



Select Committee on the Long-Term Sustainability of the NHS

Corrected oral evidence: The Long-Term Sustainability of the NHS

Tuesday 29 November 2016

12.15 pm

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Members present: Lord Patel (Chairman); Baroness Blackstone; Lord Bradley; Bishop of Carlisle; Lord Kakkar; Lord McColl of Dulwich; Lord Lipsey; Baroness Redfern; Lord Ribeiro; Lord Turnberg; Lord Willis of Knaresborough.

Evidence Session No. 25

Heard in Public

Questions 243 - 249

Witnesses

I: Mark Davies, Director, Health and Well-being, Department of Health; Adrian Masters, Director for Strategy, Public Health England; and Professor Dame Anne Johnson, Professor of Infectious Disease Epidemiology, UCL.

Examination of witnesses

Mark Davies, Adrian Masters and Professor Dame Anne Johnson.

Q243 **The Chairman:** Good afternoon. Thank you very much for coming today to help us with this inquiry that we are doing, as you know, into the long-term sustainability of health and social care. This session, which is related to preventive aspects and the benefits of that, is crucial to us, so welcome and thank you.

You will get a transcript in due course, which you can check for accuracy and, if you find in the conversation today that there is some other additional material that might be helpful, please feel free to send it to us. Anne, would you introduce yourself? If you want to make a short opening statement, please do so.

Professor Dame Anne Johnson: I am Anne Johnson. I am a professor of epidemiology at UCL and I was the chair of the Academy of Medical Sciences' working group on improving the health of the public by 2040. This report addresses the question of how to optimise the research environment for a healthier, fairer future, which I know has not necessarily been the focus of your inquiry, but research and evidence are at the heart of improving the National Health Service and health more broadly.

In particular, our report emphasised that we needed to shift the focus of research to prevention and early intervention at scale. I do not need to remind a committee like this that, of course, many of the drivers of our health, possibly 50% or more, are determined by socioeconomic and environmental factors outside the health service. Investing in prevention also means investing in effective prevention outside the health service, within economic and environmental factors, for example, as well as aspects such as fiscal and legislative interventions. For that, we need transdisciplinary research evidence including disciplines beyond the traditional biomedical sectors, in which I would include social sciences, the built and natural environments, law and ethics and so on. As we have heard commented on in the earlier session, if we look at the investment that is made outside the health service in prevention and improving health, the cost falls outside the health service and the benefits lie within it. It is really a challenge across government about how and where you invest in prevention.

The recommendation of our report was on the importance of co-ordinating and implementing research for improving the health of the public, and to do for preventive health and preventive medicine what we have done for treatment in the NHS, particularly through what has been done through OSCHR, the Office for the Strategic Co-ordination of Health Research, the National Institute for Health Research and the Academic Health Science Centre, which have brought evidence bases into clinical practice. The challenge now is to see the same effort to bring the stronger evidence base into public health practice and prevention within and outside the health service.

The Chairman: Thank you very much.

Adrian Masters: I am Adrian Masters, the director of strategy at Public Health England. I do have a few opening comments just to set up the discussion. I want to say something briefly about progress in cardiovascular disease, because it brings out some things we might want to discuss.

Over a 20-year period, we saw life expectancy increase by five years. The major reason was a fall in premature death due to CVD; the likelihood of dying of cardiovascular disease before the age of 75 halved. The analysis of the cause of that suggested that half the fall was due to a reduction in risk factors which you would target through prevention—in particular, a reduction in smoking and better diet. CVD is still a major cause of tens of thousands of premature deaths, and perhaps two-thirds of those deaths are preventable. One estimate of the cost of CVD deaths for the NHS is about £14 billion a year; as for the extra cost to wider society, there is an estimate of, say, £16 billion per year, because it includes things such as lost productivity. I want to use that as an example to bring out some themes.

Prevention is a big opportunity to save lives. It is also linked to improvements and productivity in the economy, and it can make a contribution to reducing pressure on NHS spending. I would say that the value of prevention is in that order: saving lives; helping the economy; and its contribution to the finances of the NHS.

Mark Davies: I am Mark Davies. I am the director of population health at the Department of Health. I was not planning to make an opening statement because I have appeared before you in the first session and you heard from me then.

The Chairman: I was going to say that this is your second visit.

Mark Davies: It is indeed, yes.

The Chairman: What do you think about the current preventive strategy, and is it sustainable in the long term?

Professor Dame Anne Johnson: I think you will be well aware that the NHS Five Year Forward View makes a big pitch for investing in a radical upgrade of prevention and public health. This has been a familiar theme in a number of reports. The reality is that we spend about 5% of the health budget on prevention, which is about £5 billion across the piece, and about half of that is spent in local authorities while the other half is spent in the health service. You can argue about what counts as prevention. Similarly, we spend about the same amount of our health research budget on research into prevention, which has increased over the last few years.

Let us stick to prevention within the health service. Some of the things that are done lie either within the health service or outside it, including screening programmes, vaccination programmes, smoking cessation

programmes, programmes on diet and so on. But I would say—and there is not much of me left as a clinician, but I did train as a clinician—that we need to change the focus of how we practise medicine and, more broadly, healthcare, so we take a view which is focused not just on what we now call “personalised medicine” but on personalised prevention. I think that means a fundamental shift in how we train health professionals to think about prevention so that they think, when they have a person with a heart attack in front of them, they do not want to treat just the end stage of the condition—they want to intervene much earlier in the course of that disease, either in primary care or earlier on. I do not think we have that mindset yet.

Some of you will be familiar with the concept of the four Ps of medicine—that in future medicine should be predictive, which means we need the kind of data which say, “These are the risk factors for ill health”; pre-emptive, which means that we act early; personalised, which means that we act for the individual, looking at their competing risks; and, finally, participatory. We need to take the public with us on this, because they now have the textbook—they have Google Health, and know a lot more about their health. We have to change the way we practise medicine.

The Chairman: Does anybody else have a comment about the current strategy for public health and prevention?

Adrian Masters: I think there has been a significant change in the last few years in the understanding of the importance of prevention and early intervention. Both the five-year forward view and the programme of work coming from that in the NHS and the shift, following the Marmot review, of the public health system to local government reflect the recognition of the increased importance of prevention and early intervention. At the moment, we have a very ambitious, full agenda on prevention, and we are at a stage where we have to spend the next few years seeing that through. As we get towards the end of the Parliament, we will want to come back and see what is next on the prevention agenda. My view at the moment is that we are ambitious on prevention and we do have a good agenda of change in the NHS and with local government.

Lord Lipsey: Perhaps I can focus for a minute on the third of your points, Mr Masters, which was about savings to the NHS, which, obviously, as we are a Committee on the sustainability of the NHS, are very important. There is a problem here. We see figures such as those stating that obesity costs the country some £8 million a year. The fact is that, if they do not die of a heart attack caused by obesity, they will die a few years later of some other cause and, as ever in healthcare, most of the costs of the treatment will come in the last two years of life. What is the evidence that it could actually save the NHS money to improve health through the kinds of measures that we are talking about this morning?

Adrian Masters: I think those were excellent points, by the way. If you look at the long-term modelling—for example, that done by the OBR; Wanless did something similar back in the early 2000s—and at what is driving health expenditure, you get a list. First of all, you see some

interaction between people's expectations as we become richer and the technology, then you see something to do with productivity in provision of services, then you see something to do with the demographics and the ageing population, and then you see something to do with health behaviours. The OBR recently looked over 50-year period. It saw that the difference between keeping productivity as it is now, on trend, and improving it from, say, 1% to 2%, was about 5% of GDP. If you look at what it said about the healthy behaviours, trend versus a more healthy population through better behaviours, it saw an effect of about 1% of GDP. That ratio of about 5%, to do with more productivity, and 1%, to do with healthy behaviours, is a fair reflection of what the opportunity is on the cost side.

However, the point about the two different scenarios is that, in one of them, you have a healthy population as well as lower costs and, in the other one, you have a sicker population and health expenditure. Prevention makes a contribution, but you have to think about it in terms of its contribution to saving people's lives and its contribution to helping the economy, which we might come back to—that is a big thing. Although those numbers for prevention are bigger than for their contribution to the finances, the contribution to the finances is still significant; as I say, it is potentially 1% of GDP over 50 years compared to 5% of GDP if you get the productivity better.

Baroness Redfern: Adrian, you mentioned the ambition to do more on prevention and said it was really important. Why do you think we spend only 5% on prevention in the NHS?

Adrian Masters: One consequence of the introduction of the new care models and the agenda of the five-year forward view is that we are going to find ourselves over time spending more of our total NHS budget outside of hospital on earlier intervention in the community. Naturally, as we do that, we will see the proportion of spend on things that you might call "prevention" go up. At the moment, we have not really adjusted the system to reflect the fact that we have more people with long-term conditions and we still have a very acute system-focused spend.

Baroness Redfern: Prevention saves money is what I am saying. That is the impetus.

Adrian Masters: The point I was trying to make is that I think we will see those proportions change as we implement the five-year forward view agenda because we will do more outside of hospital. I think there is more that you can do on prevention. If you look at individual interventions, you will see that they are often very good value for money. So there is an argument to say that the proportion spent should go up, which I think it will because we are shifting with the five-year forward view agenda.

There are other factors which mean that we probably have biases in the way we make decisions. It means that we are always going to have to make a stronger case for preventive action, because it tends to have a

long-term effect rather than, often, a short-term effect. The effect tends to be lots of gains over a large population rather than certain individuals gaining, plus we are pushing against inertia. We have organised medical care in a particular way and we are trying to change the way we organise the NHS, which is a very big agenda. I think that spending on prevention will go up and should go up, but, because of those biases, we will have to continue to make a very strong case with very strong evidence for prevention. You have to make a stronger case to justify it than for immediately responding to acute problems, which is probably what we have done more of in the past.

Q244 Lord McColl of Dulwich: What is the greatest barrier to progress in preventive medicine? Is it simply a question of funding or are there more significant issues, such as the confusing and conflicting advice from the Department of Health, NICE, the food industry and the media?

Adrian Masters: I would put the case in a different way because we have made a lot of progress on prevention over the last 15 years. Because of the big changes we are making to the pattern of care in the NHS and the change in the role of local government in terms of the public health agenda, we have addressed some of those barriers and I think we are going to see significant changes in the amount of prevention and preventive activity. At the moment, the big challenge at this stage is delivery on the changes we have made. We have made plans to make changes and we have to see those changes through, so I would say that delivering on the agenda that we have is the biggest challenge we have now rather than anything else.

Professor Dame Anne Johnson: I want to comment on the use of evidence in clinical practice. We have had an acute hospital management approach to health and we talk a lot about primary care, which, I agree, is making a lot impact on prevention through the management of hypertension, the use of statins and so on. In the acute setting and the management of people with chronic diseases, we are not necessarily adequately joined up and we do not always use the evidence to implement the most cost-effective interventions.

I heard a very good example presented on the management of chronic obstructive pulmonary disease, where one of the cheapest and most cost-effective interventions is smoking cessation therapy and flu vaccination. When you look at what people actually receive with chronic obstructive pulmonary disease, you see that it is some of the most expensive and least effective therapies. They do not receive smoking cessation therapy, and only 60% receive flu vaccination. Although we have evidence, we are not always very good and logical at putting it into clinical practice and implementing it. That is also compounded by the fact that, while there are great advantages in having prevention services within the local authorities, on the other hand, it is difficult to have good smoking cessation services in the NHS when they are funded outside it. It is those links between social services, prevention and acute services which are critical. Sometimes it is about implementation science and organisational

science in that we know what to do but we are not always very good at organising ourselves to do it.

Lord McColl of Dulwich: But we know what the science is in terms of preventing obesity, and obesity is increasing enormously.

Professor Dame Anne Johnson: That, of course, is extremely complicated and exactly plays to what I was trying to say at the beginning: that obesity is driven by an enormous range of economic, environmental, industrial and behavioural factors. Your own Committee here—in fact, the House of Lords report on behaviour change—looked at the paucity of evidence on behaviour change and the importance of a range of interventions which go right across the piece, from the individual to the fiscal and legislative, when dealing with big environmental changes which drive health behaviours and health effects.

Baroness Blackstone: Can I just ask Mr Davies, who has been very silent so far but sits in the centre in the Department of Health as a senior official, how he would answer the question that was put earlier on prevention?

Mark Davies: In a sense, I agree with what Adrian said. The fact is that we have a relatively new system where we have shifted responsibility for public health into local government. We have the development of STPs locally, which are starting to set out the argument for prevention. I think things are moving in the right direction, but we have to let them play out. This is about implementation. There is a very strong emphasis on prevention in the STPs. We need to make sure that we follow those through to make sure that the benefits of prevention which they set out are realised. There are some very complicated elements at play here.

Lord McColl, you referred to the conflicting advice from different organisations. We try to base our advice on the best evidence, which is what Public Health England is here to do, but that is just advice. Influencing behaviour is not just a matter of providing advice to people, otherwise people would just listen to what the Government said and do what was the best thing, but that is clearly not the case. There is a lot of complexity around making beneficial change happen. As Anne pointed out, obesity is a complex set of factors—environmental, societal, some clinical and some to do with the food industry and retail policies. Trying to get a grip on those to make things progress in the right direction is challenging for a Government who have their hand on only a few of the levers.

The Chairman: But is what you are saying not the key problem? We have, as already mentioned, the five-year forward view, which had high ambitions about preventive aspects of healthcare, yet it has no role to play at all.

Baroness Blackstone: Could I just add to that? What is your evidence that it is moving in the right direction, given that we have a huge amount of preventable disease, both mental and physical?

Mark Davies: By moving in the right direction, what I meant was that we have a new system which we have established and we need to let play out in the right way, but some things are moving in the right direction. We have the lowest rates of smoking we have ever had in this country. The data released earlier this year showed that we have a prevalence of 16.9%, which is a significant fall from the previous year and we have gone further than we expected, so progress is being made in some areas. We have a relatively new system, it has only been in place a number of years, and we have to allow that system to operate and to start to deliver. I think the STPs are an important part of that in setting out the ambitions locally to put prevention at the heart of the NHS.

Lord McColl of Dulwich: Do you have a system now in the department which looks at the advice that is put out, such as "Do not have more than two eggs a week", which is completely wrong?

Mark Davies: The advice all comes from Public Health England at the moment and the Department of Health tends not to put out advice.

Lord McColl of Dulwich: Well, whoever does it, we have had a lot of really bad advice coming from the centre, and which centre does not matter. How can we put in place a mechanism to monitor and stop the stuff going out in the first place? Fat is quite good for you, for instance.

Mark Davies: The reason we established Public Health England was to provide the source of evidence and advice for the public.

Q245 **Lord Willis of Knaresborough:** I am sorry, Mark, that we always seem to give you a hard time when you appear here. I am going to be exceptionally nice to you now because I am sure you are a very nice man.

Baroness Redfern: You can pass the bucket.

Lord Willis of Knaresborough: I really cannot let you off the hook on this one though.

The Chairman: That is him being nice.

Lord Willis of Knaresborough: What you seem to be saying is, "We have passed this down to Public Health England, so that is our job done and we can forget about that now", but there is masses of evidence which demonstrates that, in fact, you can do serious things to improve the health of the nation. On smoking, it has taken 50 years to get through gestation to where it is now, yet if you go into secure mental health units, you see that they are not included in smoking cessation programmes. You can smoke in those because it is thought that it might affect your mental health. There is no evidence whatever to say that it would, yet there is masses of evidence to say that that will help those people die earlier. In terms of salt, sugar, alcohol, all of which have significant effects on public health, it is your responsibility, yet that does not seem to feature in your response. That is being kind, Mark.

Mark Davies: Thank you for being so gentle with me. Let us take a few of those examples. On salt, we have had a huge reformulation of foods to reduce the amount of salt. That was led by Public Health England as well because it does the negotiations with industry, and the same will be happening with sugar. The childhood obesity plan, which was published in August, set Public Health England the task of having that conversation with industry, and that is going on already. That is not to say that we do not take responsibility for it. I am the senior responsible owner of the childhood obesity plan and, therefore, everything that happens flows through me and I hold the various agencies to account. Responsibility sits in different parts of the system and it certainly sits with me at the moment in terms of making, say, the sugar reduction happen.

Similarly, on alcohol, the safe drinking guidelines, which are produced by the chief medical officers of the four nations, were based on evidence and were published by the department, so we do take responsibility for these pieces of work; we convene the system, if you like.

It is an interesting point you make on smoking in mental health facilities. You are absolutely right that it is a killer for people with mental health problems as much as it is for anyone else. Interestingly, I have been to trusts which run medium-secure mental health facilities where they have introduced a no smoking policy and it works.

Lord Willis of Knaresborough: In Sheffield.

Mark Davies: In Sheffield; I have also seen it in south-east London, in Oxleas. It is fantastic to see it happen. We do not have a current tobacco control plan, but we have one in development and I would hope that, subject to Ministers agreeing to publish a new plan, we will address these issues in there. It is a really important issue and I do not dispute that is the case. The Department of Health has a leadership role and a convening role. It is a very small organisation compared to Public Health England and we do not have the experts sitting in the Department of Health, but our job is to bring it together and to make that advice properly available. I think we have a role and we do not abrogate our responsibilities in these areas.

Lord Kakkar: Just to be clear, you mentioned the movement of the public health agenda into local authorities and local government. Are you clear that, with that move, the mechanisms are now in place to ensure that the health and public health agendas are properly co-ordinated to provide the opportunity for long-term sustainability, or are there impediments in the relationship, despite the creation of STPs, that we should be concerned about?

Professor Dame Anne Johnson: I think there are many advantages of having a public health service in the local authorities because of the ability to deal with some of the environmental areas and, to some extent, education. Issues such as outlets for alcohol sales and so on as are the broader determinants of health.

However, there are concerns and they were very well expressed in the House of Commons Select Committee report on public health, which I think was published in August or thereabouts this year. I would be concerned. You are addressing prevention in the health service. Let us assume that we can improve the general health of the nation—it is always a hope that we have, but we seldom succeed in it—so that they use health services less. People have higher and higher demands, but let us say that we have a healthier nation because we deal with some of these other drivers. You will still have to address issues of prevention in the health service. When public health experts were within the health service, in a sense that expertise did also reside in the health service. It is not clear to me that we have these two things entirely joined up, and I gave the example of smoking cessation services.

The other area which may have come to your attention, which is an interesting example, is the discussion which has gone on about the use—and it is my own area—of pre-exposure prophylaxis for the avoidance of HIV transmission. To let you know, there is as much HIV being transmitted among men who have sex with men in London as there was probably at the end of the 1980s. In the last 10 years the incidence has not changed, there is a lot of risk, and we can reduce that risk with pre-exposure prophylaxis. HIV prevention services reside with the local authorities and HIV treatment services reside with the NHS. There was the demonstration: the NHS initially declined to fund pre-exposure prophylaxis because prevention was not its remit. There has been a legal judgment on that and it has been said yes. So there is a kind of mismatch, I think. We cannot run an NHS that does not engage with the prevention agenda, even though public health is perhaps led from another area. I think there are acute NHS trusts now which recognise the need for public health and prevention input into the NHS. We have to join that up, otherwise we will not be using our resources effectively. It remains to be seen whether the STPs, the sustainability and transformation plans, might be a mechanism for trying to join that up in the long run, but I think that was well discussed in the Commons Select Committee report.

The Chairman: Mark, do you have a comment?

Mark Davies: Just to note exactly what the House of Commons Select Committee said, but it also suggested that we would not want to start reorganising the system again. The point is that we have to make the system we have work, and the drivers to integration, which are really important because of the need to have the most efficient and effective system we have, will push us to the situation that Anne is describing, where NHS organisations will start to see that prevention is part of their business. Indeed, if you look at things such as cardiovascular disease, you see that secondary prevention takes place in primary care, for example, which is control of hypertension and atrial fibrillation. Clearly, the NHS has a significant role to play in prevention. The trick is to make the system we have work rather than spend time designing another one, which would have a different set of boundaries.

Q246 Bishop of Carlisle: Following on from both those responses, I wonder, Adrian, if I could push you a little and go back to the comment you made about the greatest challenge, in your view, being the implementation of the organisational changes that are recommended, not least, in the five-year forward view. What, in your view, are the most important things that need to change—those recommendations or something else? Do you think the STPs are crucial to that change and, if not, what are the best levers we have to effect it?

Adrian Masters: I think that the STPs and the process following on from them are critical to the change. What we are looking for to happen over the next few years is new, more integrated services outside of the acute setting done at scale in primary and community settings. Developing those new services and doing them at scale, I think, is the biggest single challenge. It is interesting that, if you look at the contribution on the finances—because we are in the tightest finances in the NHS and public finances in general since the Second World War—you see that the most important thing is the productivity of existing services.

At the same time, we want to make a significant change to the pattern of care, which is developing new services to look after people with long-term conditions in a community setting. Those two agendas are what we have to do through the STPs and the trick is to make sure we do a good job on both agendas, which I think is the biggest challenge.

The rate that we can make the improvement in the development of those new long-term condition services will depend partly on the rate of investment that we manage to free up to make into those services. I think that this agenda will continue beyond 2020, so it will not be done by the end of the five-year period, but the trick is to make as much progress as possible in that period. We are expecting it to make some contribution to the finances, but the big contribution from the shift will come post-2020.

Q247 Baroness Blackstone: The Academy of Medical Sciences' report had a number of recommendations, some of which were related to higher education. Can you tell us a bit about how you have been able to get higher education institutions to take this seriously? Higher education is a very diverse and diffused system and, because of the autonomy of universities and the freedom of that, it really has to be picked up from below and then introduced. I do not know how easy it is to get the things that you want done picked up by HE institutions and implemented.

Professor Dame Anne Johnson: Obviously these sorts of reports are of use only if something happens as a result of them and if people feel that the recommendations are useful. We are in the implementation phase of the report as it was just published in September. We have been working with a number of groups. A number of the recommendations on higher education start with the training of healthcare professionals, which is an issue that came up earlier, in the use of data and how we can use data to change clinical practice. That seems to me to be the most useful thing that we can do. That is where we need to engage with the public, and it

is really important that we can show the public the benefits of having records that link up.

One thing to think about is how we train medics, for example. We are now working with the Medical Schools Council and Health Education England to think about how we take these ideas forward, and we are having a series of workshops next year to look at implementation.

In the broader context of the universities—I come from a large multidisciplinary university, UCL, and to some extent this comes out of the work we have been doing—we already run a number of courses. In our global health course, for example, we teach people in health about climate change and health, and our architecture school has courses on the built environment and health. Some of this is changing the culture, and, as you know, if you produce courses that are attractive to students, that is a very good incentive to higher education institutions because they pay the fees.

On the computer science front, that is looking like an extraordinarily important development. From talking to higher education institutions, it seems that we have done less work in this area, but it is a piece of work that we need to take forward because of the demand now. If we want to use the data that we have, the thing we are most short of is people who can analyse it as well as people who can ask the right questions of it. They are two separate issues. We might have to incentivise universities but also some of the funders to build more PhD programmes, MSc programmes, and so on. Some of this, of course, is being taken forward through major investments such as by the Farr Institute on digital health, and some it is being taken forward by bodies such as the Alan Turing Institute. Those are good end points for people, but you need both push and pull factors.

Of course, in industry, which we have not talked about much, the whole data and technology industry needs people like that, and it seems to me that it will also provide an incentive in the system to stimulate that kind of activity.

Baroness Blackstone: So you are attaching quite a lot of importance to technology, data and digitisation in public health and prevention as in other areas of healthcare.

Professor Dame Anne Johnson: Critically, the same sets of data that were used to say what kind of care I need and what my personal risk of something is come from analysing many people's records to say, "Yes, for people who have certain characteristics, be they genetic, behavioural or biological, if we combine those things, these are your risks, so I know how to intervene". The complex data that says what I should do for this patient is actually the same data that can say, "Actually, on balance, this NHS trust is doing better with its heart surgery and its management of stroke". It is the same data. Similarly, if can look at how the data links to environmental and socioeconomic exposure, it is incredibly important.

The other piece of data is that people, as I think I said earlier, can now understand their health in a different way. They have access to information about health, which fundamentally changes the relationship with the practitioner. Very often, the patient knows more about their complex disease than the doctor in front of them, so it changes the relationship and the doctor's interpretation.

Finally, if we really think that technological solutions will change things, we will have to change the way we deliver the health service, such as through remote diagnostics; you heard John Bell talking about remote sensing. It is all very well having the technologies and the remote diagnostics, but we need the care pathways as well. We have done some work on the diagnosis of chlamydia and worked out the care pathway for how people could actually be treated without sitting in front of a medical practitioner, but that involves a whole set of regulations going through the GMC and so on. It is that pathway that we need to work on alongside the techy bit.

Q248 Baroness Redfern: We have heard about strategies and targets for prevention in physical health. What is being done to support a greater focus on prevention in mental health and to bring that to parity?

Mark Davies: I think this was raised the last time I was here and it is a significant issue, which we recognise. I think it is fair to say that since July it has become a more prominent political issue across government, so more is being done and quite significant investment is being made in early years services and in children's and young people's mental health services, where we are making up to £1.4 billion additional investment in services. It is fair to say that early intervention and intervening in early years is almost certainly one of the best preventive measures for people who are showing signs of mental ill-health. There is a relatively good story to tell; we are starting to recognise the need to address problems when they first emerge, often in teenage years and in young people.

It is also slightly harder to associate the intervention with the outcome in mental health. This is to do with the science and the causal factors of mental ill-health. We know in physical health, for example, that you can vaccinate against certain diseases and the outcome is pretty certain; you will not get the disease. Similarly, if you encourage people to stop smoking, tremendous health benefits accrue that we can identify. It is slightly more difficult in mental health services, so preventive measures often sit in the family, in early years or in areas that are outside the individual's control.

Baroness Redfern: So you think that closer working relationships with local authorities are important?

Mark Davies: Indeed.

Baroness Redfern: That brings me on to the next question: how is the NHS working in the judiciary services?

Mark Davies: I am sorry but I cannot answer that, because it is not something in my area of expertise. I think it is fair to say that there is a growing recognition of the causal factors and the fact that they sit within the responsibility of a number of different departments and agencies, the Department for Education, the criminal justice system and those sorts of things. There is more to be done to understand the causal factors of mental ill-health and to join up the work across government. Again, some of the Prime Minister's statements about addressing the needs of vulnerable people are an important starting point for that discussion. I am not saying that the problem has been solved; there is a lot of work to be done.

For example, we have some evidence emerging from Professor Mark Bellis, who is working in Wales at the moment, that once adverse childhood experiences, which are defined as experiencing parental domestic violence, family breakdown or parental drug and alcohol misuse, start to cluster, they start to predict future health behaviours, such as taking up smoking or drug misuse, but they also predict future mental health problems. We are starting to get a better understanding of how those very early childhood experiences have an impact on later mental health issues, and that is a big challenge for us. It is not as simple as stopping smoking, reducing sugar or stopping drinking; it is actually about changing the way families work and how they are supported.

Baroness Redfern: So mental illness should not be an add-on to what is being driven within the NHS?

Mark Davies: It is more complicated in many areas but something none the less that we have to work on. As I said, there is a really good argument for investing in children's and young people's mental health because of the preventive effect that has in later life. That is starting to happen, and it should be seen as very positive.

Q249 **Baroness Blackstone:** Could each of you in turn tell us what single key change the Committee should recommend to make the NHS more sustainable?

Professor Dame Anne Johnson: I would like to suggest, unsurprisingly, a recommendation that we invest in the kind of research and evidence for prevention that brings together a range of actors outside the traditional sphere of biomedicine. It is the kind of thing that could be done by working across research councils and the key charitable funding agencies, not just within the NHS, really thinking about prevention research and all its ramifications, so that we have the evidence base that can then be built out into practice. That should parallel the efforts that we make, and have made very effectively, in clinical practice for the evidence base for optimal treatment. That is a mechanism for improving the use of resources within and outside the NHS, and I would add that evidence is only as good as its implementation.

We have worked through the NIHR, the universities and the academic health science networks in treatment, and we must do the same thing for prevention. Critically, that means a really strong alliance between the universities and the practitioners, which could be led, as we have suggested, by regional hubs of engagement with Public Health England and the devolved equivalents, to try to build up the same kind of thing that we are doing for clinical medicine, so that we go all the way from evidence through to investment in implementation for the broader benefit of the population. We must use evidence more effectively in this space to maximise the use of our resources.

Adrian Masters: If I could be allowed two points, I think the changes we are trying to make through the five-year forward view and the shift of public health roles into local government are going in the right direction, and I would ask for the Committee's support to say, "Deliver those changes. They can, and will, make a big difference to the success of the system in the long run", so my first recommendation is support for the changes that are already in progress.

The general idea of sustainability in the long run is about public support for the NHS, which depends on what value they feel they get for the spend on the NHS as well as its affordability. As I say, I think there are three elements to that: helping people to live longer, healthier lives; the finances; and, importantly, the contribution of the health system to the economy. An emerging issue that we need to give more thought to is this question of healthy ageing. We will need to increase the participation of people between the ages of 50 and 70 in the workforce, and how we manage it will be critical in an ageing society. That will depend upon the quality of the health system and the preventive system in order to keep people well so that they continue to participate in the workforce. That area of healthy ageing and the contribution of the health system to the economy is worth further thought.

Mark Davies: As a civil servant, it is always very difficult for me to make suggestions, because I might have to implement them.

The Chairman: We may quote you if it is a good idea.

Mark Davies: Of course, I agree with my colleagues. One of the things that we have learned—I heard the end of your previous evidence session, and this is also true for public health, prevention and the technology issues that you talked about—is how you ensure adoption at scale of beneficial change. Keith McNeil talked about how difficult it is to get everyone to do everything that is good. It is the same in public health. Sometimes we focus on big regulatory actions, as we did in smoking when we changed the legislation; sometimes it is about getting people to adopt best practice. One of the things I would like to do is think about how we can learn from the STPs, the 44 areas that are looking at prevention and having a sustainable system, and how they can learn from one another. Otherwise, the system ends up much too fragmented and does not adopt change at the scale that is needed to deliver beneficial change to everyone.

The Chairman: Thank you all for coming today; it has been very helpful. If, on reflection, you think that you might have forgotten to say something, please send it in as evidence.