The Royal College of Physicians and Oxford Brookes University Medical Sciences Video Archive MSVA 1

Professor Charles Fletcher CBE FRCP in interview with Max Blythe
Oxford, June 1984, Interview One

Part One: Penicillin

MB Professor Fletcher, when you were first in Oxford, in the 1940s, you had a unique opportunity to work as the first person to use penicillin on real live human patients. Can you tell me about that experience? It must have been a fascinating time.

CF It was, indeed. It was, it was an extraordinarily exciting moment, because at that, before that time, infectious diseases had been the main cause of death in young people – pneumonia, tuberculosis, osteomyelitis, polio, septic bones, septic joints. And every hospital had a septic ward, where people lay with ... infections which very little could be done for at all. There was a... The reason that Florey[1] and Chain[2], I think, started on the penicillin was that about four years before, in about 1935, a German doctor, Domagk[3], had produced sulphonamide drugs, which did affect some of the common infective diseases. Before that time it was thought quite impossible to produce any drug that could cure an infection without poisoning the patient, because antiseptics killed people as well as germs. And it was this idea that at last it might be possible to produce something that set Florey and Chain on looking through the literature, and seeing just what sort of substances might possibly be successful, even more successful than the sulphonamides. And among them they chose penicillin, which had been discovered by the bacteriologist, Alexander Fleming, in about 1929. And they picked on this one, because it did seem to be one which hadn't been at all toxic to animals. But Fleming had never done an experiment on animals. And when they tried this penicillin, which they extracted with great ingenuity and much greater concentrations than had been done before, on mice, they found that mice poisoned with fatal bacteria injections survived. And then they managed to improve their extraction techniques and develop enough for ... human trials. And that's where I came in the picture, because I happened one day... Florey came over to see Witts[4] to ask him if he could put somebody onto doing the clinical trials. And I happened to be walking along the corridor of the professorial department – I was there as a Nuffield research student, and I wanted to ask Witts something. So I went into his room, knocked on the door, and there was he and Florey, and, and Witts said 'Well, I think [Florey], you'd better ask Fletcher to do this.' And so that's how I got in to the very first time that penicillin was used. Now, the first thing was to see if, by any chance, this drug which had been so harmless to mice might be acutely toxic to human beings. And the remarkable thing is, the first thing I was asked to do is to find someone who was dying, inevitably dying of some disease, in whom it wouldn't really matter that the first injection, if the first injection proved fatal. We wouldn't do it that way nowadays, at all! But at that time, it was done. And I found a very nice lady who was unfortunately dying of a disseminated cancer, and I asked her if she'd mind having an injection of a new drug that might be helpful to people,

[1] Howard Walter Florey.
[2] Ernst Chain.
[3] Gerhard Domagk.
[4] Professor Leslie J Witts.

and I didn't say it would help her, but she agreed to the injection.[5] So Florey came along with an ampoule of the drug, with Witts, and we went into the ward, filled this ampoule with this yellow fluid – because the extract was yellow in those days, from the yellow excretion of the, of the mould from which penicillin was grown. And I set it up, injected into a vein of the patient, and about three hours later she had acute rise of temperature. She had a rigor and fever. So that showed that the penicillin, at that time was, had a pyrogen or something that produces fever in it. And Florey worked away in the laboratory, with animals, with rabbits, to get rid of this, purify it still further and get rid of it. And then he had a substance, something which he'd removed the pyrogen, as shown in the rabbits. And then I had the job of finding out which ways penicillin could be given. Obviously, we tried by mouth, but it was destroyed in the stomach. We tried by the other end of the alimentary canal, by rectum. And we decided that the only thing to do with the very scarce supply then available was to inject it intravenously. Now, what about the patient? Well, the Radcliffe Infirmary like all hospitals had a septic ward. And I went down there to find somebody who had a serious infection with a germ, which could not be cured by other drugs but penicillin might cure. And there was a policeman there.[6] A delightful man who'd been in having septic, septicaemia, with boils breaking out all over him. He'd lost one eye from being poisoned. He had boils all over him, and he was in a desperate state. And we started penicillin. And it was absolutely miraculous! The next day, he said, for the first time he was feeling better. His temperature came down. And so it went on for four, five days. And then the supply of the penicillin was so scarce that I used to collect his urine in the evening each day, and bicycle with it over to the Dunn Laboratory, where Chain and Florey would be waiting to hear the latest clinical news. And I would give them this urine, and they would extract the penicillin so that the patient could have on the third day the same penicillin he'd had on the first day. But in spite of this, it was necessary to... The, on the third or fourth day, the penicillin ran out, and it hadn't completely cured his infection. The poor man, the poor man then deteriorated and died about a week later. The next patient we tried it on was, curiously, which nobody ever sees nowadays, a thing called a carbuncle, which was really a huge, multiple boil, about three or four inches in size, in the middle of this man's back. Terribly painful, and with discharging areas all over it, letting out pus. Very common in those days, never seen now. And after three days of injection, this thing had ... not quite resolved, but was healing, and then completely healed. Well, that had never been seen before. And then another critical experiment was on a little boy of 14, and he had a condition called cavernous sinus thrombosis. That means that there was clotting of one of the blood sinuses at the bottom of his brain, due to infection by a staphylococcus, one of the bugs which penicillin could cure, and no other drug could then. And this was a condition which was 100 per cent fatal. And the boy had only two at the most days to live. And we started running it into his vein, and the effect was absolutely miraculous! Within four days he was sitting up and smiling. And now, being a small boy, we could use less of the drug each day, and so there was enough to last, and we gave it to him for a week. And when we stopped it, he was, as far as we could tell, cured. It was a tragedy after that because in fact the infection in the blood vessel at the bottom of his brain had weakened the wall of that blood vessel, and he suddenly had a cerebral haemorrhage, of which he died. But from the experimental point of view, of course, that was useful, in a way, because it would demonstrate that the infection had been completely cured.

MB That was the great moment, was it, when...

[5] The lady referred to is Mrs Elva Akers.
[6] The policeman referred to is Albert Alexander.

CF That was the moment, it really was. Well, it was an extraordinary thing to see an absolutely 100 per cent fatal disease being cured. Now, he died later of a complication. But, I mean, the infection, which was the root of the disease, was completely cured.[7]

MB Was that the moment when you felt, did you feel at that stage you were on the, the stage of something quite remarkable...

CF Well, I mean, it was. Well, it was, it was quite clear then that... I used to go over each ... I told you, with the urine from the patient to have it extracted. And Chain was a very excitable man. He was saying 'What is the patient like? Is he getting well?' He was a Middle European. And I would say 'Oh, he's wonderful! Wonderful.' Then Florey would be standing there, laconic Australian, and saying, 'Well, that's good. I'm glad to hear that.' And I remember saying once to, to Florey, 'It's marvellous to have discovered a thing of this kind. I mean, absolutely wonderful.' He said 'Yes, I think it's a thing that only happens to you once in your life, probably.' And I remember thinking 'Gosh! I wouldn't mind if it happened once to me!'

MB Remarkable modesty on Florey's part.

CF He was very very modest, but ... a terribly caring man and, you know, the death of the policeman was, and the little boy was, very very distressing to them, as much as to me.

MB This was also a significant time, because there was a war on, Charles, and this might have spelt out other...

CF Of course. After we demonstrated this, we did some other trials, we ... for instance, tried it on people with infected eyes, putting a little penicillin solution in locally, and again, it was dramatic in its effect. But what was to be done? We were in the middle of the war then, and how was penicillin to be prepared? And no British pharmaceutical firm could take it on, at that time. So Florey and Heatley[8], who'd been the man who was largely responsible for developing the cultural techniques, went over to America and managed to get interest from the American pharmaceutical firms, who developed new techniques, with a great deal of help from Heatley. And as a result of that, they were able to produce it in large quantities. And by the time of the invasion of Europe from Africa, it was available for troops, wounded troops, and absolutely transformed the treatment of these wounds. Because the thing called 'gas gangrene' was not susceptible to the drugs previously and here were these poor, these soldiers going to die of their infection, and then being cured. It wasn't available at all in England at that time. Except for one interesting exception. And that was that Fleming, who had originally discovered the drug, had a friend who was in hospital in [St] Mary's, with a streptococcal meningitis – that's infection of the covering of the brain, with streptococcus, a very fatal germ. And this man was dying. And he rang up Florey, and said 'Could I please have some penicillin for this friend of mine?' Florey said 'Yes, of course,' and sent him a small amount. And he said 'But first of all, before you inject it into the spinal cord, to get at the

[7] For more detail about the clinical testing of penicillin see C Fletcher, 'First clinical use of penicillin,' *British Medical Journal*, 289 (1984), 1721-1723.
[8] Norman Heatley.

infection actually in the, in the brain, covering the spinal cord and brain, you must now do an experiment on a cat, to see if it's safe.' But Fleming didn't wait. He injected it, and it had a dramatic effect, and his friend's life was saved. And the next day, Florey rang up and said 'Don't give that stuff into the brain cord, because it's killed the cat.' And it's a wonderful example that, of the difference between extrapolating findings in animals, to men, findings in man.

MB That was a, a most unusual time, Charles, and there must have been many offshoots. Later you came to interview, I think, when you were BBC TV doctor, you had the pleasure of interviewing Fleming, the other side of the story, the man who didn't carry it on to the end.

CF Well, Fleming, yes, of course, got all the credit for penicillin, because his chief, Almroth Wright, wrote a letter to *The Times* pointing out that Fleming had the credit for discovering penicillin.[9] And so they all rushed off to see, the reporters all rushed off to see Fleming, and he very rightly said 'Well look, don't give me the credit. I did help them to find it. But Florey's done all the work.' So they rushed off to Oxford, and Florey absolutely refused to see them, and refused to allow any of his team to do it. At that time, there was a strong feeling that it was unethical, in medical research, to boast to the press about what you've done. Until it had been published and printed and everything was, was above board, you should never say anything about it. And so as a result of this, the, the reporters went back, and of course Fleming got all the credit. And he didn't really... He did deserve it, because he had observed it. But then he wasn't the only person who reported on the effect of penicillin. It was discovered, then later other people had also reported this. And so I think Chain and Florey would probably have discovered it, even without Fleming. But Fleming got all the glory, and the Ministry of Health is called Alexander Fleming House, and... On the other hand, Florey was freed from all this publicity, and all this touring all over the world, and triumphal tours which Fleming did – getting honorary degrees everywhere, and many prizes and so on. But he was free to go on with his own research, and eventually become president of the Royal Society, and probably do more good through his work in that way. And possibly Fleming's, all the credit going to Fleming in fact was a good thing because it spared Florey the burden of carrying that credit.

MB Charles, you obviously had a great piece of fortune in working with that team. But I know that since that time, you've thought about it a great deal, and distilled ideas about the, the significance of that particular event in the history of medicine itself. I'd rather like to call on you, because I know something of the way you've thought about it. I mean, how do you really rate that event? I mean, obviously it was great. But how does it rate in the whole history of medicine ?

CF Well, I think its importance was that it ... widened the range of efficacy of these anti-bacterial drugs, and made it absolutely clear that they could be... And after that, because this mould had produced penicillin, drug firms all over the world went getting samples of soil and culturing moulds of all sorts and kinds. Oddly enough, Florey said he thought it was a waste of time, but it wasn't. Because from that search was found a great many other antibiotics, which have resulted now in practically, there being practically no infections by bacteria which can't be treated by ... by these drugs. And the result, of

[9] This letter was published in *The Times* on 31st August 1942.

course, on hospitals, has been extraordinary because these septic wards, these terrible places which really...

MB Would you describe one to me Charles? You've said a little bit about it.

CF Well, at Bart's when I was a student, there was a septic ward, with a ... happened to have a sister in charge of it, who terrified all the nurses! She was a terrific disciplinarian. And in this ward were people with various septic wounds -broken legs, joints infected, burns infected. And worst of all, I remember a girl with tuberculous meningitis – that's tuberculosis of her brain, and with ... unconscious, but giving the most appalling whining howl – [demonstrates the howl]. And I remember the students being absolutely horrified by this awful thing... Now, penicillin didn't touch tuberculosis, but it shut all the septic wards. As soon as penicillin became generally available septic wards disappeared. And the tuberculous thing was cured, was dealt with by streptomycin and, and ... isoniazid, and later other antibiotics. But all developed in the stream that penicillin initiated.

MB What, what were the treatments before that in those septic wards?

CF Oh, bandaging, rest... And, of course, one of the things about this ward was all the bandages in this ward had to be done absolutely meticulously, and if ever a nurse put the, the two layers of bandaging not exactly quarter of an inch apart, she got absolute hell from this wretched sister! And it was bandaging and rest. I mean, there was, there was nothing else, until the sulphonamides came, and then some of these infections, particularly the ones with the germ that caused pneumonia, were able to be cured. But that was rather a small proportion. Most of these were due to this bug, the staphylococcus, which is the one that causes boils and septic conditions, and they were, they were the ones that really did the... And about half the people who came into these wards died.

MB And these, these illnesses could inflame very quickly, because of the bacterial...

CF Oh, they could, they could come... I mean, osteomyelitis – infection of the hipbone... I remember a boy at my school, at my public school at Eton, was playing cricket. He suddenly felt a pain in his hip, this was osteomyelitis, he was dead four days later. And a nephew of mine, whom you know very well, had the same thing when he was about 10 or 12 years old, and within three days he was well with penicillin. I mean, it was quite dramatic, the change in this threat of blood poisoning and septic diseases.

MB So it put medicine onto an entirely new plane.

CF Well, it put it on an entirely new plane. Of course, the idea of getting drugs of the same kind to deal with virus diseases has been developing lately and there are one or two that look as if they're becoming effective. But they are very easily controlled now by vaccination, by immunisation, because the body develops, very rapidly, effective immunity to virus, virus diseases. But immunity against the bacterial diseases are, never was so effective, although they were used and still are used as preventative. I mean, typhoid inoculation will, more or less, prevent you getting typhoid. And that's one of the reasons why typhoid disappeared.

MB Charles, are there any more observations on that development of penicillin? You've given me a thoroughly exhaustive view of the first, the first steps. Anything else that you want to recall from that, from that period? Was it a very important period for you?

CF Well, one of the illnesses which penicillin was able to cure which the sulphonamides had no effect on was this infection hearts of the valve, sorry, the valves of the heart, which are called infective endocolitis. And the germs used to settle in the, in the, in little clots on the valves in the heart, and when you gave them sulphonamides they couldn't penetrate the clot and get at the germs. But penicillin did penetrate it. Now, this disease was absolutely universally fatal. And I happened to publish a, a paper on the treatment of this disease, and the failure of treatment with sulphonamide, and something which reduces clotting – heparin – it reduces clotting. And this was a failure. And that was the last paper I published before I was a joint author of the penicillin paper.[10] But, I mean that disease was, again, rendered completely treatable by penicillin. And at that time, quite a common disease. I mean, probably in every major hospital there were two or three patients with this disease, slowly dying of it.

[10] The 'penicillin paper': EP Abraham, EB Chain, CM Fletcher, AD Gardner, NG Heatley, MA Jennings, HW Florey, 'Further observations on Penicillin,' *The Lancet*, Aug 6 1941, 2: 177-188.

Part Two: TV Medicine

MB Charles, one thing that is immensely interesting about, about your career is that in the 1950s, from a very distinguished basis in medicine, you all of a sudden started to get a bit of stick in the press, in the medical press, because you'd started to be a television man, rather than just a clinician. What happened?

CF Well, it really all started when I came up from Cardiff to London in 1952. And the BBC had done some fairly simple accounts of medical diseases, with doctors talking about them, but they wanted to do a new series on interesting aspects of medicine, which they were going to call 'Matters of Medicine'. And they wanted somebody man to act as – anchorman was the phrase then used – to introduce them and act as a body, and they wanted a doctor. Now, a great friend of mine, John Agate, who was then working for the RAF and hadn't got much to do, was a friend of the producer of this series. And the producer asked him if he knew anybody who might be able to introduce them, and John Agate was kind enough to suggest me. So I met Andrew Miller-Jones, the producer, at the BBC Club, and he said 'Come on, have a trial.' And so I went up to Alexandra Palace, where the ... the broadcasts were then carried out from, it was where they came from, and had a go. And I sat at a little desk, with a little hole in it, with a television tube, about that size, in front of me, [through] which I could see what was going on. And then there were various people who came in to do various things, and I sort of did the continuity job between the various bits of the programme. And I did this. They had four programmes, and they went quite well, according to the producer. At the end of it, they said to me 'Charles, you're a natural. You can obviously do this.' Well then I didn't do any more for a few years. But then the BBC did a very interesting series called 'The Hurt Mind', which was an attempt to show the public that mental diseases were not really unlike, and less, no less respectable than ordinary diseases. And again I was asked to do the anchor man job for that. I shared it, in fact, with a fellow called Mayhew[11] who was a, had done a lot of medical programmes on television. And he did the first two, and then we shared one, and then I took over the last three! And then I did one or two other ones, called 'Matters of...' – 'A Question of Science', in which readers, viewers sent in questions, and we had a panel of people, and I answered the medical questions. And then in 1958, Mary Adams, who was then a producer at the BBC, or in charge of the features department, asked me if I would be anchorman for an entirely new set of programmes which were going to be live programmes with outdoor broadcasting teams, coming from hospitals. And this was based on ... they'd done two programmes in St Mary's Hospital, which had been extremely popular. And each of the regions of the BBC wanted a couple of programmes of the same kind. So they had the five regions, and they each had two programmes, and they asked if I'd do it. And I looked at the various things they were going to do, and agreed I would do it. And when they got things ready, they had a press conference at Television, at Television House, about what the programmes are going to be, and showed one of the films that had already been prepared. And the BMA[12] sent along a reporter ... and he, when he saw this programme, fainted! And he reported what was going to be shown on, [that] actual live operations were going to be shown, and the *British Medical Journal* came out with a violent attack on the series, and indirectly, on me too. They, their leading articles were called 'Disease Education by the BBC', and they argued that it was all right to talk about health education, how to keep yourself well, but to talk about treating disease

[11] Christopher Mayhew.

[12] Professor Fletcher might mean *BMJ* here.

would be harmful. They said it would be, frighten patients to see operations, they said it would make them hypochondriac, telling them what sort of disease they might get, that it would cause emotional trouble in the home, and all sorts of things. All completely bogus objections, as far as I could see. I was keen to do it because I was keen that people should learn about their bodies. I always thought, and my father had always impressed on me that the inside of a body is fantastically beautiful and interesting. And to see the surgeon going inside the body, and seeing the actual stomach, the heart and things, what they're really like, I thought would be very interesting to me, and it had been very interesting me when I started medicine, and would be interesting to the public. I didn't think it would be frightening if we did it in the right way. And I, I thought it was worth doing. And so, I went ahead with the series. Now the BMA came back, BM[J] – *British Medical Journal* – came back with three successive articles, in successive numbers, attacking the series under this headline – 'Disease Education by the BBC'.[13] There was an adjournment debate in the House of Commons, asking the government to put a stop to this, which it didn't do, but that was the opposition trying to get at the government. And the chief of my department, with the publicity that resulted from the series... Because they were very popular and there were many articles in the press about them. And the first time we showed a heart operation, there were headlines in the press about it. And he said 'Look here, you know, Fletcher, you're not doing yourself any good. You'll lose the confidence of your colleagues, you won't be promoted in the, in the salary scheme' (that we then had available)... And, but I felt it was, I couldn't say no. I'd said yes, and I couldn't say no, so I went on with the whole series of ten programmes. Now, it just happened that that year, I was promoted on the salary scale, and I was elected by the College of Physicians to be a member of their Council! So it, it shows that... there was divided opinion about this. And there were a lot of doctors who felt it was in fact, as I did, a valuable thing to do. Now, that series of programmes called 'Your Life in their Hands' ran for one series of ten programmes and then three further series of eight programmes each between 1958 and 1962. And they really did gradually change the attitude of the profession about talking about medicine in public. I, and by the end of the series there was, no further objections were raised and never have been since except occasionally by occasional die-hards. I've always wondered what the real objection of people to these broadcasts was. I believe it was partly a bit of Victorian prudery, that doctors were entitled to look at the insides of people's bodies, but it wasn't really proper for other people to see what the bodies... To talk too much, it was not socially desirable. I believe that's what it was. I don't think there was really any genuine medical objections to it.

MB There was all sorts of terror though, Charles, on the part of some ... outlying general practitioners, who found that new practices and ... and new techniques in medicine were being discussed that they'd not heard of.

CF Well, that was the objection that was raised – that we might talk about things that general practitioners didn't know about. I thought about that, that if the general practitioners wanted to watch, they could – they were peak viewing hours in the evening. And if they wanted to learn, they could. And indeed, I had many, we had many letters from grateful general practitioners for what they'd learnt from the programmes.

MB Did you not do a series called 'General Practice'?

[13] 'Disease Education by the BBC', Leading articles in *British Medical 'Journal*, 1958, 1: 388-89, 510-511.

CF Well yes, later on, later on we did do, with the BBC's help, a series of programmes, often programmes a year running for eight years, which were broadcast on Sunday mornings and late in the evening on a weekday, which were aimed at general practitioners, which were given in technical terms directed at general practitioners. Now, those audiences... We had a quite remarkable size of audience. We averaged something like 30 per cent of those GPs who were able to see the programmes, who were in an area of the country where they could see them, because television was limited in its... And not only that, but we also had about... That was about usual, an audience of about four or five thousand GPs, but we also had 500,000 lay viewers of these programmes. And never a single protest was received by the BBC by any layman about what they saw. And no GP ever complained about what their patients had ... learnt from these programmes. I once talked to a Canadian, a doctor, who was a, had been a television personality and then took up medicine. And when he was qualified, he started doing programmes from Hamilton, Ontario of this kind. And when I told him about this audience thing, he said 'If we hadn't had a large Labour audience, lay audience, for our programmes I wouldn't have bothered to broadcast them. I hoped we were teaching people what medicine could do for them.' But we were also teaching for doctors. But his main purpose ... and that really was one of the valuable things of these programmes. And nowadays, of course, this is done on a very wide scale. It's completely changed. The whole thing has changed.

MB And yet the programmes that you were responsible for presenting, at that time, seemed to win approval in medicine, whereas the ones that I've seen in America, and other parts of the world, are rather sensational and rather, rather shocking even to the medical profession.

CF Well, you see, this is the difference between real medicine and fictional medicine. Now fictional medicine, with the great excitement and exaggeration of the drama of medicine, I think can be harmful. Although the ITV series called 'Emergency Ward 10' which showed, was just concerned with everyday life in a hospital, in fact dealt with it very realistically under medical advice and they did just as much good in teaching people what went on hospitals.

MB So you felt that that was quite...

CF You see, one of the things that I was concerned with was so many people are frightened of going to hospitals. And I wanted to show that the sort of things that physicians and surgeons were doing in hospitals were sensible, logical, natural, and not cruel or in any way harmful.

MB What were the main benefits? Was the spin off a better communication between doctor and patient? Did that, do you feel that happened at that time?

CF I don't think it really affected that much. I think it has eventually. I think there's been a change. Doctors have become more willing to talk to their patients about things. But I think they may also have encouraged patients to ask about things. One of the best testimonials I had in the course of the first series was a programme which we did, a rather complicated one about an operation on short-circuiting the circulation to the liver when it's obstructed by scarring from disease of the liver. And this just involved taking one vessel and joining it up to another, so as to short-circuit the liver. And I was ... in the course of this, and shortly after that programme I was walking on the towpath at

Richmond, and a chap recognised me and came up and said 'Excuse me, Doctor. I recognise you from those programmes. I want to thank you for what you've done for me in that. You know I was always terrified of being a, having an operation. I couldn't bear it. But, you see, I'm a plumber, and now I see what the surgeons are doing, it's just plumbing really isn't it?' So I said 'Yes, that's what they're doing. Very skilled plumbing.' He said 'Oh, very good indeed. But, you see I'm not frightened any longer if that's what they're doing.' And I thought that was a marvellous way of showing, even showing a complicated operation which, a very rare operation, but still giving reassurance to people that what surgeons are doing is not mysterious and magical, it's absolutely logical and, and common sense.

MB Looking back on those classic series of 'Your Life in their Hands' – which will, I mean in a hundred years from now, still be of considerable interest to medicine I believe – what were the great spots? What were the great moments? Where were the breakthroughs? You've talked too a bit, I think, at one time, about pain and...

CF Oh, that was the very first programme of all.

MB Was it?

CF Absolutely, it was the very first one of 'Matters of Medicine' at Alexandra Palace, one of the programmes on pain. And we had Odette Churchill who, in the course of the war, had been, had joined the French underground and been captured. And in order to get her secrets from her, they had pulled out her fingernails and toenails. And I said to her 'How did you tolerate the pain?' She said 'Well you see, when they were doing it they left the window open, and I turned into a little bird and I flew out of the window and I was flying round in the trees.'

MB Remarkable.

CF Now, that was an astonishing mental capacity to remove yourself from your body. Technically, the psychiatrists call it a 'hysterical personality', and it was quite clear in her later history, in her earlier history that she had had illnesses which she had invented. And when she was a prisoner-of-war, afterwards, after she'd had her nails and toenails, she was in solitary confinement for a year, and during that time, she... I asked her how she tolerated it, and she said 'Well, you see, I first of all made clothes for my children. And then I started decorating the house, and then I did my friends' houses.' And this had been so real to her, and she'd been so involved, that when she came home and found that her friends' houses were as they always had been she said 'Oh! You've had them all put back, have you?' She <u>really</u> thought she was doing it. And this curious capacity for taking yourself out of yourself is ... obviously, in these curious circumstances, a very useful one.

MB Any other high spots, Charles?

CF Well, I think that some of the things that I discovered that the, the programmes had done for people meant a lot to me. We did a programme on the operation on the ear, which can restore hearing – when the little tiny bones in the ear get clogged, clogged up and clotted up and you, the surgeon, under a microscope, operate inside the ear removing this little bone. And the television camera's put on another ... little microscope, so they could see it, and the eardrum filled the television screen! You could see this

minute operation being done. Well, anyway, a short time after that programme the BBC had a letter from a man saying 'I want to thank you for what you've done for me. I was, I've always, my greatest pleasure in life has been singing in the church choir, and I could never watch any of your programmes on 'Your Life in Their Hands' because our rehearsals were always on Thursday afternoons. But one day God ordained that this rehearsal, the rehearsal should be cancelled. And I saw that operation, and I realised that I could go on singing in the choir in spite of being deaf, because I had the operation. And now I'm hearing as well as ever, and I can go on singing in the choir. So thank the BBC and thank God for that,' he said. Well to think that one can tell somebody in that need that something could be done for him, showed me what an enormously valuable, valuable thing it is, to talk to the public about medicine, freely.

MB And you think that the present series of 'Your Life in their Hands' is carrying on that tradition very well?

CF I think the present series is... Now, of course, my series were all done in black and white, and people said 'You'll never be able to do it in colour.' But, in fact it turned out that colour didn't produce it, any difficulty. And now, of course, they're, they're, I think they're done with even better techniques than we had, and they're even better programmes. One thing, though, I would say, was the difficulty we never really overcome, I always wonder about it now, and that was that a number of people were so keen to see the thing they did watch it but they did faint. And we had reports at the BBC of people who'd damaged themselves. They'd fallen over, and fallen and burnt themselves on the fire and so on. There was one programme on the BBC in which one doctor with a pop-, with a practice of about 4000 people reported that four people in his practice had damaged themselves by fainting in the programme. And if that practice was typical, that's one in a thousand, and we had 5 million viewers, so that means one, it must have been 50,000 faints at the, going on all over London during one programme! And I, I don't know what the answer is to that. But I don't think it can be happening now, or one would be hearing about it. One doesn't hear of people fainting when they see these programmes.

MB They've been indoctrinated, I think. I think they're quite used to seeing microscope views inside the body...

CF I think, I think they've seen so much, not only on medical programmes, but on other programmes that are, sort of in which medicine comes into it incidentally, in a, in a television play or something.

MB Charles, are there any final views on where television medicine will go to? Do you think it will continue in the same vein?

CF Well I, there's one television technique I hope will come into medicine, and that is of course in, in teaching doctors how to talk to patients. Because I've become very much concerned with the, teaching students how to learn how to talk to patients, so that they can understand you. And how to interview them so that you really find out what they want to, what their problem is. And the best way to learn this is to be photographed, the student to be photographed with a video, tele-, TV camera while he's doing it, and then watch himself doing it, and seeing for himself the mistakes he's making. Because if you see what you're doing wrong, you're likely to put it right, whereas if you're just told you're doing it, what to do, you don't know you're

doing it and so you can do it. So that's a development of the technique, which I think is going to be very important in medicine. And, indeed, TV recordings, or really good TV recordings of operations and of treatments of various kinds are playing a great part in the teaching, in teaching in medical schools now.