seed research, seed funding, derisking projects, and making sure that existing research projects have rich public and patient involvement, or, in this context, rich family involvement. I am sure that we can send you details on the impact of those various projects.

Lord Winston: It is not incredible research that I am looking at; it is credible research that I am looking at, and that is a real issue. I do not mean to be at all dismissive. There is a very big difference. The research councils certainly are looking at the impact of what they are doing. They measure it regularly. As I remember when I was on the research councils, there was a real need for us to do that. I am not sure that is happening with the AMRC and whether we are focusing on what we might need to get the best impact.

Louise Wren: A huge focus for the AMRC at the moment is to provide guidance for our membership on best practice in this space. What is the best way to capture impact, present impact and track impact? It is an incredibly important focus for us as a member organisation.

Lord Winston: I think we are talking about different things about impact. I am talking about the actual papers published.

Louise Wren: The AMRC is not funding those papers. Our members track the impact. They can and do, and they are funding excellent research across the UK—in fact, £2 billion in 2022 in total.

The Chair: Thank you both very much. Thank you sincerely. You have been most helpful. It is a difficult subject. We need to direct some tough questions so that we have something to say about the research aspects in our report. We have certainly heard a lot on the clinical side of things, but we need to make sure that we get information about the research aspects. I am sorry about what might have appeared to you to be some challenging questions. It is just that we were seeking information. Both of you have met me before many times, so you know that from when we worked together. Thank you both very much.