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EPISODE 13 – Iain Chalmers – Thursday 23 August 2018

This week, a very special conversation with a maverick British medico who set up a tiny research centre in Oxford and watched it grow into a global collaboration of over 40,000 people across 130 countries. Three decades on, the Cochrane Collaboration now produces the world's most trusted health evidence that's used by patients, health professionals, researchers and policy makers around the world every day.

Cochrane co-founder Iain Chalmers joins Ray to look back on the origins of the organisation and the extraordinary life of its namesake, Archie Cochrane. Iain also reflects on his work beyond the collaboration - from working in refugee camps in Gaza to teaching children in Uganda how to detect 'bullshit' health claims and more recently, establishing the James Lind Alliance. It's no surprise he's received the BMJ's most prestigious award for a lifetime of achievement in healthcare, along with a knighthood from the Queen.

TRANSCRIPT:

Ray: From little things, big things grow. Today, a special conversion with the maverick British medico, who set up a little research centre in Oxford with three or for staff and watched it grow into a global collaboration involving more than 30,000 people across 130 countries, today producing the world's most trustworthy healthcare evidence.

Hello, I'm Ray Moynihan and welcome to another episode of The Recommended Dose, co-published by the BMJ funded by Cochrane, which, as you'll hear today, was founded 25 years ago with the help of today's guest, Iain Chalmers.

From teaching children in Uganda how to detect bullshit, that's a technical term, to working in a refugee camp in Gaza, Iain Chalmers is full of surprises. A socialist who accepted a knighthood from the Queen, he's also won a prestigious award from the BMJ for a lifetime of achievement in healthcare. But, let's hear first of Iain Chalmers life changing encounter with a little book written by a man called Archie Cochrane.

Iain: Archie was already well known, obviously. But he became exceedingly well known when he wrote a book called *Effectiveness and Efficiency* in which he made the very simple point that unless you know what the effects are of the things that you're doing in the attempts to help people avoid illness and recover from illness and rehabilitation and so on, you weren't really able to organise a rational health service. So, it was a very, very simple message which many people were introduced to through that little book. And it was reviewed not just in medical publications, but also, for example, in *Le Monde.* So, it became quite famous.

And it changed my life in a way because I had been working as a clinician up to that point and it was very clear to me that some of my patients were suffering and occasionally dying because I was doing what I'd been taught to do. And that insight came when I was working in the Palestinian refugee camp in the Gaza Strip for two years. So to have Archie's book saying, 'Look, if you want to get some idea about whether you're doing more harm than good, you need carefully designed research' and he referred particularly to randomised trials where you create two groups that are similar, and in fact differ only by chance, and that gives a good starting place for comparing treatment options or prevention options.

Ray: As some listeners might know, Archie Cochrane is an extraordinary person, was an extraordinary person. For example, he fought against the fascists in Spain in the Spanish Civil War in the 1930s. He fought in the Second World War in the 1940s where he was a doctor in a prisoner of war camp, I think for four years. At one time, the only doctor in a camp with something like 20,000 prisoners of war. And he described in that book you mentioned, *Effectiveness and Efficiency* how in those prisoner of war camps, he experienced major epidemics of typhoid, of diptheria, fevers and much else. And that experience there had some kind of deep impact on him, didn't it? Do you see that experience really effecting the way he thought about the need to rigorously evaluate treatments?

Iain: Yes, because he pointed out that he had very little in the way of medicines. He had some aspirin, basically. And maybe some iodine to put on wounds. But in fact, I think he mentions that of the people who died while he was medical officer there, there were three of them, and they'd all been killed by gunshot wounds from German guards. And so, it impressed upon him, I suppose, the healing and recovery paths of nature left to itself. And that was a very important demonstration of the need to research to make sure that you can actually do better than nature left to itself.

Ray: I re-read some of *Effectiveness and Efficiency* this morning preparing for this interview, and I should say for anyone who hasn't read it, it's an absolute classic that's highly recommended. And he actually says the quote, 'The relative unimportance of therapy in comparison with the recuperative power of the human body' and he goes on to say that 'cure is rare while the need for care is widespread. And the pursuit of cure at all costs may restrict the supply of care.' And those comments seem incredibly insightful, but also timely and relevant and salient today.

Iain: Yes, and one of the last donations of his personal wealth that he made was to support the creation of a hospice for people who were dying of AIDS in Wales. And that is in some senses a manifestations of his concern that people should receive good care even if cure at that time was not even within sight. So yes, he emphasised that pretty repeatedly.

Ray: Of course, Cochrane's key vision was to see all medical tests and treatments rigorously evaluated and the summaries of the results of those evaluations made available to people. It's such a simple idea, but so powerful.

Iain: Yeah, and by keeping on stressing it, he really pissed a number of people off. In grand rounds in hospitals he would say, 'well, how do you know that what you're proposing to do with this challenging patient is likely to do more good than harm?' And people didn't like being challenged in that way. And they felt that somehow, given that he wasn't a clinician himself, that he had no right to be asking these challenging questions of people who were grappling with clinical decisions.

Ray: Inspired by Archie Cochrane's vision about the need for rigorous evaluation, during the 1980s Iain Chalmers and colleagues decided to review all the evidence about what worked and what didn't work in pregnancy and childbirth, meticulously going through the evidence behind every intervention. They eventually produced a massive report, but also a paperback version for the public called *Effective Care in Pregnancy and Childbirth*, which made a huge splash.

Iain: Women, in general, liked it. Midwives in general liked it. Obstetricians were mixed. One obstetrician, he was actually Australian, a professor of obstetrics who was working in Britain. He referred to those of us who had been involved in producing this evidence as an obstetric Baader-Meinhoff Gang. Now, for the people who may be listening to this who have no idea who Baader and Meinhoff were, Andreas Baader and Ulrike Meinhoff were German anarchists who became notorious for setting of bombs in various parts of Germany. And clearly, this Australian professor of obstetrics felt that we were being as destructive as the German anarchists with which he associated us.

Ray: I presume that you weren't happy to be compared to people who actually set off real bombs. But was there a sense in which you were really trying to shake things up by rigorously running a ruler over literally everything the doctors were doing, asking whether it worked or not? Which is, essentially what the Cochrane Collaboration has gone on to do, that was a fairly radical thing to do at the time, was it not?

Iain: Well, it certainly was seen in that way by some people. But I would say that we really rejoiced in the welcome that our work had received from women. That was the real endorsement of what we had tried to do. So, in some senses, when women started complaining about what we had tried to do, that would've been really worrying. And we would've realised that we'd actually got it wrong.

Ray: That popular systematic review of the evidence behind what doctors did in pregnancy and childbirth caught the attention of a senior executive within Britain's National Health Service called Michael Peckham, who decided to fund a tiny centre to do more of this sort of work. That centre would take its name from Archie Cochrane.

Iain: I asked Michael Peckham whether he would be prepared to fund a very small unit, about four or five of us, to see if we could promulgate the method, not to do more reviews but to promulgate the methods we had used to do reviews. And I'm glad to say that he said yes. I

had asked for five years with a review after three. He said, ‘You can have three years with a review after 18 months.’ Which was fair enough.

And so we organised a meeting very soon after we had ... October 1992 is when the Cochrane Centre, as it was then called, was opened. And the following year in the summer, we invited about 120 people to come to a meeting in Oxford with a view to creating a Cochrane Collaboration.

In fact about 90 people turned up at short notice. We didn't offer them any travel or accommodation expenses. We got about 90 people there. We gave them sandwiches and coffee when that was needed over two days. So, it took off partly because the idea was so blindingly obvious and people weren't able to cope with the avalanche of papers and data that they were being hit with. Also because of the happenstance that there was a backer in our department of health, Michael Peckham.

And then I guess it should be mentioned that the internet was starting to become quite useful to people for making contact and sharing documents and so on. So, all of that came at the same time and we had the working example of the pregnancy and childbirth work to say, ‘Look, if you do it across all of healthcare, you should be able to produce resources of this kind.

Ray: From one meeting of 90 people, Cochrane now has, I think over 30,000 people involved from 130 countries. There are literally thousands and thousands of reviews available, often free online, for people to use. I use them regularly, many listeners will use them regularly. Did you have any sense at that time that you were starting a wildfire that would sweep the world so quickly and so dramatically in the next 25 years?

Iain: No. That's the simple answer to your question.

Ray: Are you pleased? Are you pleased to see the results?

Iain: When I left the Cochrane Collaboration in 2003, I wasn't going to look over my shoulder in seeing what they were up to and what they were doing, because it was a different era that was starting when I decided to go and do the next thing that I wanted to do. And I guess the only thing that I've made my views known about is that I think it's a crying shame that the organisation has dropped the word ‘collaboration’ from its title. I think that collaboration was one of the things ... it was part of the ethos of the organisation right at the beginning.

Ray: Not withstanding the numerous benefits that your work, that the Cochrane Collaboration has brought to the world and continues to bring to the world, one of my ongoing concerns ... I mean, I've been reporting on Cochrane for close to 20 years now, and the whole evidence based medicine movement. You and I met as part of that reporting something like 20 years ago.

But one of my concerns has been that, somehow, the whole notion of an evidence based approach, while it's been inculcated in many ways into the mainstream of medical infrastructure, it hasn't yet broken into the mainstream of public consciousness.

You know, I'll look for a Cochrane review if I have a decision to make about a health emergency or something. If my loved ones consult me, I'll talk to them about it. But when you talk to your friends or loved ones, generally they seem distinctly uninterested. Cochrane gets some media coverage, but nowhere near the amount of media coverage that those Cochrane reviews really deserve. Would you agree with that? Do you have that concern? Do you know why that is?

Iain: Well, I think that you're right. The analysis is correct. And the reason I say that is that what I consider a very nice little book on the Cochrane Collaboration written by a very nice Canadian journalist, the subtitle of the book is called 'The Cochrane Collaboration', and it's 'Medicine's Best Kept Secret.' So, obviously his assessment was that this indeed was in the case, that it wasn't as well known as it deserved to be. And that must've been part of the motivation for him writing what I think's a very good little book on it.

Ray: You're listening to The Recommended Dose, today with one of the founders of Cochrane, Iain Chalmers. And I'm not sure how to say this, but I thought it only fair to share it with you. During the middle of the interview, out of the blue, Iain interrupted one of my questions and suggested that he may need to take some medication.

Ray: So, if I can do that..

Iain: Sure.

Ray We've talked a lot about Archie Cochrane-

Iain: Maybe you should give me some Indolebant. That's what I need, isn't it really?

Ray: Thank you for the reference.

Iain: Really brilliant. Absolutely brilliant piece.

Ray: That's a reference to the creation of a disease called Motivational Deficiency Disorder. I'm a former sufferer, I think many of our listeners suffer this. We launched it in the BMJ and of course, the treatment for it was a drug called Indolebant. The brand name was Strivor but thank you for using the generic name, Indolebant. I'm sure you don't need any Indolebant, Iain. We've talked a lot about Archie Cochrane, about Cochrane the organisation. I know there are many other things in your life. Let's talk about some of those now. Tell me briefly about this book, *Testing Treatments* and why it would be so interesting to listeners.

Iain: Well, I guess the first thing to say actually is that the text of it is freely available on the web. So no one has to pay any money except for the paper to print it on.

The book *Testing Treatments* is about why we need such rigorous evaluation in healthcare. And it has some key concepts like 'new is not always better' and 'more is not always better.' Concepts that 10 years later would themselves be evaluated in an extraordinary study of a cartoon book for school children. But let's not get ahead of ourselves. Back to Iain talking about *Testing Treatments*.

Iain: What encourages me is that even though it's getting on for 10 years since the text of that book was written, people are still wanting to translate it, which suggests that it still has meaning. It was described by one reviewer as important, scary and encouraging. Important because it explains why it's necessary to test treatments well, scary because it gives the examples of what happens if you try to cut corners and don't evaluate treatments rigorously, and encouraging because it shows how everyone, everyone can have a role improving care through improving research.

Ray: I know you also wanted to talk about a big study that was recently done in Uganda. An extraordinary and unusual study involving I think 10,000 school children, published in *The Lancet* last year. You're involved with it and it was really designed to help kids to, I think the quote is, 'To detect bullshit when bullshit's being presented to them.' Again, tell me briefly about that study. People can obviously read more details in that Lancet piece, we'll put a link up to it. But tell me about that extraordinary study.

Iain: It was a cartoon book based on a story of a brother and sister, John and Julie, which took them to situations where the concepts could be illustrated. And to test to see whether we had any impact on their understanding of these concepts, as you say, we did a randomised trial involving 120 schools, over 10,000 children, and, as you also said, we showed in that that you can teach primary school kids in Uganda to be good bullshit detectors and to recognise when a treatment claim, claim about the effects of the treatment, shouldn't be trusted.

Ray: Another of the major initiatives that you've taken in recent years was to create this thing called the James Lind Alliance. People can check that out on the web. But briefly remind us who James Lind was and why he's so important in this story.

Iain: Ok, James Lind was a Scottish naval surgeon who in 1747, faced with lots of conflicting opinions about how you should treat scurvy, which we now know it to be caused by deficiency of Vitamin C, but that wasn't known for another 200 years, which of the various opinions about how you should treat this condition should be taken seriously. And he decided to do a controlled trial comparing six of the different treatments, and showed that oranges and lemons were, in fact, very effective cures for this condition. Now, in fact, sailors had known that that was the case for at least 100 years before Lind. So, it may have come as a surprise to the medics, but that's because the medics has some bizarre theories about what caused scurvy. So, the Royal College for Physicians, for example, suggested that sulfuric acid was the best treatment for scurvy.

: Now, what was also surprising in James Lind's write up of this experience, which came three years later in 1753 was that he did a systematic review of what had been written about the disease and how to treat it. Drawing on German and French sources as well as English, ones written in the English language. Probably his most important contribution, however, was to encourage honesty among researchers. To admit that treatments sometimes failed and to record those failures.

And it was that example that many people recognised was important. But in fact, the oranges and lemons story has tended to override these other aspects. But he seemed a good enough person to name an initiative after, and we had the advantage, we didn't have to worry about whether his family would worry about it. He died a long time ago. And so that was also a

reason for using his name. It wasn't actually my suggestion that the James Lind Alliance should be named after him. It was actually a neurologist who suggested that. But I don't regret it. It's a perfectly reasonable title for what they do.

Ray: Maybe in 250 years' time, someone will name a library or alliance after us, Iain. (laughs)

Iain: I'd be delighted to be in harness with you, Ray. That would be great. We could take our Indolebant together.

Ray: Another of your interests is this problem of waste. And I think you and others have really tried to calculate how much money is wasted on unneeded medical research. How big a problem is that?

Iain: It's a massive problem, I'm afraid. Really massive. Paul Glasziou and I published a paper in *The Lancet* in 2009 in which we estimated that over 85% of the massive investment in biomedical research was being avoidably wasted. And we thought that it was going to be massive blowback from people who were outraged by this suggestion, but it didn't come.

And the reason that it didn't come is that people couldn't actually come up with a defence of a lower proportion of the investment being wasted. But, let's say it was only 50% or 40%, or 20%, it would still be indefensible. When, for example, one looks at the major sources of waste, one is people embarking on new primary research without actually finding out what's known already. And as a consequence, doing research which was completely unnecessary, or doing research in such a way that it didn't take into account the limitations of what was known already. So that was one problem.

And then the other problem is that about half of the clinical trials that are done never get published. And it's even worse in animal research. An even greater proportion don't get published. Now this is unconscionable waste of what, in essence, always end up being the public's resources.

Ray: Some listeners may know this already, but you are a knight. And I should probably have been calling you 'Sir Iain Chalmers' through this interview. Why did you receive that and was it easy to accept?

Iain: I'm glad you haven't.

Ray: I mean, did you think about refusing it as others have done?

Iain: Well, first of all it happened quite a long time ago now actually. It happened in 2000, I think. And the way it happens, you get a letter from Downing Street saying the Prime Minister is thinking of recommending to the Queen that you should be offered the knighthood. If he did and she did, what would you do? In other words, they will want to try and get out of the system people who are going say no when it's announced they're being offered it.

So, I was ambivalent and it took about 10 days or a couple of weeks to get back to them and say yes, if I'd let it go ahead. And the reason for that was, I took advice from close people but I guess the thing which made a tremendous amount of difference to me was that this was

something that my wife, who had been brought up in very strained circumstances in the working class community and so on, she would become Jan, Lady Chalmers. And she liked that idea. And I thought, given all of the support that she's given me all of my career, this was the least I could do, was to do that.

: However, people sort of assumed that it must make a difference. So, Mike Clark, in fact, one of my successors as director of the UK Cochrane Centre, he actually did a randomised trial where letters that I was signing to people that I didn't know, people like deans of medical schools or presidents of colleges. And one half of the letters going out had 'Sir Iain Chalmers' typed under my name, and the other had just 'Iain Chalmers' typed under my name. And, as I had predicted, it was impossible to show any effect of the ones that had 'Sir Iain' in terms of the speed of the response, the courtesy, the dealing with the issues that I had raised, the titled that they'd used in addressing me in the letter.

So, that was written up as a paper published in the Journal of the Royal Society of Medicine, and the title, I wasn't an author. Mike Clark and his two sons were because they'd help with the analysis, was 'Yes sir, no sir, not much difference sir'. So, I leave it to you to decide whether it actually makes a difference. But, there you go.

Ray: Iain, there was a beautiful short little profile of you in the British Medical Journal a few years back, with the provocative title, 'Guilty, Obsessional, and Frustrated'. Is that really you?

Iain: I think that's still accurate, yeah. I have to admit that ... they asked you three words to describe how you see yourself, and yeah, I do. I see myself in those ways.

Ray: Archie Cochrane died in 1988, I think. He never got to see the whole movement, the whole global infrastructure, the taking his name. And we can't interview him for The Recommended Dose. But if we could, what do you think his parting words of wisdom might be to people listening?

Iain: He would probably still say that there's not enough emphasis made on care. And there is too much emphasis on interventions, which have very, very modest, even sometimes trivial beneficial effect at enormous cost. I Imagine that he might say those two things. But that's a guess.

Ray: Today, though, we're talking about Iain Chalmers. And no conversation about his life would really be complete without mentioning his links with Palestine where he worked initially for two years in a refugee camp, and where he would meet his future wife.

Iain: I mean the reason that I sought work in Palestine was a feeling of shame at what my country had done to the Palestinians. So, it wasn't that I had great medical gifts to offer to the people that I might be able to work with. So, that was the motivation for going. There was no self sacrifice on my part, because I was paid a perfectly decent salary. I wasn't a volunteer, I was on a WHO pay grade. The reason that I had any opportunity to go and work there came about because after the 1967 war, and Israel's second occupation of Gaza, the first one had been 1956, they couldn't recruit either Egyptian doctors of Palestinian doctors because of the occupation.

So, I went there for those reasons. I'm very clear that in some respects, I did more harm than good, because I was applying things that I had learned uncritically. I hadn't developed the ‘skepticemia’, as some people have referred to it as, that I discovered later. And so, being aware of these mistakes, I made a decision at the end of my two years in Gaza, that I would never try to go and work in a culture with which I wasn't reasonably familiar again. Because I would be at risk of making more mistakes that way.

Ray: I had been asking people in this podcast, Iain, to recommend some favourite fiction. Is there anything that you'd like to recommend to listeners?

Iain: You can use what you want from this. Basically, my light reading is Middle East politics. I tried to get into ‘Middle March’ recently because everyone keeps on saying what an important book it is. I gave up and went back to reading Middle East politics. If I was to choose one book which had some important lessons which was in some senses fiction, but in other senses very real, it would be ‘Alice in Wonderland.’

Ray: Iain Chalmers, thank you so much for your time and for this interview. And it's been great chatting.

Iain: Thank you for the opportunity to ride some hobby horses.

Ray: You've been listening to Iain Chalmers, or should that be Sir Iain, on The Recommended Dose. Thanks to Jan Muths for editing, and Shauna Hurley and Cochrane Australia for production and the BMJ for co-publishing. And for those still suffering Motivational Deficiency Disorder, please keep taking your Indolebant, it’s really worked for me.