DIGITAL, CULTURE, MEDIA AND SPORT COMMITTEE

Oral evidence: Concussion in sport, HC 46

Tuesday 18 May 2020

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Watch the meeting

Members present: Julian Knight (Chair); Kevin Brennan; Alex Davies-Jones; Clive Efford; Damian Green; Damian Hinds; John Nicolson; Giles Watling.

Questions 364 - 429

Witnesses

I: Professor Alistair Burns CBE, National Clinical Director for Dementia and Older People's Mental Health, NHS England.

II: Dr Niall Elliott, Head of Sports Medicine, Sport Scotland; Dr Rod Jaques, Director of Medical Services, English Institute of Sport; Sally Munday, Chief Executive, UK Sport; and Phil Smith, Director of Sport, Sport England.

Examination of Witness

Witness: Professor Alistair Burns CBE.

Q364 **Chair:** This is the Digital, Culture, Media and Sport Select Committee. Today we have three panels, but we are covering two different subjects. The first two panels will be looking at concussion in sport; in the final panel we will be looking at sport in our communities—two ongoing inquiries. Our first panel consists of Professor Alistair Burns CBE, National Clinical Director for Dementia and Older People's Mental Health, NHS England.

Before I start the questioning off and welcome Professor Burns, I would like to go around the Committee to see if any members have any interests to declare for either concussion in sport or sport in our communities.

Clive Efford: I declare I am the Chair of Samuel Montagu Youth Club. We do receive grants from Sport England and others.

Chair: Thank you. Yes, I know it very well. Great. That has concluded that, so let's get on with our first set of questions. Professor Alistair Burns, good morning, and thank you for joining us.

Professor Burns: Good morning. It is a pleasure to be here.

Q365 **Chair:** Thank you. It is much appreciated. Does the NHS have a policy on concussion and brain injury?

Professor Burns: Yes, we have a number of policies and I wonder, Chair, if I might start by giving some of the statistics, some of the numbers in relation to head injury and concussion, perhaps just to put things into perspective. The policy and the way in which the NHS cares for individuals with concussion would grow out of that.

Every year, about 1 million people attend A&E in England with a head injury. Of that 1 million people, about 900,000 have no or a very brief loss of consciousness. The vast majority, about 85%, recover after a week with no lingering symptoms and that rises to 97% after about a month.

I can talk specifically about the policies in primary care and the hospital system.

On primary care, I think it is fair to reflect that most people who had a concussion and a head injury would probably not present to their GP primarily. They would go to an A&E department. Someone presenting perhaps with symptoms of concussion, dizziness, headache or memory loss would go to their GP and they might mention, "I had a head injury a couple of weeks before" and that would open up the conversation. If someone was presenting with symptoms, GPs would, as part of the history take, note if there had been a head injury.

I can talk later about my own area of interest, which is dementia.

In the hospital system, between April 2017 and February this year, there were 7,536 admissions with concussion. Only 8.5% were sports-related, and that is fairly consistent over the years. There has been a significant drop in the last year with much less sport taking place. In the vast majority of cases, 98.6%, there was no specific intervention. People were in hospital perhaps one or two days. There was a peak with monitoring in children because of the concentration of children 11 to 16. Thirteen people were recorded over that period as having died, but none of those deaths were related to sports injuries. The data and the information for the hospital system is there.

I am happy to pause or I could describe some of the guidelines and pathways. They are a bit better defined for major trauma as opposed to concussion. Perhaps I could pause there.

Q366 **Chair:** That was virtually my next question: is there any updating of protocols for A&E doctors and GPs and, if so, how regular is that updating of protocols?

Professor Burns: As part of continuing and professional development and appraisal, both for general practitioners and for doctors in A&E, there are updates as part of medical education, not just for doctors, obviously, but for all the staff, ambulance staff, and the Royal Colleges and Health Education England. I am speaking on behalf of the National Health Service, which is responsible for that.

The guidelines, which are produced both by the NHS and the charities with whom we work very closely, are updated on a regular basis, and the NHS makes sure that clinicians are aware of the latest guidelines around concussion.

Q367 **Chair:** They are signposted effectively. Then it is up to them and their line managers, who are in practice with them, or hospital administrators, to ensure that they have that continuous development; that they are not only signposted but they then progress that. Is that fair?

Professor Burns: Yes. As an example of that, we are guided by the NICE guidelines, the National Institute for Health and Care Excellence, that is the benchmark for other guidelines that we have. Obviously, I am talking about the downstream effects of the injury. The NHS would not have a specific role at pitch side, although involvement of the NHS in that would be welcomed. The NICE guidelines have clear guidance for the identification of issues around concussion, not only for professionals but for the public as well.

Although it is down to each clinical commissioning group in each individual hospital to begin to assess adherence to the NICE guidelines, the evidence that we have from studies is that adherence is high and, as part of ongoing appraisal, we would monitor that.

Q368 **Chair:** Professor, you said in your opening remarks that 8.5% of individuals presenting with concussion to A&E, I think it was, are sports injury-related. Is there anything different about the pathology of sports-

related head trauma and other types of head trauma? Are outcomes in any way different?

Professor Burns: That 8.5% was actually related to admissions to hospital where "sports" was put as a code. A slight caveat to that, that is related to the coding of the episode and it relates to hospitals only and is the primary code.

The NHS provides a personalised approach to care for head injuries. If you like, a head injury is a head injury, but obviously the circumstances in which that head injury or that concussion has taken place would determine the care. If it was part of a road traffic accident and there were other physical injuries they would be taken care of. If it was someone who came in out of sports, that would probably be a slightly different approach, but the fundamental approach to the concussion by the time we see it at first entry to the NHS would be much the same.

Q369 **Chair:** Yes. I would imagine the age demographic is slightly lower, though, for those sports injuries in relation to the general population?

Professor Burns: Yes. We know that sporting activities account for a large number of head injuries, and events like this to raise the profile are most welcome, but we must be aware there are other areas that account for numbers of head injuries. For example, a recent study in Scotland showed that prisoners had a high level of head injuries. We know that in relation to the effects of alcohol and among homeless people, there are groups who are more likely to have a head injury and, therefore, come into contact with the NHS.

Q370 **Chair:** I know the study you are referencing and the long-term effects of head injury were particularly interesting. I think nearly 40% of people who were in prison in Scotland had suffered some form of head trauma in the past.

Does it concern you that the demographic of those sports-related head traumas tends to be younger and, therefore, the lasting effects could be much longer and have a greater impact on people's lives and future development?

Professor Burns: Yes. That is a very good point. My own area of expertise is dementia, and obviously I know that many of the previous witnesses you have had at the Committee have spoken about the relationship between dementia and football as well as rugby and other sports. The point about the long-term effects is important and so is the spike of admissions and monitoring of 11 to 16-year-olds.

Q371 **Chair:** We scrutinise the DCMS and we know that the Department loves a roundtable discussion; it seems there is always one going on. There have been some Government roundtables on this particular topic. Have you been invited to any of those? Have you contributed in any way?

Professor Burns: My understanding is that the NHS has not been invited to those meetings. I think Mr Huddleston is the MP who has done the most, and my information is that the NHS has not been invited.

Q372 **Chair:** Does that surprise you?

Professor Burns: I guess it depends on the terms of reference of the roundtable and the questions asked.

Q373 **Chair:** One of the impressions that we have during this inquiry as a Committee is that there is a lot of operating in silos, and this seems to be a prime example of operating in silos. No reflection on yourselves. I will raise this with the Minister next week, but it seems quite strange that the NHS is not invited to a roundtable about concussive head injury. It is absolutely bizarre.

Professor Burns: As I say, my information is that we have not been invited. I am sure the NHS would be very pleased to attend and support the work of the roundtable.

Q374 **Chair:** Has the NHS had any engagement with campaign groups such as Headway?

Professor Burns: We work very closely with the charities. My own experience is with the Alzheimer's Society in my own area of expertise. Certainly, for the guidelines that we have produced and that are available on the NHS website and on the NICE website, we tap the expertise of the charities, such as Headway. We work very closely and protocols, for example the rehabilitation protocols, are being developed. The expertise from organisations such as Headway is very much appreciated.

In my own area, we work very closely with the Alzheimer's Society to develop advice for people with dementia. Obviously, that would include people who are former footballers, for example. Sports United Against Dementia is a particular initiative that the Alzheimer's Society has. So we work very closely. I like to think it is a two-way street. We get information and advice from them, and that informs the policies that we have.

Q375 **Chair:** I do understand why you perhaps would not know the precise number of meetings, for example, you have had with Headway, but could you write to us in the coming days to let us know the sorts of engagements that are ongoing between the NHS and charities more widely in this sector but also, specifically, with Headway and its campaigning? That would be very helpful for the Committee.

Professor Burns: I would be very happy to follow up with a letter to the Committee with that information, as much as we have it, yes.

Chair: Thank you very much. Kevin Brennan.

Q376 **Kevin Brennan:** Professor Burns, welcome to the Committee this morning. I think you said that 8.5% of admissions to hospital with head trauma are related to sports injuries. Is there any further breakdown available of that by sport as to which sports in particular present cases in that way?

Professor Burns: That is a very good question. I could look into that. I suspect that the ICD code and the coding is such that it would be sports

related, and I suspect one might have to go back to the raw data to try to uncover exactly what was, say, football and rugby or whatever. Again, I can see if we have any additional information about that. I am happy to follow up with a letter to the Committee, but it is not information that I have to hand at the moment.

Q377 **Kevin Brennan:** Thank you. That will be very helpful. I remember 2 February 2008 vividly because it was the day Wales beat England at Twickenham for the first time in 20 years. I was present, fortunately, on that occasion. I often think back on it happily and remember the game. I was a Government Minister at the time. I had made a speech in the morning and had a wonderful afternoon at the match.

Alix Popham, who played in that match for Wales, came on as a replacement. If you ever watch the footage of it, right at the end of the match, with his very distinctive blonde hair, he is seen celebrating. He cannot remember anything about that game. It struck me, watching the BBC Wales documentary last night on this subject, that that is rather incredible: that I can vividly remember everything about that occasion but he, when it was one of the highlights of his professional sporting career, cannot remember participating in that match.

I know you cannot diagnose someone from that information or anything of that kind, but what are the likely reasons why our experiences and memories should be so different?

Professor Burns: It is a very interesting question. If I could draw from my own experience with dementia—as you say, not saying that in any sense is a diagnosis but just speaking in general terms. What you have highlighted very well is the difference between what we call autobiographical memory—in other words what I had for dinner last night, where am I going to go after this—and emotional memory. We know when people have many neurodegenerative diseases that that emotional memory is much stronger. That is why I can remember 50 years ago when I scored a hat trick at football. I can remember the emotion that I felt. I cannot remember any of the details. There is a disassociation between an emotional memory, which is firmly felt, the emotion that you had about the game and the exact details.

There is no doubt—and I know you have heard from Professor Stewart and colleagues—about the association between football, rugby and boxing and dementia pugilistica. I think that is what we call the anterograde amnesia. The memory of events after a blow on the head, a concussion, can be lost. Clearly the effects of dementia come on—I think Professor Stewart and his landmark studies show—in about 10 years, but I think the association between that accident and the poor recall is important.

Q378 **Kevin Brennan:** To explore that a little bit, it is very interesting what you were saying about that autobiographical memory and emotional memory. Clearly, those two experiences—that of a fan and that of a player—would have been equally emotionally impactful. Are you saying that the possibility of head injury while playing rugby would also affect that emotional memory as well as that biographical memory? Quite

frankly, you are probably right, I probably would not remember all of the details of the match unless I regularly went back and watched the video of it, which I might do. I am not going to tell the Committee whether I do that or not. Certainly, the emotional memory of what happened on the day is very, very powerfully ingrained and yet, one of the principal participants in that occasion cannot recall even participating.

Professor Burns: That emphasises the role of a head injury, a concussion, a minor hepatic brain injury, and the effect that it can have on memory, which is why the studies from Professor Stewart and others are important. I know you have heard from Dr Etherington and Dr Sylvester about sport. It is so important to raise this, and I am grateful that the Select Committee is raising the profile

Q379 **Kevin Brennan:** Does concussion or possible sub-concussive head trauma get recorded on medical records when injuries are reported?

Professor Burns: They tend not to be. When somebody, for example, attends an A&E department with a concussion there would be a letter to the person's family doctor, usually in electronic form. There would be a record of that in the GP's notes and if the person went to their GP, that record of attendance at A&E or even a call to NHS 111 is usually recorded, so that episode would be recorded. It would obviously be recorded in the hospital notes as well.

Q380 **Kevin Brennan:** If a head trauma was reported to a doctor and it was sports related and, therefore, potentially not a one-off thing—in other words, it could be something that had happened and the patient was unaware of it having happened on multiple occasions—is that something that you would expect medical practitioners to investigate further?

Professor Burns: Yes. If someone came back with recurrent episodes of head injury playing a sport, and concussion, that would be there in the records. If the person presented or if someone was concerned and the person went to their GP, those records would be there. Certainly, as I gave the example at the beginning, I think that would alert a GP to the possible role of that. The guidelines that are available on the NHS website and for NICE give some advice about that.

Q381 **Kevin Brennan:** If it was a first presentation but it was presented as a sports injury, would the guidelines flag that and say, "Perhaps investigate a little bit further because this may not be the first occurrence"? Would that be flagged in the guidance if it was related to sport?

Professor Burns: I am not sure if that would specifically be flagged. It would be documented as part of the general practitioner's role. As I say, if someone was to present again, they would be aware of that.

Q382 **Kevin Brennan:** How often are these sorts of injuries referred to specialist centres such as the Institute of Sport Exercise & Health, in your knowledge?

Professor Burns: Again, Mr Brennan, perhaps I could follow up with more details. I don't have those particular figures to hand about referrals

to these particular organisations. If I may send a follow-up letter to the Committee, I will see what further information I can get on that.

Kevin Brennan: Thank you.

Q383 **Giles Watling:** Thank you so much, Professor Burns, for being here today. I am interested in the treatment options available and whether in your view the NHS is up to speed and has the facilities? There may be positive treatment options, but how many specialist centres exist today for a concussive head injury?

Professor Burns: There are 27 major trauma centres across the country. As I mentioned, as part of the NICE guidelines, there are guidelines about the treatment initially and then going to major trauma centres there are 122 trauma units as well. These would be the areas where people would be seen. In these areas there would be the full range of specialists from neurosurgeons, neurophysiologists, neuropsychologists and physiotherapists to neurologists who would be able to support someone and give them the correct treatment.

Q384 **Giles Watling:** To your knowledge, are those facilities—the 27 centres and the 122 trauma centres—sufficient? Are they overstretched or are they under-subscribed? From my knowledge and from the information that I have, they are managing. I am not aware of any particular issues about there being a stretch on the system or requiring more, so I think facilities in the trauma centres and trauma units are sufficient.

Q385 **Giles Watling:** That is good to hear. What are the criteria for referral? How do you analyse which case is right for these centres?

Professor Burns: As I say, the NICE guidelines stipulate very clearly that if someone does have a head injury or concussion in sport, they would be seen in A&E. There are criteria for whether someone should have a brain scan and also criteria as to how quickly that should happen. In general terms, the severity of the injury, determined in the clinical assessment that is carried out when someone arrives using a number of skills, such as the Glasgow coma scale, which measures the degree of impairment, sets in train the protocol for the kind of treatment that someone would have.

People with perhaps more minor symptoms would be seen at an accident and emergency department. They may have a brain scan and be discharged home with information about the red flags—to come back if there are worsening headaches or difficulties with memory and concentration. That is articulated in the NICE guidelines. These are the guidelines that hospitals and GPs adhere to. The information is there and is regularly updated.

For example, there was an update a couple of years go in the NICE guidelines about how soon someone should have a brain scan if they are on a blood thinning tablet. That was brought forward. I think that is a good example of where research has influenced practice, becomes part of a NICE guideline and then is implemented in the NHS.

Q386 **Giles Watling:** I absolutely get the whole principle of the NICE guidelines, but I am just wondering about individual clinicians. If someone were to turn up with some sort of head injury at an A&E, you can be fairly confident that at pretty much any A&E across the country there will be somebody there who will be competent to make those assessments and go by those guidelines?

Professor Burns: Yes.

Q387 **Giles Watling:** That is good to hear. What happens beyond the initial triage and treatment? You just said about ongoing headaches. What provision exists for ongoing treatments once the initial symptoms are dealt with?

Professor Burns: A range of primary-care support services would be available. It would be a personalised approach. For example, it may be that if someone had symptoms of anxiety and depression, they might have access to IAPT—improving access to psychological therapies—which are kinds of talking treatments, NICE-approved treatments for people who might have symptoms of anxiety and depression. People with impaired memory and concentration might be referred to a memory clinic, such as the one that I run on the NHS. It would be a personalised approach depending on the particular symptoms that a person presented with.

Q388 **Giles Watling:** I will leave that to one side. I was just thinking that it is down to the GP to do the referral, so we are back to primary care for ongoing treatment. Is that what I extrapolate from what you say?

Professor Burns: As a co-ordinator of treatments and as a person who would bring in specialists—whether they are approving access to psychological therapies and neurologists, someone in neurorehabilitation, a memory clinic—the GP would have at his or her fingertips in a local area the range of facilities that would be available to support an individual.

Q389 **Giles Watling:** Thank you. One final question from me, Chair, and then we will move on. In Scotland I understand that there is a single set of concussion guidelines as a policy, which we don't have in England. Would the NHS be open to developing and using a national concussion protocol, do you believe?

Professor Burns: There are a number of protocols I think you are referring to, "If in doubt sit them out", which gives a huge amount of excellent information. I don't think it is related to a particular sport so it is applicable to a number of areas.

Giles Watling: Contact sports?

Professor Burns: Yes. There are examples. As I say, the guidelines have examples of that. There are examples for professionals, for example, in South Tees or Oxford, and in Brighton, Barts Hospital has put in information, and there are international assessment skills. That is certainly something that I think would be appropriate to look at.

That pitch-side approach is something that Public Health England would be involved in through the work it does on prevention. The NHS does do some work on prevention— vaccination and screening and work on tobacco—but I think Public Health England would have the key role in developing policy.

Giles Watling: That is very interesting. Thank you. Back to you, Chair.

Q390 **Chair:** It is quite interesting to see you point at Public Health England, because when this Committee has approached Public Health England—I know it is pretty busy with a certain other matter at the moment—it stated that it did not have anything to say on this matter.

Professor Burns: I am not sure if I have any comment on that. I am—

Q391 **Chair:** Does it surprise you that Public Health England has no comment to make to this Committee on such an important topic?

Professor Burns: I think I am here to talk about the NHS provision.

Q392 **Chair:** Bearing in mind, of course, that you have said it should play a part in it and it has said, "Not me guv". Surely, therefore, I would imagine that your position would be that Public Health England needs to take some ownership in this area. Do you agree?

Professor Burns: I think there is a crucial role for a number of organisations, including the charities and Public Health England, so I agree with that, yes.

Q393 **Chair:** Good. Dr Richard Sylvester said in evidence to us that even neurologists were poorly trained in this area. Do you agree with that?

Professor Burns: The evidence that I have is that there is enough advice. There clearly are centres of excellence where there is a concentration of clinical expertise, usually around research programmes, and so in those areas there is expertise but, as far as I am aware—

Q394 **Chair:** Forgive me, Professor Burns, the question I put to you was from the statement of Dr Richard Sylvester. He stated that neurologists were poorly trained in this area and your answer has been about centres of excellence. That does not seem to marry up. Do you disagree with Dr Sylvester or do you think he is overplaying the position or do you see a kernel of truth in what he says about neurologists' training?

Professor Burns: Training for neurologists is for Health Education England and the colleges. Information about the management of concussion would be part of general training.

Chair: That is basically "no comment", isn't it?

Professor Burns: I am not exactly sure what Dr Sylvester said.

Chair: He described it precisely as "clinical nihilism", which I think is quite a dramatic statement, and he said that neurologists were poorly trained in this area. Those were his exact words. But the question to you, as the go-to person in the NHS in this country and in this particular area,

is very simply: do you agree with him, yes or no?

Professor Burns: I think I would need to get some more information on exactly what he was saying. It may be about the education and the training that is provided by the colleges and by Health Education England, but my—

Chair: I think there may be a career in politics for you, Professor Burns, if you wish to leave the NHS. You are not answering the question but, don't worry, it is fine. Thank you for that, but please do follow up with the letters in question that you have discussed.

Professor Burns: I will.

Chair: Thank you very much for making the time today and for your evidence. That concludes our first panel.

Examination of Witnesses

Witnesses: Dr Niall Elliott, Dr Rod Jaques, Sally Munday and Phil Smith.

Q395 **Chair:** This is the Digital, Culture, Media and Sport Committee and this is our second panel today in our ongoing inquiry into concussion in sport. We have four witnesses for our second panel: Dr Niall Elliott, Head of Sports Medicine at Sport Scotland, Dr Rod Jaques, Director of Medical Services, English Institute of Sport, Sally Munday, Chief Executive, UK Sport, and Phil Smith, Director of Sport, Sport England. Niall, Rod, Sally and Phil, hello, good morning, and thank you very much for joining us. Our first questions will come from Clive Efford.

Clive Efford: Good morning, everyone. It is good to see you, Phil. How are you? Can I start with you, Phil, and Dr Elliott and ask about the incidents of trauma occurring in grassroots sport? Do you have any idea of what the level of incidents in grassroots sport is of this type of injury? Can I go to you first, Dr Elliott?

Dr Elliott: You can. It is a very good question. The reality is that we rely on studies that have been published by colleagues from the States, for example, looking at the data that has been collected at grassroots. We have some knowledge, through the likes of charities—Headway, for example—but my understanding is we don't have one way for documenting and collating what happens within grassroots sports. As we heard from a speaker in your first session, we have data from the accident and emergency admissions scenario, but I don't think we have one central repository of knowledge from general practice about the exact level of incidents within grassroots sport at any level, from children to adult.

Q396 **Clive Efford:** Phil, would you like to say anything on that? What can we do to improve the knowledge that we have in this area?

Phil Smith: Thank you. Good morning. Thanks to the Committee for the opportunity to speak and raising the important topic, a very serious topic, of head injuries in sports.

I am in the same position as my colleague, Dr Elliott. Sport England does not keep records of head injuries. We don't have the powers or the remit to talk about medical issues, of which this is one. However, I do have access to information that is collated by other organisations. As far as I understand it, while every single head injury is potentially serious, sports injuries do represent a fairly small proportion of people who present themselves to accident and emergency or seek other medical help.

Q397 **Clive Efford:** The set-up that we have at the moment is that UK Sport does non-professional elite sport. Sport England does the grassroots. Is it down to the age of 13 now?

Phil Smith: Right down, right through the ages.

Clive Efford: Then we have professional bodies, but we don't seem to have any repository where this whole issue of acquired head injury in sport is monitored or the information gathered. What can be done about that? That is open to the whole panel if anyone has any comment on that.

Dr Elliott: There are a few elements of evidence that come from other countries. If we look at South Africa, for example on the BokSmart process, they brought in a blue card, if I remember correctly. A referee could show a blue card to a person who was concussed and take them off the pitch, and that was recorded. So in a mandatory way that was recorded at the end of each game.

That is in a structured sport environment. We are talking about grassroots sport, which could be your weekend warriors, five aside, through to your kid's club playing where there may be not as much structure to it. I think that may be an area where we are sadly missing.

Q398 **Clive Efford:** Does anybody else have any comment on how we can improve the way we gather information?

Dr Jaques: If I may come in here. In Atlanta, in the United States, there is a central disease control agency that looks at catastrophic injury in sport. By "catastrophic injury" they mean a brain bleed, a spinal cord injury or a sudden death in sport, so these are measurables that are quite clear for clinicians seeing them. As a result of these very rare and tragic events, Atlanta is able to report back on these clusters across the United States to make it clear, if there are potential threatening environments, where these catastrophic injuries occur. They find that very useful. If we could have something like that in the United Kingdom it would be fantastic. There are agencies that work in each of these domains in the UK, but they do not necessarily pull all together these three significant issues.

Q399 **Clive Efford:** If the Government were minded to set up an institution like that, where would it sit within the sports hierarchy? Would it go to UK

Sport, would it go to the NHS? Where should a body like that sit?

Dr Jaques: In the United States it is a system whereby the medical agencies report into the central register, and I can imagine a similar scenario in the UK.

Q400 **Damian Green:** My questions are critically for Mr Smith and Dr Elliott. I want to pick up on some of the evidence we have had up to now, which has suggested that Scotland may be doing some things in some parts of the area rather better than the rest of the UK. I want to particularly focus, picking up on what Clive was asking about, on the state of advice now to people in grassroots sport. You get the impression that concussion has gone up the agenda hugely in elite sport and there is much more knowledge, advice and sensitivity to it. I want to explore how far that has filtered down to grassroots sport as well. Mr Smith, in England how would you assess the state of advice on concussion in grassroots sport?

Phil Smith: You are absolutely right that it has improved remarkably in recent years. The advice that is offered by the individual governing bodies to participants and cultures is largely very good. It has been advised by medical professionals within each of those sports and the advice covers three different areas in relation to concussion and head injury. It relates to how to prevent injury in the first place and I could tell you a number of ways different sports have approached that, either by changing the rules of the game itself or by the equipment that is mandated for use or how the activity is managed and organised.

Then there is the treatment of head injury and what to do when somebody sustains a bump to the head, including differences between male and female participants, including differences between children and adults. Then there is the return to play and rehabilitation, how to get somebody back on the field or back in the activity safely within the right amount of time and taking the right steps. Having looked at pretty much every national governing body's guidance in preparation for this discussion, the guidance is not only comprehensive but it shares a number of common characteristics.

Clearly the way that somebody might sustain a head injury in, say, horse riding is very different from how that might be happening in rugby, either Rugby League or Rugby Union, but there are some very common themes. I do not have any medical qualifications myself, but those who do have advised that the advice being given is comprehensive. The challenge we have in grassroots sport is how we make that advice more widely known to those who, like me, spend their evenings and weekends helping others to enjoy sport.

Q401 **Damian Green:** Thank you, I will come back to that dissemination point in a minute. Dr Elliott, we have heard a lot of praise for Sport Scotland in the way it deals with concussion. What steps have you taken?

Dr Elliott: Thank you very much for the opportunity to talk about this, because it is a very emotive subject, as we have already said. If I could give a potted history of how this journey has transpired over the past

seven to eight years within Scotland, and we could possibly go back a little bit further.

If I could introduce to you Benjamin Robinson. Benjamin was a young 14 year-old lad who sadly sustained multiple head knocks during a rugby game in Northern Ireland. As a result of those multiple head knocks in the one game, he sadly passed away. His father and his family have been campaigners ever since then, since 2013, trying to understand how we can improve awareness. From the outset we have had a multi-agency engagement in trying to get people around the table to improve grassroots education and knowledge of concussion.

The heart of this is a recognise and remove process. We ensure that everyone at the football game or at a sports session understands what concussion might look like and on the back of that are able to remove that individual. We are not professional sport at grassroots. We then ensure the continuation from there is that they get the right access to the healthcare system, how to rehabilitate the person, how to rehabilitate the brain. We have gone through iterations in 2015 and 2018 and we are going through a 2021 review of the guidance. The process looks predominantly at the next stages for us, which is education, looking at parents, looking at PE teachers, looking at students at university level, looking at coaches, and we are facilitating that through these guidances. This is filtered down to grassroots and is engaged by all sports.

We are talking about Scottish rugby, we are talking about Scottish football, we are talking about shinty, we are talking about lawn bowls, equestrian, cycling. We have had support from Government Ministers, the Education Minister, Sports Minister, and at the moment around the table sits the Scottish Chief Medical Officer included in that, and academia. We have been able to bring this group together, led by colleagues like my colleague Jonathan Hanson, James Robson and Willie Stewart, who you have heard from. That collaborative approach has allowed us to bring one grassroots-level recognise and remove education tool. We have not got it right and there is a lot more education to go forward and that is very much our next drive, but that gives you an understanding as to where we have been.

Peter Robinson, Benjamin's dad, has also been part of that as a layperson and has brought in the real story. That has helped us as educators or as clinicians to understand what the steps need to be to ensure this does not happen again.

Q402 **Damian Green:** That is interesting. I want to explore getting it down to the people who are coaching or who are standing on touchlines on Saturday mornings or whatever. We have heard from an ice hockey coach, Monica Petrosino, who said: "For me as a coach there is no formal training on head injury or concussion protocols. We all have to do our coaching courses, our safeguarding courses and our general first aid courses. There is absolutely no awareness of concussion." She coaches in England. Is it getting down to where it needs to get to?

Dr Elliott: Yes, and colleagues at the University of Stirling have recently published a study they looked at two or three years ago where they felt it was not drip-feeding down to the grassroots to coaching level. It has been education. It has been out through schools. Both in Northern Ireland and in Wales and in Scotland we have put leaflets out to schools, supported by the Scottish Government, and that is being driven centrally. There are teaching modules for coaches to do, but they are possibly at a level 2 or a level 3 coaching badge, when they should be down at the grassroots level of coaching. So there are areas that we need to improve, and we certainly recognise that.

The drive to education is part of our 2021 next iteration, to make sure we improve. That, as we have learnt, could be electronic, e-learning modules, it can be through a Teams or a Zoom call process. Some of us go out to schools and we give talks to PE teachers and to sports groups, and this is something that we have been driving for many years now.

Q403 **Damian Green:** Thanks. What about England, Phil?

Phil Smith: There is no single solution to this, but I would agree with the assertion that there can be more awareness. Again, as a grassroots football coach myself, having been trained in the technical aspects of coaching football and having done an emergency first aid course, the level of awareness about concussion is still reasonably low. That is fair.

But there is information widely available, there is a suite of free-to-use training resources available from our partners at UK Coaching. As I mentioned, all the individual governing bodies have produced excellent information and in some cases videos, easy-to-use materials about how to prevent head injury or how to treat it or how to come back from it. It is all there. Our challenge now is to promote it as widely as possible.

Sport England can offer some solutions on that. We certainly have the ability to reach audiences through a vehicle called Club Matters, which is an online resource for anybody running a local sports club, again free to use, so no barriers there. We can promote that more widely and will do over the next year or two.

We can certainly continue our work with our colleagues at UK Sport on including welfare and the duty of care in the next iteration of the governance code, which I am sure the Committee has heard of before. We can strengthen the standards that we expect of people organising sport, because the welfare and care of participants has to be the number one issue for anybody organising sport, whether it is locally like me at training or whether it is nationally for organisations such as national governing bodies. There are ways we can strengthen the awareness of concussion, but I believe the material is pretty good that we have already.

Damian Green: Do either of our other two witnesses want to comment on this particular aspect of disseminating the information? No. If not, back to you, Chair.

Q404 **Alex Davies-Jones:** Dr Jaques, if I could come to you first, please. Is there a difference between concussion protocols in elite sport and professional sport?

Dr Jaques: No, there is not, in a short answer. The concussion guidance, which most people turn to in this sector, is published by the Concussion in Sport Group that meets every four years. The last time it met was at the international conference on concussion in sport held in Berlin in October 2016. This is an internationally recognised organisation with over 30 contributors to the concussion statement, with a further 40 individuals giving representation. The last time that it met for this concussion guidance document, it looked at 60,000 papers and considered those in concussion management. Across the sector in professional and elite sport, most people turn to the Concussion in Sport Group guidance document.

Q405 **Alex Davies-Jones:** And it last met in 2016. I assume Covid has put a spanner in the works of it meeting recently, but do you know when it is due to meet next?

Dr Jaques: It was due to meet in Paris last year, and I believe it is due to meet in Paris again this year. Of course, with that potential four-year gap there is a potential loss of updates on that.

We address that at the English Institute of Sport, which caters for our Olympic and Paralympic athletes in the high-performance system in two ways. First, we mandate that all doctors and physiotherapists go on a pitch-side trauma course that includes the immediate management of concussion and recognition of concussion, which is incredibly important. That is a pass or fail course and they do that annually.

Secondly, we run a quarterly medical meeting that includes discussion around difficult concussion cases. We invite national governing bodies of sports and chief medical officers to attend those meetings so that we are open about how to manage complex concussions and we educate ourselves and keep up to date on that.

Q406 **Alex Davies-Jones:** Is the incidence of head injury and concussion in elite sport increasing or decreasing?

Dr Jaques: It is about stable, from what we see. We have an electronic medical records system in the English Institute of Sport, which all 44 of our Olympic and Paralympic sports use so we can understand the real-time problems across all sorts of injuries, including concussion. Over the last five years concussions have moved between about 47 concussions per year and 96 concussions per year, but it is around about stable each year in the 1,200 athletes that we provide medical and science services for. Last year was a bit extraordinary because of Covid. There was a dip, mainly because local and international competitions reduced and therefore probably there was a false drop in the concussion rate that we observed.

Q407 **Alex Davies-Jones:** Why is it stable? If we have these new guidelines

coming into place and more training is being rolled out pitch-side and to coaches, why are we not seeing a decrease in the number of concussions at elite level?

Dr Jaques: Of course education is important in this sphere, but it does not stop concussions from happening. One could argue that the reason why we are identifying a consistent number of concussions year on year is that we have lowered the bar in recognising them and we have become more sensitised to recognising concussions because we do put the health and welfare of our athletes first. We have, across the sector in all the home country sports institutes in England, Scotland, Wales and Northern Ireland, produced a professional code. The first page, first line of that professional code says, "Make the athletes' health and welfare your primary and overriding concern". Not the concerns of the sport but the concerns of the individual.

Q408 **Alex Davies-Jones:** Do you think there is a need for more full-time chief medical officers?

Dr Jaques: My first reaction to that would be yes, as a doctor, but I am not certain again whether that would necessarily impact on the incidence of concussion. What I would say, however, is that it is very important to understand the landscape of the elite sporting sector. While I know that you have heard from Professor Loosemore that he has half a day a week with boxing, that does not paint the full picture. He has in addition some other doctors who work with him and, most importantly, there is a network of consultants in sport and exercise medicine employed by the English Institute who give coverage across the working week. If a boxer was not able to see Professor Loosemore on a Tuesday afternoon when he might be working, they would be able to see one of the other consultants in sport and exercise medicine who during their training have been trained to manage concussion, during the rest of the week.

Q409 **Alex Davies-Jones:** Thank you, that is helpful. Sally, is UK Sport currently as close to an oversight body as you could get?

Sally Munday: It is important to be clear that we are not a regulator. UK Sport does not play that role, that is not our remit. What we are is a distributor of both Exchequer and lottery money to invest in Olympic and Paralympic sports and major events. Depending on the definition of your word "oversight", we are definitely not a regulator.

Q410 **Alex Davies-Jones:** What body has the most influence on concussion protocols? Is it UK Sport, the individual NGBs or the international sporting federation?

Sally Munday: I will start answering and it might be appropriate for Dr Jaques to add. All of the sports will run their sports in line with the rules and regulations that are set by the international federations. Those international federations will have their own medical Committees where they will set protocols that are then enforced by them at international competitions and it is what the governing bodies in the UK would respond

to when they are running a sport in this country. Does that answer your question?

Q411 **Alex Davies-Jones:** Yes, I think it does. I am trying to work out where would the concussion protocols and the shared best practice be most appropriate to come from. Where do you see UK Sport's role in that?

Sally Munday: Important for us is that we invest a significant amount of money in not only the sports that use a significant amount of that money for medical services but in the English Institute of Sport. We have a world-class institute of sport in this country, which is able to ensure that our athletes get first-class medical support and care. The reality is the rules and regulations for sports are set by international federations. We play a role in trying to influence those rules and regulations through the national governing bodies, but ultimately it is down to the international federations to set the rules.

Q412 **Alex Davies-Jones:** That is very clear, thank you, that is helpful.

Dr Jaques, if I come back to you, we have heard criticism that the Concussion in Sport Group that you have mentioned is too conservative and sport should take a more precautionary approach. Is this something that you agree with?

Dr Jaques: In principle, no. However, whenever medical consensuses are published internationally, there are always challenges to those consensus statements. That is true across the whole sector of healthcare. In relation to concussion in sport in particular, I understand those criticisms because the group meets every four years and it summarises the evidence at that time. In my earlier answer I said how we look at making certain that we are up to date in service delivery for our Olympic and Paralympic athletes right now.

It is important to completely separate the interests of the sport and the interests of the individual. What I am absolutely convinced about for the Concussion in Sport Group is that it is absolutely for the interests of the individual. It is a panel of neurologists, neurosurgeons, psychologists, consultants in sport and exercise medicine and pathologists, and I am convinced that it represents the best interests of the human being.

Q413 **Alex Davies-Jones:** On that point, did you see our session with Eleanor Furneaux, who gave evidence to this Committee? She described in pretty shocking detail her own experiences of having to repair her own helmet and compete the following day. Were protocols followed when that was carried out?

Dr Jaques: I have read the testimonies on the second day for both those athletes and personally I am very sorry that their careers were prematurely terminated because of concussion-related issues.

Regarding the helmet issue, I have looked into this further. My understanding from the British Bob Skeleton and Bobsleigh Association is that athletes are encouraged to have a second helmet and are not

allowed to train or compete again unless they have a second helmet to do so.

Alex Davies-Jones: So on that point the protocol was not followed?

Dr Jaques: Correct.

Alex Davies-Jones: Thank you, no more questions from me.

Q414 **Chair:** You just mentioned a second helmet. To clarify, they are encouraged and they have to go and buy it. That is the state of affairs, is it not?

Dr Jaques: I do not know that level of detail in this particular sport, but I can say that these helmets are bespoke. The athletes wear them in a neck-extension position, so you can imagine that you cannot share a helmet from one person to the next. It requires the athlete to have two helmets fitted to themselves for safe conduct of the sport. It is certainly in the regulations of the sport that you should have two helmets available.

Chair: But there is no sanction, is there? It is encouraged.

Dr Jaques: They are not allowed to train or compete if they do not have a second helmet; that is my understanding.

Q415 **Chair:** Thank you. Sally Munday, are there any decisions that you make or your organisation makes that are affected by the impact of concussion in sport?

Sally Munday: Our investments are across a wide range of sports. We currently invest in over 50 sports. Of those, the 44 sports that we are investing in run significant Olympic and Paralympic programmes, and a big part of that investment includes medical provision and medical practitioners. When sports apply to us for funding, they include in their submission information about all the aspects of the support that they are going to wrap around the athletes. That includes medical provision, of which, of course, concussion is part.

Chair: Is there anything specific to concussion in those bids for funding?

Sally Munday: Not specifically.

Q416 **Chair:** Would you consider whether or not you think that is an extra area that you need to explore with these clubs and bodies that are asking for your money?

Sally Munday: To be clear, we invest in the governing bodies, not in individual clubs. We would probably take advice from the Institute of Sport with regard to whether we were seeing a prevalence of concussion over the myriad other sporting injuries that affect athletes. We would take some guidance from it, so it is probably difficult to answer that categorically right now.

Dr Jaques: To assist, looking at the last five years, the doctors and physiotherapists working at the English Institute of Sport have seen

28,400 different physical and mental injuries in sport, of which 382 are concussions. Effectively, the footprint of concussions in the last five years is 1.6% of consultations.

Q417 **Chair:** What do you think that indicates?

Dr Jaques: That indicates that it is a relatively rare event. Of course it is important to put in context the fact that for any one athlete they have about a 4% chance of a concussion in any one year. For that individual we take it extremely seriously, and that is why we have a fixed standard across the whole system whereby both doctors and physiotherapists in concussion management are trained to the same level, because at any one time it may be that a physiotherapist is away with a camp or a doctor is not present. That is very important.

Secondly, we have a generic protocol that we follow for all athletes who have a concussion in the first instance. Later in their management, they become more bespoke to returning to that particular sport. You can imagine that a swimmer, a cyclist or a modern pentathlete might go back to sport in a slightly different way, so that becomes more bespoke to the sport in the second half of their recovery.

The median duration of symptoms in our athletes after a concussion is 10 days. That is pretty well the norm for the public; 73% of our concussions completely resolve within 30 days. We do not see a gender difference between our men and our women, although our women do have a slightly more prolonged symptom course—14 days as opposed to 10 days. That is observed across the grassroots and the public after head injuries as well.

Q418 **Chair:** Dr Jaques, if awareness of concussion is improving, why are incidents stable? Surely it would increase if we are more aware of it.

Dr Jaques: I gave some of that answer earlier to your colleague. My sense here is that there are two factors at play. The first is that the recognition of concussion is improving and the awareness of athletes and their coaches of concussion has improved. Athletes are more willing to discuss it in the changing room now than they were before.

The second feature is that it is important to get across to our athletes that it is okay to talk about this. It is okay to come forward with symptoms. Intuitively you might think that you require a head injury to get a concussion. That is not the case. You can have a bodily injury that causes a movement of the head that then induces the concussion. Education among coaches and athletes is important in this domain, and we assist national governing bodies in signposting them to the right educational materials for their sports.

Q419 **John Nicolson:** Dr Elliott, can I return to Scotland? Congratulations, you are the first and only witness so far who has mentioned shinty in any of our sessions. I remember at university that it was blindingly obvious the boys who played shinty because they would come back at the end of a weekend and the visible injuries, often on their heads and faces, were very distinctive. It could be extremely brutal.

I noticed that you said that Scotland single guidance policy on concussion and head injury was effective, but you also said that we do not have it quite right. Could you tell us what you think we do not have quite right in Scotland, as well as what we have right?

Dr Elliott: I alluded to a lot of what has gone well. That has been colleagues getting around the table who have a passion for sport. The group that we have around the able, ultimately, as Dr Jaques has alluded to, have a primary aim of looking after the wellbeing of the individuals who play sport. We have the personal story that Benjamin Robinson has given with that and we have very forward-looking organisations. To us, that has worked well, and we are a small group, which inevitably makes it a lot easier because we can get around the table quite quickly.

What we have been keen to do is to educate as opposed to necessarily bring in policy or enforce aspects of it. There are areas where we are lacking, and the University of Stirling report showed that coaches are not necessarily getting the education that they aspire to. We have heard this already today. At coaching level at the grassroots, this should be no different from learning how to do your basic life support for a collapsed athlete or a collapsed member of the public. It is a life skill to recognise concussion. Our drive now is to ensure that coaches do receive that education.

That is where we are working with the likes of Dr Stephanie Adams at the University of Edinburgh, who is a clinical psychologist, a Canadian who has come to Scotland with a concussion education programme at university level. This is the driver that we need to move forward to try to ensure that we can improve that. We need parent education, coach education and inevitably the sports person's education too.

As Dr Jaques has quite rightly said, the discussion around concussion is improving in the changing rooms. We need to ensure that people understand what it is. It is not a loss of consciousness. It could be blurred vision, it could be a mild headache, it could be just, "He's behaving oddly". Being able to recognise that will make a difference to someone getting a second impact syndrome, for example. We are not quite there, this is ongoing.

Q420 **John Nicolson:** I am glad your Canadian colleague managed to get a visa. We know how difficult that often is for experts who want to come and live in Scotland. Specifically on the question of what we do not have quite right yet, what would you highlight?

Dr Elliott: To me it is the education at parent and club level. We have a very visible "If in doubt, sit them out" campaign that is visible at Hampden, it is visible at Murrayfield, it is visible at Ravenhill, for example, in Northern Ireland, where there is a concussion mantra out there so people get to understand it a bit more. That should be at grassroots, so to me it is putting that obvious logo there and the ability to go and search and look for education.

I then go to clinical colleagues and upskilling them and understanding how to manage concussion at the same time. Dr Jaques has quite rightly pointed out, as a sports and exercise medicine doctor, that it is part of our jobs and we have to learn these skills. But we have colleagues who see the weekend warriors on a Monday or a Tuesday in general practice. While they have a degree of understanding of how to manage major concussion issues, they might not be aware of the subtle returning to work or learning bit before returning to sport. For us it is also educating our medical colleagues. That could be nurses, physiotherapists, doctors. Anyone who has a point-of-care touch with a patient should know about concussion. That is an area that we feel we need to improve on, and we have colleagues already working with the Royal College of Emergency Medicine and the Royal College of GPs to provide e-learning modules and platforms to give our colleagues upskilling.

As Willie Stewart's team discovered, inevitably as clinicians we have to try to interpret the extra bits of the jigsaw puzzle and work out how we deliver that on the grassroots ground level.

Q421 **John Nicolson:** Do you think that there has been enough focus in this inquiry, for instance? You mentioned Stirling, and I have had a meeting with some of the experts at Stirling. Do you think there has been enough focus in this inquiry on sub-concussive injuries and not just concussive injuries? As lay people we are having to learn ourselves here about these distinctions. I was fascinated and horrified to discover that the concussive injuries are the obvious ones, are they not? They are the ones you see that everybody recognises because somebody is knocked out. But the sub-concussive injuries are quite common and I understand that sometimes athletes refer to those as sparkles or stars before their eyes. They may indicate brain injury, but athletes just pick themselves up and carry on. Those, are I understand it, can lead to early-onset dementia. Most of us would have thought that that was just a temporary phenomenon that you recovered from, but apparently not.

Dr Elliott: The lifetime prevalence of a concussive episode or a minor brain injury in the population is about one in five. Over a lifetime, 20% of us will have had some form of minor brain injury, from the sparkles to sadly people who sustain more significant head injuries in road traffic accidents.

John Nicolson: Are you talking about any of us?

Dr Elliott: All of us, yes. That is what the studies are suggesting.

Q422 **John Nicolson:** I cannot remember the last time I had sparkles. I remember having it at different points in my life, but I cannot remember the last time I had it. Maybe that is because I have too sedentary a life at the moment during lockdown. But for athletes it is a recurring issue, is it not? They are having it a lot, which must suggest that athletes are having repeated brain injuries to a far greater degree than the average member of the public.

Dr Elliott: Anyone who has an active lifestyle increases that risk of any injury, and that would include a minor brain injury. Sub-concussive injuries and concussion I would argue are brain injuries and the cumulative effect is something that we are starting to learn. It is through experts such as Professor Stewart that we are starting to understand the longer-term impact of that. As an on-the-ground doctor, I have to try to apply those lessons in a pragmatic way so that lay people and parents can understand how to protect themselves or how to protect others around them.

Q423 **John Nicolson:** What was the Scottish Government's role in the single guidance policy that we have seen north of the border?

Dr Elliott: We had Mike Russell, who was the Education Minister at the time in 2014, and Shona Robison, who was the Sports Minister at the time in 2014, who drove and was part of the engagement with Government. Since then we have also had engagement with Dr Calderwood and Dr Smith, who are the chief medical officers, who, at the heart of this, want to be at the table. They feel they have a role to play with this. That gives us, I would argue, credibility within the organisation of Government but has also allowed us to talk to the right people should we need to change policy. We are not policymakers, we come to the table with potential problems and we have to look at this collaboratively as to how we move forward. That is a big strength that I would recommend.

Q424 **John Nicolson:** This inquiry looks at the whole of the UK. What do you think is holding back the Government at Westminster from following this example, if you believe, as you clearly do, the example of Scotland works? Why are they not following it?

Dr Elliott: I cannot possibly comment on how Government works across the four devolved nations, because uniquely I have been entrenched into Scotland and the life that happens here. The lessons to me are very much to get the right people around the table, and make sure they are all talking about the same thing, regardless of how emotive it is, and I am pretty certain the right answers will come out. There are good examples not just from Scotland. We are talking about Canada, we are talking about South Africa, we are talking about the States and the role of the CDC—the Centres for Disease Control—that has this central registry. There are snippets of good ideas across the country and we can get around the table and work this through, I have no doubt about it.

Q425 **John Nicolson:** Can I move to you, Mr Smith? Who should take responsibility for concussion or sub-concussion in sport? We have heard from Dr Elliott that the driving force in Scotland has been the Scottish Government and Ministers who have taken ownership of the issue and have forced the pace. Do you agree that that is the model for England and for Wales? Who do you think in those countries should be driving this forward and taking responsibility? Because it is a public health issue, is it not, not just a sports issue?

Phil Smith: I can only give a view for England, of course, being Sport England. It is a shared responsibility, in my view, between the individuals

who organise the sports and activities that we all love to play, and the governing bodies who are responsible for the rules and the safety of the participants in those individual games, sports or activities. Of course, there is some responsibility on the individual, whether that is to participate themselves safely, or across the individual culture or whoever is on the touchline or is organising that particular session.

I do not believe there is a single body or organisation that should hold all of the responsibility for what is a complex and serious issue. However, on the question of whether the UK Government should be doing anything different from what goes on in Scotland, I would say there are different ways of achieving the same aim, the key aim here being that people can play sport or do their activity in the safest possible way. I do not believe that at the moment the difference in approaches to safety is leading to different outcomes for individual participants.

Q426 **John Nicolson:** Okay. Can I move to you, Ms Munday? Is there enough research being done in this area? Some of the witnesses I have spoken to say that they think there is a linkage between the research that is done and the outcomes. In other words, those funding the research want to see certain outcomes and only fund research that will deliver those outcomes. Maybe what we need is an independent regulator who will allocate the funding to a wider range of researchers and scientists in this field.

Sally Munday: I do not feel I am particularly well equipped to give you a response about medical research. The EIS is not a body that does that type of research and neither does UK Sport. We do more generic research across performance sport and attitudes towards Olympic and Paralympic sport and so on. I am sorry, I do not feel best equipped to answer your question about medical research, sorry.

Q427 **John Nicolson:** Okay. Can I return to you, Mr Smith? What do you feel? Do you feel that there is a case, perhaps, for a neutral body, or a body at least that would be seen to be mutual, that would allocate funding? A number of people I have spoken to and other members of the panel possibly have spoken to do not feel that the research is seen to be entirely objective in the way that funds are allocated, at least.

Phil Smith: I am sorry, I am not clear on your question about allocation of funds. Funds from whom to whom?

Q428 **John Nicolson:** Funds from some of the sports bodies that fund research into concussion. Some of the folk I have spoken to working in the field of research are, to be honest, quite worried about speaking out about this because they think if they make too much of a link between sports injuries and early-onset dementia, they will find that their funding dries up, and that sports bodies that allocate funding have a specific outcome in mind that they want from research and they want research results to be watered down.

Phil Smith: I am afraid it is not a topic on which I have any personal knowledge and nor does Sport England have the remit to be involved. We

do not commission medical research as far as I am aware and we do not have the powers to implement medical information. Sorry.

Q429 **John Nicolson:** Okay. A final question to you, Dr Jaques. We quite often ask witnesses this. If there was one single thing that you would like to see us put into this report, what would you like us to put in it?

Dr Jaques: Thank you for that question. I have given this some thought before coming to this Committee. What I think is at the heart of some of this matter is the causation behind concussions. We can spend a lot of time debating how you recognise concussion, how you treat it and what the long-term effects are, but we are all interested in the causation. To do that we have to look very carefully at training habits and rules in sports. The only way that you can make informed decisions about that is to carefully audit the circumstances around concussions at the point that they happen.

I know that there is ambition to have a code of sports governance in sport and I know that contained in that there is the intention to have a board member on each national governing body who looks after the safety and welfare of their staff and their athletes. If concussion could be included in that in the way that I describe, I think it would drive at board level a closer inspection of the causations of concussion in each national governing body. This would be a significant step forward.

Chair: Thank you, that concludes our second panel on concussion in sport. I wish to thank Dr Niall Elliott, Dr Rod Jaques, Sally Munday and Phil Smith for their evidence today. We will take a short break for two minutes while we set up our third panel, which is in relation to sport in our communities.