

96. Veronica

(1) Tell me about your background.

I grew up around London. I was the oldest of four children. My mother was a teacher, my father was an executive for a large computer company. And I lived in a sort of very well off commuter town, quite close to London. Very privileged education: I went to a state primary school, but it was very good, and then went to one of the local grammar schools - an all-girls high school - which was okay. But I got a very good education. Again, I was lucky, we had quite a lot of grounds, so I grew up with horses. You know, my parents were very good at... we used to go into London a lot, and we travelled quite a lot. I always remember, for years, I was the only person I ever knew who'd been to Yugoslavia and Bulgaria, and places like that. So, it was very... I lived in Belgium for three years, and went to a French school, so until my mid-twenties, I was bilingual. And it's now rusty, but comes back if I go there. But did Latin, for some unfathomable reason, at school, because scientists were supposed to. And it's one of my regrets, and what's something I'll pick up later: that I didn't do another modern language. No doctors in our family at all, and decided to do medicine, really, at the Royal Wedding, when I went down with a group of friends. And my friend Tim and I were discussing things along the Mall, at about four o'clock in the morning. I asked him what he was going to put on his UCCA form that autumn, and he said "well, probably medicine", and said, "because..." And I thought, "Mmm, I can't really disagree with that", so decided to do medicine, said exactly his reasons at the interview, and the rest is history.

What were his reasons?

I think he liked... I can't remember, because it was many, many years ago, but he liked the mixture of something... it's the practical application of science. It was something put like that, but a lot more eloquently, because he's a lot more eloquent than I am, but... And he's now happily working as a surgeon, so both of us, you know, survived medicine, really.

(2) Describe your training.

I went to Birmingham University, started in 1982. There were a hundred and sixty in the year, of which less than a third were female. So, right then, women were still... weren't most commonly going into medicine. We were quite a big... one of the bigger medical schools, I think. And it was a more traditional sort of training, with two years was very much theoretical: you did anatomy, physiology, biochemistry. And then, after that, you worked for three years, you were on the wards, and very much doing more clinical medicine. You had very little clinical contact in the first two years. We had one general practice placement, which actually I loved, and... which was with a child who'd been born with a disability. But I thoroughly enjoyed it. And from having... really having fallen on it, as it just seemed like a good idea at the time, I thoroughly enjoyed everything about it, from learning the theory, to the practical application. So, I

was lucky, I landed on my feet. I think I also had a good social life. I met some very nice people, a lot of whom I still am in contact with. And I remember, at the time, it seemed a very easy way to leave home, because you were still... you were sort of semi-attached to home, but certainly from the third year onwards, you had very little holiday, so you didn't have the long university holidays. And it was about two hours from home, so it wasn't too bad to get home, if I needed to.

Can you remember how much you learnt about diabetes throughout the training?

I don't think... I can't remember exactly how much. We certainly would have done the theory, and we would certainly have come across patients with diabetes on the wards. But I didn't have any of my clinical attachments to a diabetes team, although I would have come across them on general medical and surgical takes. But we certainly would have learned the theory. And pharmacology: I remember I always really liked the way pharmacology was taught at Birmingham. And I'm sure we must have gone into the treatment for diabetes in the big sort of teaching sessions, where seven of us would be put in front of the whole year, having been asked to research a particular subject, and then talking it through with one of the professors and senior lecturers in pharmacology. So, I think you were aware of it, but it was not given any special recognition, you know, as would renal disease. One of the things: my junior surgical attachment was on a transplant team, so I saw more liver and renal transplants than I did appendicectomies and hernias. But significantly, a large number of the people with kidney transplants would have had diabetes as well. And I can remember, you know, learning how to write up the insulin that they were on. And I very clearly remember one lady who'd had... who's one of the earliest pancreas transplants, and I remember meeting her in an outpatients. It was only partially successful, and I have no idea how long it remained successful for.

(3) What did you do after you completed your training?

I did my first house jobs in medicine in 1987, and I did the medical part in the General Hospital. My house job was actually in gastroenterology, but there was a very big diabetes team. And I think that's when it really first came to hit me, about the complications of diabetes, and how much it really could take over someone's life. Very occasionally, I'd be asked to be second on, and I would be asked to cover the diabetes patients. And I can remember, you know, feeling the consultants always got very jumpy, because they didn't have one of their team on; that really, only those people who were part of the team were deemed capable of looking after diabetes. And there were a couple of extremely supportive registrars, who, you know, were always available for advice, and, of course, the nurses knew a lot. You didn't often have to go, because, obviously, they were sorted out during the day. But I remember the diabetes team as being, you know, they very much liked to manage their own patients, and the rest of us didn't know as much. We were probably the same with the inflammatory bowel disease that we had, as well. I mean, I don't think it was a problem with the diabetes team, but I think it was just within the speciality that you did. So, yes,

I think, in general medical takes, I would have seen... and did look after people with ketoacidosis, that were very, very poorly, and I can remember that very clearly. Also, patients coming in, obviously, with more than one complication, so they would come in in a sickle cell crisis, because of the ethnic mix within Birmingham, but they may also have diabetes as well. And how sick they could become, and how sick, and how quickly they could become so unwell. We had very good guidelines, and it must have been quite early on, really, for hospitals to write down what you did when someone came in; all to the credit of the diabetes team, there. And I can remember some very good teaching by the diabetes consultants as well. And when we were on call with them, because you were covering your colleagues, you know, a lot of the consultants would be in at ten, eleven, twelve at night, and you'd learn quite a lot on the sort of, you know, the last evening ward round before you went on. But, overall, you know, my overwhelming memory was of, I enjoyed my house jobs. It was amazingly tiring; we were working more than 50% of the time, and would do very long shifts, so it was just tiring. And you just learnt and learnt and learnt and learnt. But I also had to learn about cardiology, gastroenterology, all the other - rheumatology - all of the other specialities that came in.

You said that the nurses seemed very experienced.

I think that as much reflects my complete lack of experience, as much as anything. But obviously, there were nurses who were employed to work on the diabetes wards, and they would become very experienced at what they were doing. I am not, however, sure whether there was any extra qualifications they would have had. There may well have been, but I'm not sure. But they were, again... my memory is of the nurses of all the wards as being very supportive to us new doctors that came out.

In this year of your house jobs - 1987 - what would you say was the received wisdom about diabetes?

Well, we're talking, you know, over twenty years ago now, but very much that Type 1 diabetes had to be looked after by special doctors; that if you weren't a special doctor, you wouldn't get it right. And Type 2 was very much seen as not quite so important, for all sorts of reasons, really. It would be remembered, however, that I wasn't doing outpatients, and it may be that, of course, if I'd have done outpatients, I wouldn't have thought that way. But very much it was, you know, you had to be looked after by a diabetic doctor. I had no idea... I had a feeling that most of the care would have been hospital based, but again, that's just a memory.

(4) What did you do after your house jobs?

After my house jobs, I got on a training scheme in a market town, near where I now live. And I had to do an extra job, I seem to remember, for six months before I could start. We chose the one where we started, really, because both - I was married by then - both my husband and I wanted to be in schemes that were close to each other. So, I did A& E, and, you know, thoroughly enjoyed

that. Did I come across diabetes? I'm sure I did, but I can't remember. And I then went and did medicine. I think this is when it first came to strike me: there were differences in the way that the people with diabetes were looked after, from the teaching hospital where I'd done my house jobs, and from where I was doing. It wasn't... it was seen as very important by the team involved, but the control of the glucose, the glycaemic control, was more relaxed. Certainly, they were using tablets in women who were pregnant with diabetes, that I hadn't seen being used centrally, and they were using Actrapid twice a day. And I was very used to people coming in, needing insulin, when I was a house job: you'd put them on Actrapid four times a day, and then use the amount of units that they were given four times a day in order then to work out their twice-daily - because it was all twice-daily - insulin needs. And I can remember having... just asking quite... I can remember having some discussions with the then consultant, who was on his own, and had a large patch to manage, why this was. Such that, when I - I did my house jobs, actually, in this same hospital - such that when I came to do medicine, I opted not to do diabetes, and actually opted to do three jobs in other specialities, although, of course, I would have covered the patients who were in hospital who were there. So, I finished my house jobs, fairly standard. Had four months' maternity leave, and then went into general practice, where there was a GP who was very keen on diabetes. And I think it must have been about the early 1990s, when GPs were starting to take more and more interest in diabetes. And certainly, it seemed to reflect, I can remember when I was revising for my MRCP, there were an increasing amount of papers about the experience GPs had of managing both Type 1 and Type 2 diabetes, or then it was called insulin-dependent and non-insulin-dependent diabetes. The nomenclature hadn't changed, then, and still people were still referring to it as juvenile type, and adult onset, so, you know, the nomenclature has changed. And this GP, I can remember that they did run diabetes clinics, and they did, sometimes, alter the insulin. When people had come out on twice-daily Actrapid, they would quietly get on and just alter them to a twice-daily mixed regime. And it was quite nice, as a trainee, in that practice, to be able to do that under supervision. And there was, I can remember, I stayed on for a few months after that practice to actually do the diabetes clinic. And, you know, it was set up properly: there was a nurse, they came in, they had blood tests that were done, and, really, you know, it was the sort of marker of things that came on. So, I then became a part-time partner in 1992; a small practice in a rapidly growing town. And I joined two male GPs, and it became very clear that what I was going to have to do is just gynaecology, unless I put my flag in the ground that I wanted to do something else. So, I very rapidly said "I'll do diabetes". You know, I liked medicine, I liked diseases, and, you know, people with diabetes, then, very sadly, had... you know, very early on, got complications with heart disease. And I felt I wasn't... I didn't particularly want to be thrown into doing gynaecology all the time, you know, I wanted to do this. And it was the best decision I made. We also had a practice nurse, there. She'd been a district nurse for years, and was one of the first nurses to come into general practice. And she was really keen on diabetes, very methodical, very supportive, had run quite a

lot of it on her own. And so, she and I, I think, as a small little unit of two, you know, worked quite hard to make things better.

- (5) About that time, there was a new consultant, who was then fairly rapidly joined by a second consultant, and from the hospital point of view, things became very straight forward. It was very easy to get good advice. Suddenly, you know, there were very well-known regimes, with QDS Basal Bolus regimes. It became easier to get... Dietary advice, in the early 1990s, tended to be very fixed. It tended to be in portions, or, you know, amounts of carbohydrate whatevers - I can't remember what it was. And I seem to remember, sort of through the 1990s, the diet - as the insulins became more sensitive to people's needs, and probably more based on the physiological needs - you know, the diet did relax. And the consultants ran, for a time, there was... they ran sort of regular three monthly meetings for GPs with an interest; again, you know, trying to sort of increase the knowledge. And again, as your fear, when you first become a GP, you just think: how are you going to recognise everything that walks in through the door? You still have that now, you know, and how are you going to know anything about everything? And actually, obviously, as time goes on, you realise you can't know everything about everything, but to build on your experience, and not to stop learning. So, really, through the 1990s, the practice was growing very rapidly. It was developing the clinics. At that time, the general practice contract - it was the first new contract - and it came in with chronic disease clinics. And again, what was useful is, we didn't have to change what we were doing, because we'd been running these clinics, based on what I'd learnt as a trainee. But it became quite easy. I think, in those days, there was less about fitting in around the patients' needs. So, if you ran a clinic on a Thursday afternoon and a Tuesday morning, people probably didn't like coming in - it probably was no easier for them, with leaving work - but, you know, they would obediently trot up to the diabetes clinic. We then had... we were computerised for prescriptions in the early 1990s; our appointments system, again, about '93, '94; and starting to put more regular information on the computer, so we could run simple audits that weren't based on paper-based audits, and more sophisticated call and recall systems. So, we had those... the clinics - they sort of morphed into something else - until, probably, the late 1990s, when it became clear, as we got bigger and bigger, that actually what you needed to do was to fit more in around the patients. So, if they couldn't come to your Tuesday morning clinic, there was nothing to see you stopping them in a routine appointment at half past five, say, on a Thursday or Friday evening.

- (6) Before we move on, can we just look back at 1992, and describe the diabetes clinic in more detail?

Yes. Again, because of the start of the computerised system, we could audit to know how many people with diabetes we had. We would audit them by

medication, so it was urine sticks, or it might be Metformin, or it might be insulin. But by tagging something that someone with diabetes was prescribed, then we could find out how many people we'd got. And that was how you'd run the sort of sim. . . We also, very unusually, had a dietitian. And this was a scheme where we were given. . . had a little bit of extra money given to us, by the, then, would have been an FHSA. And we chose to spend our money on a counsellor and a dietitian. And we were lucky: we got one of the more senior dietitians from the hospital, who decided to work part-time in the hospital, and she came out. She didn't just see people with diabetes, although it was a significant amount of her work, but she used to see people who perhaps were terminally ill, people with renal disease. And she was with us for three or four years, until the money was withdrawn. And it was phenomenally useful, so useful, in fact, that we've actually did this again, when the whole scheme changed, just before the GMS2 Contract, and we now work with a dietitian again. The comparison between the two is that I think Jane, the then dietitian, would have spent much less time, in the early 1990s, on obesity than our current dietitian does. And I think that would be the striking difference that I remember. It was useful having the counsellor. He is still with us, he's been there. . . And we employed him, really, because of what we saw was a perceived need for people who were given difficult diagnoses and bereavement. So, he was employed as a medical counsellor to help people deal with the consequences of being given a diagnosis, such as diabetes, and he would have seen that. And again, looking at how that's changed over the years: he still does see these people and he still can support them, but it's now so much more about stress, about family issues, and, you know, offering CBT. So, what's been interesting, we also employ him for significantly more hours, now, to supplement the relatively poor amount of counselling that we've got through the PCT or the mental health system. But he, in the beginning, he very much was there for people who were told they'd got diabetes; who felt they'd got a life sentence, who, perhaps, their experience. . . and their experience, then, was, if you get diabetes, your leg will fall off, and if you have to go on insulin, it is a failure. So, he was there to help us deal with that.

(7) And what would you say was the received wisdom about diabetes in, say, the mid 1990s?

I think, by then, the DCCT trial had come out. And certainly, I can remember, very clearly, one of the consultants saying "we know now that it is good and it is right to give good control for people who need insulin, but we have no evidence that those with Type 2 diabetes need good control". Although, I thought then, as did he, that it seemed to make physiological sense that you should try and keep people's glycaemic control as good as possible. But still, very much, the emphasis was on those with Type 1 diabetes, with almost a sort of therapeutic nihilism for those on Type 2. It was seen as the GP's province. The hospitals would get involved only when the complications were there, or perhaps if they needed insulin. And if you needed insulin, you went into the hospital, and the hospital sorted it out. Again, people would be admitted to start on insulin. You

would not start that in the community, or at least not in our areas. So, again, it was very medicalised, you know, seen as... Going into hospital was seen as a serious thing, and that was happening. Then, as now, really, children with diabetes were hospital-led, and that, I don't think - if we're going to compare then and now - I think it's much less... adults are, I think, more community-led now, but children are still in the hospital.

I recorded a GP, now in his eighties, who virtually never saw childhood diabetes. How common was it for you?

I can remember one or two patients, and actually still look after them, which is nice. They're now adults, and I look after them in the diabetes clinics that we do now. I can certainly remember one or two. I still have a very clear recollection of adolescents going in with ketoacidosis. But it wasn't very common, and I should imagine, you know, that it wasn't very common because some of the children must have gone in in extremis and died, and not come out again. I think prescribing, in the early nineties, was different. You went in, you were diagnosed with diabetes, and I would imagine that the hospital took care of all the prescribing. Where we tend to get involved, also, is arranging the repeat prescriptions for children. And that, you tend to... I certainly... the individual I can remember had his diagnosis of diabetes at age nine, and it was supporting his mother, really, as she went through it. He was a lot in hospital, admitted a couple of times with DKA, then became extremely good, but, you know, got too many hypos. So, I can remember a couple of cases, but I can see why a very elderly GP might not remember that, or remember any.

(8) So, now, moving on to the late 1990s, what were the major changes?

I think, from the mid-1990s - mid to late - we were looking at screening for retinopathy. The screening for people with diabetes had been done by the hospital, and for various reasons - there had been a new consultant in - and he'd just discharged them all, and said "we haven't got enough time, enough space for the screening". And there had been a couple of landmark trials, really showing that, you know, how you could prevent sight loss by picking this up early. If I remember rightly, I can remember looking for papers, and hearing about examples in the West Country, where they'd started them. And again, there was a new consultant, who was very interested and very supportive of us, as was the local diabetes consultant. And so, we started one of the earliest, I think, retinal photography schemes. We used to run it from our practice, on behalf of the three practices in the town where I worked. And that started, I think, 1996, if not even earlier than that. And we would hold the disease list that was those with diabetes, we would be given the names by the other two practices of their patients. And it was a professional medical photographer who would come in, take the photographs. He would then develop them, and one of the hospital specialist ophthalmologists would come out to the practice every three to four weeks, and he would report them for us. Any that obviously had sight-threatening retinopathy would go straight on to the hospital, and any that weren't would remain in the care. But even then, I remember very clearly having

three letters, you know: one is “you haven’t got any signs of retinopathy”. The second one “you do have signs of retinopathy that can be helped by improving your diabetes care”, and the third would be, obviously, “we’re going to ask the specialist to have a closer look at you”. And we were so proud of our scheme, because it had been really hard work to set it up. What was lovely was how keen... it was one of the nicest examples of every single GP in the town wanting it to happen. And the two hospital consultants - the diabetologist and the ophthalmologist - again, wanting it to happen, despite, you know, they were very busy at this time, and it would have meant more referrals coming in their way. It very rapidly, different, but fairly similar schemes took off in other parts of the country. Before then, we would have looked in every patient’s eyes. Part of our annual diabetes check, we would have done fundoscopy. And I can think of two or three - my husband’s practice, where they’d both done ophthalmology - would look at them very properly with indirect ophthalmoscopy, and were obviously so much better at picking up things than I ever would have been with my little ophthalmoscope. And so, they would run an indirect ophthalmoscopy clinic to look at their patients. Again, in the north of the county, there was another retinal photography, I think where the GPs were actually doing and reporting on the photographs. So, there were these little things coming on, and were starting... In the centre of Birmingham, I can remember going to hear about where opticians were actually doing the screening. So, there was more and more evidence that people were thinking “hang on”, you know, “what we need to do is to get people before problems arise”. Certainly, I can remember the teaching, when I first came into general practice, that when you had someone with Type 2 diabetes, 40% of them would have had complications at diagnosis. So, it used to be a bit of a game, really, that used to make sure you saw the patient, and really examined them well, because you knew there were likely to be complications. We would tend to diagnose because of symptoms, but really, through the 1990s, you then started to actively case-find. So, people who’d had ischaemic heart disease, you’d start to do “well, let’s just look at their blood sugar”. You’d have a low threshold. It wasn’t just the thirstiness, perhaps, for people who were tired, elderly people who were confused. I think we got better at case finding. I think there’s some research to show that we didn’t wait for people to become in extremis before they did it. I think, overall, the general knowledge about diabetes went from not very good to fairly good, because we were getting handed a lot of the Type 2 diabetes. Still, a lot of people would expect, anybody on insulin would have gone to the hospital, at the very least, once a year, and obviously more with complications.

- (9) So, the retinopathy was something we were very proud of. We were continuing to grow; we had more nurses. The training courses for nurses were springing up all over the place, so we had nurses, then, who came in with particular extra training in diabetes care, and more of... we had more doctors, more of whom were interested in diabetes care in the practice. So, I ceased to see all of them, and, interestingly, I still have my cohort of people I’ve known for all of these years, but because of other commitments



on my time, and time out of the practice, I'm no longer the person who does most of the care. So, as we move into the new millennium, I think, in a lot of primary care, a lot of the day to day diabetes management, computer systems were starting to get very much more sophisticated. And we became paperless - or paper-light - in 2001. And we weren't ahead of the game, by any means; there were many more, even in our area. And I think once you became paper-light, which meant that you were putting all your consultations and you were Read coding, the ability to audit became much easier. And with the ability to audit, you could really see how many people you were seeing, and how good you were at maintaining glycaemic control, what percentage of people had HbA1cs, you know, were there. And we became better... I think we started to become better at chasing after those people who didn't come down to see us, and the people who were house-bound and in nursing homes. And certainly, in 1999, the retinopathy service used to go into the nursing homes, and just photograph everybody. And they would go out to the people who were house-bound, even. And that, I think, was one of the lovely things about the particular team that did this. So, we then come on to, there we are, we're computerised, and we... there'd been quite, I think from the late 1990s, quite a lot of PCTs had supported GPs, and practice nurses, in getting a qualification; a little bit of extra knowledge on diabetes care. And I know in East Birmingham, I think they'd had a GP and a practice nurse from every practice. And our PCT had tried to organise it, without much success. So, with the enthusiastic help of the diabetes specialist nurses, I was involved in setting up and running the Certificate, which we run very successfully, and it still runs. But, in the sort of early twenties, we put through, you know, four cohorts of twenty-five doctors and nurses, in just under two years. And it was great. It was a very straightforward course; it did what it said on the tin: you know, this is Type 1 diabetes, this is Type 2. Where we could, we encouraged people to come with a doctor and a nurse within the practice. I think if you... when we talked to the people, at the beginning, what was lovely is the nurses, you know, very much knew their side of the job. The doctors found the prescribing so easy, unlike the poor nurses, but they were rubbish at the diet, because... You could very much see that it was a team approach that was doing. And what we were doing was just making sure that all parts of the team knew, you know, roughly the same spectrum. And that was great. Again, very well supported by our local consultants, who would just come and lecture on it. We managed to get some companies to subsidise it. It was quite expensive, and we thought it would put people off, so we subsidised it quite heavily. And that worked well, because really, people couldn't give the excuse they didn't want to do it. And what's nice is that it's carried on in the way that is now. So, we did fairly well, and, certainly, there were... about half of the county had a doctor and a nurse, in every single practice, that had the Certificate in Diabetes Care.

- (10) So, I think, that, and then you have the new contract, and you have the Quality and Outcomes Framework - which is very good at gathering data on how good your control is. It doesn't say how good your care is, because care is a bit more than just getting blood pressure and glycaemic control down. Again, and I think all of these things, over the last ten years, you know, there's so much more expertise in general practice. People aren't admitted to hospital any more. We do work very much with the increasing number of highly qualified and experienced diabetes liaison nurses, who... So, we might even get someone who's a new Type 1 diabetic, who isn't particularly unwell, and we would hold them over the weekend. We would actually get the district nurses in to give them their insulin, and then the DSNs would pick them up the next week; de-medicalising what is something someone has to live with. And I think that's one of the most important things. As soon as you say "we're in it with you; we're in partnership; it's something a lot of people have. That we can do our bit of the bargain, and you can do your bit, and you don't have to go into hospital as soon as there's a crisis". The other strides, in the last five to eight years, you know: the education and the training health professionals have in how to educate patients. You know, recognising that they're... just in the same way you have to be trained to educate primary school children, you know, actually patients need that. You know, the phenomenal amount of resources that we have for patients where English isn't their first language, and, you know, that's great. The ability for us to have translators and interpreters in the room with us, for our care; that's very new. Five years ago, that wouldn't have happened. You know, as a fairly rural town, you know, they would see, you know, "why do you need that? We need it in the inner cities". But actually, the people with diabetes, very often, were in this catchment area. And, you know, the dietetic advice has moved from: you have to have this really rigid, restricted diet, from the early 1990s and the 1980s, to, actually, you have to have the diet that we should all be eating anyway. And that it's a healthy diet, and balancing the needs of insulin. So, it becomes very much more interesting, and, you know, I still thoroughly enjoy working with it. There's... you can never know enough. I still have... we're lucky, we're very well supported by the liaison nurses and the consultants, but we now have five... four doctors with the Certificate in Diabetes Care, and three nurses. And we can, you know, so I can always ask one of my colleagues, you know, "I'm not so sure about that". You know, it just becomes a much more level playing field. Patients don't feel they have to see one doctor, because he does the diabetes. They then have the freedom, like any other patient, to choose the doctor whose consulting style suits them best, choose the practice nurse whose consulting style suits them best. And we have a spread, so our colleagues will still see patients with diabetes, you know; know there's always someone around with a little bit of extra knowledge.

But no diabetes clinic?

We don't run a specific clinic, because we've got quite a high level of employment, and we found that we had lots of people who just didn't turn up. So, people with diabetes can come any time. The older people will still come on a Thursday afternoon, which is when it was always run, so we always make sure there's a nurse there, or one of the doctors there. But actually, no, I think "why should anybody be any different?" So, we now, for the last two years, we've been running clinics between six thirty and eight thirty in the evening, and why shouldn't someone with diabetes have their check then? You know, why should they be stuck coming to the clinic when we want to?

(11) You mentioned actively looking for people who might have diabetes. Can you tell me more about that?

Yes, I think - and I can't tell you when it started - but very clearly, if you've got someone who is obese and overweight, then they're going to develop diabetes. So, you know, we will do a random blood sugar on them, and then go on to a fasting or glucose tolerance test, according to what the result is. If they are someone with hypertension, every year we'll do, as part of when we check their renal function, we'll also check perhaps lipids, and we'll do a glucose on all of them, because they will develop it; it's part of the metabolic syndrome. Certainly people with established peripheral vascular disease or coronary heart disease will have... part of their routine screening bloods will be, at least once a year - even if they have no symptoms - they will have a glucose done. Other sort of markers, if we're doing lipids, a lipid profile for someone, and if they've got a raised, you know, triglycerides, again, you'll go back and you'll think "well, okay, it might be that they've got diabetes", and do a blood sugar for that. Certainly the rise and rise and rise of obesity. The other thing is, obviously, women who've had big babies. You can look back, one of the lovely things about the GPs' summaries, you can see when they've had babies, and, very often, what weights the babies were. And if, you know, a woman's had a couple of babies that were sort of ten pounds or above, they're going to... they've got such a high chance of developing diabetes. And more recently, you know, the further knowledge of women with polycystic ovary syndrome, again, they've got a much greater chance of Type 2 diabetes and glucose intolerance, insulin resistance. So, actually, you know, part of, you know, looking after them, you may be seeing them for all sorts of reasons, but you would have a low threshold, perhaps saying "well, come in, we'll just check your blood glucose". So, really, it's about telling people that they're at increased risk, you know, working with them to have as... to stay as thin, quite frankly, and as fit as they can, so to delay the onset, but saying "okay, we want to be there as early as we can". And, increasingly, we have got more and more people who, as part of this screening, have not got diabetes, but have got impaired glucose tolerance or impaired fasting glycaemia. And they will be given the same advice, even if they'd got diabetes, you know: stay thin, stay fit, they can see the dietitian, we can give them all the information. And the idea being that saying "look, it's just a question of time, and why don't we work with you", hopefully, so that when they do develop Type 2 diabetes, according to whatever WHO protocol, you know, they're already going to be

thinking the diet. I know that's a bit, perhaps, a bit idealistic, but it's not such a shock. Very recently, of course, there's been a lot in the news, and I think Diabetes UK, they've always been so - even when they were the British Diabetic Association - a great source of information. I love their website, and we use their leaflets. But they've been very good at promoting diabetes, and promoting wellness within diabetes, and where to get advice. And I think the general public are starting to come in, you know: "my father had diabetes", you know, "my uncle had diabetes". "I've been feeling a bit tired recently", you know, "perhaps should I check my blood glucose". Or people are going to their pharmacists, who can check blood glucoses now. So, I think it's... the information is out there, certainly as we become more and more multicultural. What would be nice if the theory is out there, so we can just get on with managing diabetes within people's lives. Not labelling them as diabetics, which is just an awful thing to do, but they are... that it's a human being who happens to have diabetes that we need to work with. But it's not just a specialist unit; it's a whole range of people. And I think, you know, diabetes really led the way in multidisciplinary teams. It was one of the first units where you got multidisciplinary teams, and developing faster and faster, now, with all the different sort of DAFNE protocols and things that the diabetes nurses can have.

- (12) For the future, I would love to employ diabetes liaison nurses. You know, not practice nurses with an interest, but actually specialist diabetes nurses, within the practice, but working with us, you know, so that we can really carry on upping our game. And they're still very secondary care based, and even if they're employed by a PCT, very secondary care based. And you can understand why they like to work in a team. But I think, what I would really like is to see more of them coming out into the community. Consultants are starting to come out in the community, and that's lovely when they do, because you learn so much from them, but they're very busy. And I think as long as the bulk of the routine care is done appropriately in the community, then travelling to the hospital shouldn't be such a hard thing. But I think the biggest thing is - I think the GPs are getting there - but our patients, when they go onto a non-diabetic ward in hospital, still come out with horror stories. And I really hope that changes. And I think, again, in hospital, you can't change insulin unless you're a member of the diabetes team; diabetes is seen as a special thing to be educated. And really, I think it should be part of every doctor and every nurse's training, so that they have no problem with adjusting insulin levels. And often people tell stories: they've had Type 1 diabetes for years, and they go in, and all their insulin and their glucose monitor is taken away from them. You know, what makes them, when they go in with a broken leg, or... what makes them unable, you know, to actually advise on what their blood sugars could be? And I know that when the DSNs go round and see them, they're completely with the patient, but it's just this whole protocol: you can't medicate yourself, you're now a patient. And I think that needs to change, to recognise the expertise that the patients have. Going back

to medical students: we have first, second, third and fourth year medical students coming into the practice. And what's lovely is, certainly in the first and second years, they do quite a lot on diabetes. And we are getting patients, who come in from the community - our patients from our practice - are coming in and talking to the students, right at the beginning of their career, about having diabetes. And, unlike me, they're meeting people who are working, or... you know, I remember very clearly one eighty eight year old, who came in, and showed them how she gives herself her insulin, and how she checks her own glucose. And she'd needed insulin for six months, and she just came in and showed them. And you could see, for them, it was, you know, this is amazing, and it stops this only seeing nurses giving. And I think, before I finish, really, I think the forgotten tribe are the district nurses, and my experience is the district nurses are doing so much diabetes care. They're going into the house-bound, the people who can't see. They have increasing numbers of very disabled people being supported in the community, and they are giving them their injections every single day, and they're providing, you know, a day-to-day contact with people. And their level of knowledge is just fantastic, you know. Because of them, we can initiate insulin in the community, because we know that you can start the insulin, and you know someone's going to come and see them once or twice a day. And, you know, that reassuring "don't worry, you don't have to inject yourself until you feel absolutely ready, you know, get used to feeling it". And I think, you know, that really, the district nurses mean that we're now much better at giving the same diabetes care to those who are house-bound. It's not just those who can come up to the practice, but these people are getting the same - and should be - getting the same amount of care and support. So, they will call us in. You know, we're not controlling this person's... and if I can't sort it, then we'll ask the DSNs, who can go and see them. So, I think the community care for the frail is better. And I look forward to really, you know, continuing to change and adapt, I think. Lots more research; huge, huge academic units now. And there are new drugs that we're starting to use, and I think it will remain a very interesting area.

- (13) You mentioned that when you were training, Type 2 diabetes was regarded as mild, not too important. Can you talk about how that changed?

Yes, I think it was the UKPDS trials that came out, really reinforcing that good glycaemic control, for all people with diabetes, was vital. And that has made such a big difference in... you know, if you have diabetes, you have diabetes, and the mode... you know, how you control blood pressure - and we shouldn't forget, of course, how important that is, it's not just glycaemic control - but... And, you know, a person can walk in, and if they need to manage their glycaemic control with insulin, fine. But if they don't - they manage it with tablets - you should be looking, by and large, for the same degree of glycaemic control. And I think UKPDS threw a big rock in the water, and made us... I think a lot of people had been very conscious that, although the evidence wasn't there, it made

good physiological sense to keep. And again, little trials showing, for instance, that if you put people on insulin when they went in with MIs, so we'd find people who go in, have an MI and come out on insulin. Well, again, it was all pointing to, you know, the wider use insulin has: whether the insulin is bullied out of the pancreas with some oral hypoglycaemics, or whether, actually, you've giving it exogenously in the form of the subcutaneous injections. So, I think that UKPDS was vital, really. It also was about the time that we were starting to use Metformin and insulin, and starting to combine; looking, really, at the physiology of diabetes. Looking at, you know, the glucose intolerance and the effect of the liver, and not just "we're short of insulin, and we've got to give you more by whatever means". And I think there's a greater understanding of that, really, is to try and look at someone as a whole person. And if you're going to just look at their physiology, you know... And the newer, you know, Exenatide and the new gliptins that are coming out - again, you know, understanding the physiology more, although we need to see how things go, really, to see what their role is. So, that was quite a marker. And things like care pathways in hospitals, so that people with feet problem, you know, have to sit on waiting lists until, you know, gangrene sets in and it all becomes a crisis. You know, as soon as you get a problem... Podiatrists, again, greater training. It's not just the very highly skilled diabetic podiatrists in hospital clinics, but, out in the community, we've got other podiatrists, some of whom did the certificate, you know, that we used to run. And again, you know, very much more educating the patients, more, why feet are important. So, I think it's not perfect, and I think every time we do an audit, we always think "oh, we didn't do that so well", you know, "what are we going to do?" But I think it's just remembering that you have a human being - they happen to have diabetes. Because they've got diabetes, they're going to need a treatment. You know, it is very likely that even with Type 2 diabetes, they are going to need insulin, so we tell them that at the beginning, so it's not seen as a failure when they go on it, it's just part of the progression. But you also remember that they're on all sorts of other drugs. And, increasingly, they're getting old, and they have all sorts of other medical conditions, and you can't forget that. And remember it is the person and the family, and the person who's living with it on a day to day basis that you need to concentrate on.

- (14) So, of course, if we're looking at this - there, within the family - our dietitian, you know, doesn't want to see the person with diabetes, especially on their own. They will actually want to see other family members, particularly the person who's the main cook, because, actually, it's all very well educating someone if they just come home, scratch their head, and give a sort of, you know, a brief summary. And as I mentioned earlier on, we're lucky enough, we have employed another dietitian. What I like about that is she can then form her own relationship. And she has a lot more freedom than the very over-worked dietitians in the hospital, locally, that she will continue to see them. And they can come back at any time; they can make their own appointments. Their wife can come back; you know, their blood

sugars doesn't seem... she'll talk recipes with them, she'll talk ethnically sensitive recipes with them. And, you know, it's just become... instead of having your one-off diet chat, at the beginning of your diagnosis, and then it's the nurses and doctors scratching their head and trying to remember. You know, what she's saying, continually, is, you know, "we need to look at what you're eating and how you're eating". And she's very good at saying "look, what I'm telling you is the same thing I would eat myself". Again, trying to say "you're still a human being. You're not a diabetic - you happen to have diabetes. Everybody should be eating this, so, you know, is it going to harm the rest of the family if they're eating the same thing?" So, I think there's a long way to go. And I continue, you know, I learn as much from the patients as I do from my hospital colleagues. And, you know, one day, it'll be nice to reverse the obesity trend, but it's becoming... it's more and more and more of our work: significant. And I think, for future GPs, you know, you cannot rely on just those with a certificate or an extra interest. The workload's too big. Everybody has to know about diabetes, and everybody needs to engage with it.

- (15) So, would it be true to say, then, that everything is getting better and better?

I think the knowledge is getting better. I think, if I have reservations, we have more doctors to cope with more patients, but patients need to come in more, and patients with diabetes need to come in more. One of the things I find difficult is, I've always got my eye on the computer, you know: what do I need to measure? And the patient might not want to talk to me about their blood pressure. Actually, for them, it's not an issue. It might be that they've got... might be nothing to do with their diabetes, even. They want to talk to me because they've had some tragedy within the family, and yet, there I am saying "oh, heavens, you know, April's coming up, you know, I won't get that point if I don't do that blood pressure". And I think... and that is a difficulty. I still think the benefits outweigh the negatives. I think, as well, the way we work: more GPs are female, more of us are part-time, those of us that are full-time are often out doing other things. And in the hospital, the hospital teams are bigger, that I think continuity of care has very definitely been eroded. Now, if your continuity of care is eroded, and your doctor wasn't particularly good at diabetes, I don't think that's a bad thing. But if the trust is eroded between the health service and those with diabetes, then it is. And I think it's always very difficult to get the balance right. So, I think, yes, continuity has suffered, as we all get busier. And the consultation rates, in general practice, are just going up and up and up and up, and, you know, the hospitals are finding the same thing. One of the successes is people with diabetes are living longer, and that's great. But they're living longer to get other complications, and they're living longer to get other diseases that might confound their diabetes. And again, so that means, you know, that's more time. So, I think, you know, what we want is that trick of being able to manage the diabetes, so people live as long as they want, independently, fully fit, and without complications. Certainly, if I live long

enough to develop diabetes, that's what I'm aiming for.

And then, just for the sake of a researcher in twenty years' time, who may not understand all the changes in the health service, can you spell out what you mean by "if I don't do that test, I don't get that point"?

GPs, at the moment, are performance-managed in their quality. And we get a thousand and fifty points for having, for instance, you know, a diabetes register: the percentage of people with diabetes whose blood pressures are below 150; those that are below 140; the percentage of people with diabetes who've had a microalbumin screen for renal disease; the percentage of people with diabetes who've had a HbA1 and a cholesterol done. And this will go across several chronic disease types, so it's the same for asthma, the same for mental health, dementia, COPD, stroke, heart disease. And a good 40% of the practice income is made up of that. And, certainly, we found we were lucky we were computerised, and we'd been doing fairly structured care, so we did quite well quite early on. And with that money, we improved our counselling, and we employed our dietitian, and we employed another nurse for diabetes, and another doctor. So, its direct effects did come on to... or at least we chose to make it. But if we became less successful at playing that points game, our money would go down, and some of those extra people would go down. The difficulty is, if you have a practice that's struggling in an inner city, with a very high prevalence of diabetes, it gets a low amount of points, it gets a low amount of income. It's not going to be able to employ the extra people to do it so easily. And actually, I think, you know, it may be that the care and the knowledge of the nurses and the doctors is better than ours, but their prevalence... they've got a much sicker... And actually, what this system does is not purely rewarding good clinical care. If you've got a high prevalence of people that are difficult to look after, for all sorts of reasons, then the system makes it more difficult. Those people should be getting more services, not less.

(16) And can you talk about how things have changed for pregnant women?

Yes, I think that's very interesting. I think diabetes, obviously, was looked after... In 1992, if you were known to have diabetes, you would go in, and it would be consultant-only care. They were looking for problems. And I think if you had Type 1 diabetes, you know, the hospital clinics would be doing some pre-conceptual counselling. As things have changed, you know, you may have Type 1 diabetes, you may not go up to the hospital, so actually, it's up to the GPs to do the pre-conceptual counselling - make sure they're taking the right amount of folic acid. And I think the care, again, that's one of the good examples of multidisciplinary care. I think, if you're pregnant with diabetes, you will go in and you'll see a multidisciplinary team. There is one clinic that has two diabetes consultants. One of the biggest changes is the ophthalmologists, now, will proactively look for retinopathy during pregnancy. So, they will actually be contacting people, saying "look, come up". And they're not going to rely on just the screening system; they actually want to see it. And so, they're getting the best, you know, vision. Much better, you know, screening for diabetes. So, you



know, the midwives will be taking the history: what were the birth weights of the last babies? If they were big, then we'll get a glucose tolerance test; actually looking for diabetes, not waiting for that tragedy of, you know, a late neonatal death. So, I think, you know, I think the pregnancy care was... it can always be improved. And there are many more high-risk women coming in, who've perhaps moved... come to the UK, and are, you know, with their diabetes, and come into the UK pregnant. We've certainly had instances of that, and you're picking up, you know, quite a sick person. And also people are obese. Again, you know, the systems in pregnancy's much better: you can use ultrasound; they are screened for diabetes, even if they're not known to have it. So, I think that's a very good example, really, how, again, it's multidisciplinary care. It's going across specialities in hospital, cross-disciplines, and again, very appropriately managed in secondary care. Good protocols for people, so they can still have normal deliveries. In the late 1980s, you know, everybody on... you know, you were lucky if you had a normal delivery. Most people, it was automatically a Caesarean section. But now they can be put on an insulin and glucose infusion, you know, and can be monitored. And if, you know, the woman is given the option, everything being equal, of having a normal delivery, and I think that's a good thing.