

Fixing Healthcare Podcast Transcript

Interview with Lindsey Fitzharris

Jeremy Corr: Hello, and welcome to our Fixing Healthcare podcast show “Breaking Healthcare’s Rules.” I am one of your hosts, Jeremy Corr. I’m also the host of the popular New Books in Medicine podcast and CEO of Executive Podcast Solutions. With me is Dr. Robert Pearl. For 18 years, Robert was the CEO of The Permanente Group, the nation’s largest physician group. He is currently a Forbes contributor, a professor at both the Stanford University School of Medicine and Business, and author of the bestselling books *Mistreated: Why We Think We’re Getting Good Health Care—and Why We’re Usually Wrong* and *Uncaring: How the Culture of Medicine Kills Doctors and Patients*. All profits go to Doctors Without Borders. If you want information on a broad range of healthcare topics, you can go to his website RobertPearlMD.com.

Our guest today is Lindsey Fitzharris. She is the bestselling author of “The Butchering Art”. She has a Ph.D. in the History of Science and Medicine from the University of Oxford and hosts on the Smithsonian Channel a popular TV show called “The Curious Life and Death of...” Her new book, “The Facemaker” on the birth of plastic surgery told through the remarkable story of Sir Harold Gillies and the first World War was published today.

Robert Pearl: Hi, Lindsey, welcome back to Fixing Healthcare.

Lindsey Fitzharris: It’s so wonderful to be back and talking about my new book.

Robert Pearl: You know Lindsey, listeners to our podcast are still talking about your first book, *Butchering Art*. And this one I’m confident will be equally popular.

Lindsey Fitzharris: Oh, from your lips to God’s ears, as they say. I hope so. It’s very different tonally. *The Facemaker* is different from *The Butchering Art* I think in tone, because World War I is more immediate than the Victorian period. But I really enjoyed learning about Harold Gillies, the pioneering surgeon who rebuilt these soldiers’ faces, as well as the soldiers themselves.

Robert Pearl: Well, this season of Fixing Healthcare is about breaking the rules and the people who do so. Now, these aren’t the written rules or the regulatory requirements, but the unwritten ones. They’re the norms and ways of thinking left over from the past that everyone follows without knowing why until someone comes along and breaks them. And Sir Harold Gillies was not only a giant in medicine, but also a remarkable rule-breaker.

Lindsey Fitzharris: Yes, I agree with that.

Robert Pearl: Before we dive into this incredible man. Lindsey, let me ask you of all the people in medicine across history that you could have written about, why did you choose him?

Lindsey Fitzharris: Oh, that's such an interesting question. And I've been doing a lot of interviews ahead of the book's release on June 7th. I'm a medical historian. I have a PhD in the history of science and medicine from Oxford, but these days I call myself a storyteller. So what's important to me is that there's a really good story there. I went into this book not knowing much about World War I, but I knew a little bit about Gillies and I knew a little bit about his patients. And that storyteller in me knew that there was a really good gripping tale there.

Lindsey Fitzharris: I think that my goal with this was to not only tell Gillies' story, but his patient's story as well, and to give them a voice. Because a lot of times these men, they were forced to sit on blue benches for instance, so that the public knew not to look at them. And it could be a very isolating experience to suffer some form of facial trauma in this period. So I felt very passionate about bringing that to life.

Robert Pearl: So early in *The Facemaker*, you have a sentence that I love. You say, "From the moment that the first machine gun rang out over the Western front, one thing was clear, Europe's military technology had wildly surpassed its medical capabilities." What do you mean by that? And can you describe some of the savagery?

Lindsey Fitzharris: Well, plastic surgery predates the First World War. The term plastic surgery actually is coined in 1798. At the time plastic meant something that you could shape or mold. So in this instance, a patient's skin or soft tissue. And some earlier attempts at altering a person's appearance, they tended to focus on small parts of the face, like the nose, rhinoplasty being one of the most ancient methods. So it wasn't really until the First World War that there was this huge need suddenly for facial reconstruction. And that had to do with the brutality and savagery of this kind of war.

Lindsey Fitzharris: This was a time when losing a limb made you a hero, but losing a face made you a monster to a society that was largely intolerant of facial differences. So Gillies really filled in there to help these men and to mend their faces and their broken spirits.

Lindsey Fitzharris: But to go back to the savagery, there were huge advances in weaponry. In fact, so many advances in weaponry at this time that a company of just 300 men in 1914 could deploy equivalent fire power to a 60,000 strong army during the Napoleonic war. You have the invention of the flame thrower, the invention of tanks. You have chemical warfare at this time. So really the medical community was just playing catch up when all of this began. And there was this huge need to figure out how to mend these broken bodies.

- Robert Pearl: You also say that the science of healing stood baffled before the science of destroying. How big was that gap?
- Lindsey Fitzharris: At the beginning of the war, it was quite significant. But I have to say that the medical community actually caught up pretty quickly. And a lot of the advances that we see in World War I continue to serve society today. Of course, the birth of modern reconstructive surgery and plastic surgery at this time. Advances in anesthesia. So you have the invention of inter-tracheal anesthesia at this time, which is in parallel with the facial reconstruction for obvious reasons that you couldn't anesthetize these men with facial injuries that easily. And so there was a great need to figure this problem out.
- Lindsey Fitzharris: You have advances in blood banking and blood transfusion. And all of this is wonderful. Again, it has served us since the guns fell silent on the Western front. But I came to this grim realization halfway through my research as well, that as wonderful as these advances were, they actually prolonged the war because as doctors and nurses got better at patching these men up, they were being sent back to the front and it was feeding the war machine.
- Lindsey Fitzharris: So the medical community caught up pretty quickly. The chain of evacuation was incredible by the end of the war, they could remove these men, get them back to Britain, get them back home, get them back to these base hospitals quite quickly and efficiently. But of course, as they were patching these men up, they were being sent right back to the front.
- Robert Pearl: In this series, we're trying to understand the degree to which these massive leaps that you talk about come from circumstances versus the nature of the protagonists. And that can apply to Steve Jobs, Elon Musk, or in this case Sir Harold Gillies. When it comes to Sir Harold Gillies, how do you apportion each of these two factors, circumstance and the intrinsic individual that he was?
- Lindsey Fitzharris: That's such a great question. I think that, like in my first book, *The Butchering Art*, Joseph Lister was the right person at the right time. He was a Quaker. He had been trained scientifically. He was primed to understand Louis Pasteur's germ theory in a way that perhaps other surgeons the Victorian period were not able to understand it. And so he was able to assimilate it into medical practice.
- Lindsey Fitzharris: I think that the same could be said about Harold Gillies. What is extraordinary about him is that he's a very creative individual. He's one of those annoying people that's good at everything he does. He's a competent artist. He's a great sportsman. And that creative aspect to his personality served him very well going into reconstructive surgery. He's also very collaborative. He's willing to work with other technicians and practitioners at this time. Whereas other surgeons really were working solo, Gillies was for instance, bringing in dental surgeons to work with. A lot of surgeons at this time wouldn't work with dentists, they considered them inferior practitioners. And again, this really helped elevate his work and what he was ultimately able to provide for his patients.

Robert Pearl: I loved when you talk about Jacques Joseph, because he is a surgeon who beyond even the time you were talking about your book, he ended up becoming a pretty famous aesthetic nasal surgeon. And when people would come watch him, this is post World War I, it was a particular difficult part of the operation when he would put his arms around the nose so they couldn't see anything. And he would do this maneuver that they couldn't learn. So having observed him, actually couldn't do it. The personality that you described was intrinsic to Jacques Joseph.

Lindsey Fitzharris: Wow. That's amazing. So Jacques Joseph is in the book. He's an important surgeon working in Germany at the time. He was a Jewish-German surgeon, and he was really well... He was actually better placed than Gillies going into the war because he was doing cosmetic surgery. He was working on rhinoplasty before the war. So he was a little bit more familiar. Gillies goes into the war as an ENT surgeon, but not necessarily working on reconstructive aspects of the face.

Lindsey Fitzharris: So that's fascinating too, because a lot of surgeons that Gillies came into contact early on in the war were very protective as you say, of their techniques. There's a French surgeon named Morestin, that locks Gillies out of the operating theater at one point. But Gillies really wanted to bring people around. He wanted to bring everybody working on facial reconstruction to one single hub.

Lindsey Fitzharris: And so he created the Queens Hospital in Sidcup. And this was the first hospital dedicated entirely to facial reconstruction. And all of the allies, the countries were represented, so you have an Australian unit, you have a Canadian unit. You had American surgeons as well, they were later in the war, but they were roving around, they didn't have their own unit. But the point was that they were all working together. And as a result, they were learning from each other. There was competition. Surgeons are very competitive, and that helped raise the standards across the board. And that was an unusual approach, I think, in terms of how other surgeons were working in this period.

Robert Pearl: You did a great job of describing Gillies during his time at Cambridge. And you talk about him being a rule-breaker, spending his entire scholarship on motorcycles and challenging professors. But you also talk about fairness and how that was a value for him. How do you see these two forces playing through Gillies as he gets to World War I?

Lindsey Fitzharris: Yeah, that's interesting. As you say, he was a rule-breaker. I think again, going back to that creative drive in him, he didn't like to be kept in a box. And so, he was always challenging his professors, but he was very likable as well. He was very charming and everybody liked him for it, even his professors that he was challenging. But he did have an eye to fairness as well. And certainly both of these come to play when he starts working on the reconstructive aspects of surgery, making sure that his patients get the best care that they can.

Lindsey Fitzharris: One of the terrible tensions for Gillies in World War I was the fact that he had a duty to his patients, but he also had a duty to the army. And so in some

instances, I'm sure he would've wanted to continue working on the reconstructive process, but perhaps the function had been returned to the face. And the feeling was that the man could be returned back to the trenches. And I think that was a really heartbreaking tension that played out throughout the war for him. And perhaps that he wouldn't have felt that that was very fair either to the patient, but his hands were tied in that capacity.

Robert Pearl: I was struck by again, that word fairness. That, as you write in the book, that the people of the time with major facial injuries, I think you used words like broken faces and twisted faces, and men without faces, and Gillies didn't see them that way. He saw them as human beings and there was something intrinsically positive about him that seemed to me to be beyond all of his peers. Is this how you interpret Gillies in history?

Lindsey Fitzharris: Yeah, I definitely think... I had a disability activist and author named Ariel Henley read the manuscript as I was going through this process. And she gave me some really wonderful insights as well. She has Crouzon syndrome and has undergone a lot of reconstructive surgery herself. And she said one of the things that she really enjoyed about The Facemaker was that capturing of the relationship between surgeon and patient that develops when you're in that person's care for such a long time. Gillies was in a unique position because a lot of trauma surgeons working near the front, they didn't even know the names of the men they were working on. They were literally just trying to save their lives, then send them to the base hospital and for further help.

Lindsey Fitzharris: Whereas Gillies was working with his patients for years, sometimes even over a decade. And he really developed friendships with these men. Some of these men even went on to work for him. There's a man named Big Bob Seymour who loses his nose in one of the battles and Gillies reconstructs his nose. And he goes on to be Gillies' private secretary for the rest of his life.

Lindsey Fitzharris: I think that Gillies' attitude, as you say, this positive attitude and the way he could look at the humorous side of things really served him well, because he had such a heavy burden on his shoulders. If you imagine the psychological damage as well to these men coming into the hospital, I think he was really able to nurse them in many ways, not just fixing their faces, but he was able to fix their spirits.

Robert Pearl: As you note in the book, the PTSD that many of the people from the battlefields experienced, I suspect Gillies had some of that too. And you point out that physicians today in hospitals are experiencing that in the post-COVID era.

Lindsey Fitzharris: Yeah. I mean, absolutely. Gillies doesn't really talk about that ever personally, about the trauma that he himself felt. But there were moments in The Facemaker where you see him break down. For instance, he would use golfing, he was an amateur golfer, a champion golfer, and he would use golfing as an outlet to relieve the stress. And on one occasion he's told about a patient who dies while he's on the golf course. And he breaks down, which was out of

character for him. And he does become very attached to these people and he really truly cares for them.

Lindsey Fitzharris: And I think that Gillies very much believed in these men and in turn, they very much believed in him to be able to restore their faces. He would often say, "Don't worry, sonny, you'll have just a good a face when we're done with you as anybody else." And that was such an uplifting thing to say to these men, straight out of the trenches, scared. A lot of times they weren't even men, they were just boys. They were so young and to be facing that kind of terrible situation, I think to have someone like Gillies at the helm was very reassuring indeed.

Robert Pearl: I mean, you noted that he was driven in a way that many men in his social class were not. Often sequestering himself in a library when his peers were out socializing. This was during his college days, and you quoted a peer that says, "Whatever he decided to do, he did." And you comment, "His determination would serve him well in life." What did you mean by that?

Lindsey Fitzharris: Yeah. I mean, you see this time and again in *The Facemaker* as well, whenever he set his mind to it, he was just going to do it. So at the beginning of the war, he's introduced to this need for facial reconstruction through this character, Auguste Charles Valadier, who's this French American dentist who retrofits his Rolls Royce with a dental chair and literally drives it to the front under a hail of bullets. I mean, he's incredible, this guy. And he's doing some of this early facial reconstruction near the front.

Lindsey Fitzharris: In fact, his Rolls Royce went up for auction. I think it was about 10 years ago. So I hope whoever owns that Rolls Royce picks up *The Facemaker* and learns a little bit more about its owner. But Gillies goes back to Britain and he decides he's going to petition to open a specialty unit. And he's eventually granted this. Although at first, the administration, they have their hands full and they don't really understand why he's requesting this.

Lindsey Fitzharris: In fact, he goes out onto the Strand in London and he goes to a stationary store. He buys these labels. He addresses the labels to himself. He sends them to the front and soon enough, all of these patients start showing up with his handwritten labels, pinned to their uniforms, "Please send to Harold Gillies back in Britain." And so he really takes hold of the situation.

Lindsey Fitzharris: So he starts this specialty unit in Aldershot at the Cambridge Military Hospital. And when he gets onto the ward, he tells the nurse who has many other patients not with facial wounds, he says, "Well, you're just going to have to move these patients and make room for this new specialty unit that I'm creating." And she was taken aback, moving all of these patients, what is he talking about? There's no room in the hospital. But she remarked that whenever, she learned that whenever Gillies said he was going to do something, that was it. And you shouldn't argue. And they found room to move the patients elsewhere, and to move his new patients in. And thus began the legend of

Harold Gillies opening these specialty units and eventually his own hospital during the war.

Robert Pearl: So early on in his surgical career, Gillies breaks many of the rules of the past and ones that existed in the battlefield, as you describe it, of World War I. As an example, rather than using artificial materials for reconstruction, he comes up with the idea of replacing like with likes. Skin with skin, bone with bone, cartilage with cartilage. Before that people thought this was impossible. Can you help the listeners understand how he advanced these surgical techniques?

Lindsey Fitzharris: Yeah, that's right. He did say replace like with like. And also one of the principles of plastic surgery for him was return something to normal, to its normal position before you move forward. Again, there wasn't really attempts at the wholesale reconstructive of faces except maybe a little bit in the American Civil War, but even then it wasn't being done on this scale. So Gillies is really making up a lot of these rules as he goes on.

Lindsey Fitzharris: But he found that as you say, using like for like really gave the best result. The other thing that Gillies was doing that was different from the past was he wasn't just restoring function, he was interested in the aesthetic result. And so he did pay attention to things looking good, so to speak. To again, returning something to normalcy in the face, which he also thought served function as well. So if something looks normal, it's probably going to function better as well.

Lindsey Fitzharris: So that was different from what surgeons were certainly doing in the past, where they were really just focusing on function and making the face functional again, not really going far beyond that, into the aesthetics of the face.

Robert Pearl: Can you help the listeners understand what a flap is and why the two-flap was such a major advance? And maybe even the controversy about who was the originator?

Lindsey Fitzharris: Oh yeah. Well, okay. So also I have to remind people, I'm Dr. Lindsey Fitzharris, but I'm not of the kind of doctor that can save people's lives. I'm sure there's a lot of those doctors listening right now. I could tell you how doctors tried to save people's lives. It was really challenging when I was putting this book together and I actually got a lot of experts weighing in to make sure that I was describing everything accurately. But the flap was, plastic surgeons out there will be familiar with flaps. It stayed attached on one side. It comes from a Dutch word in the 16th century, meaning something that hangs broadly and loose. And it stays attached on one side. So in this case, the soft tissue was attached to the pedicle, which was the blood supply.

Lindsey Fitzharris: And the flaps could be moved to cover an adjacent area, for instance. So what Gillies did, so the flaps would stay open on one end and so they could get bacterial infections. And there was a lot of risk to these kinds of tissue flaps. What Gillies ended up doing was he created something called the tubed pedicle,

which is he took the flap and he rolled it into his cylinder so that the tissue inside was encapsulated with skin. And then he would attach it to the site that needed to be reconstructed.

Lindsey Fitzharris: And this was revolutionary, Robert, you and I could talk about, was it revolutionary? Was it evolutionary in the sense? Because what happens is there are two other surgeons who end up saying that they also created the tube pedicle around the same time. Of course, there was a great need, 280,000 men from France, Germany and Britain alone needed some kind of facial reconstruction by the end of the war. So there was a great need. And this was something that evolved out of World War I, but Gillies is known to be one of the first, if not be first to do it.

Robert Pearl: Yeah. A story that I found incredibly sad, but very educational was Henry Ralph Lumley, Gillies operates against his better judgment. Why does he do it? Can you tell us the story?

Lindsey Fitzharris: And actually, and Robert, when I send you the photos, this is a good opportunity to talk about Lumley. So Henry Ralph Lumley was a pilot. He crashed his plane on graduation day. He never even made it into battle and he suffered severe burns as a result. You have to remember that these pilots were flying just years after the Wright brothers had the first flights. So these were very rudimentary planes. Oftentimes they went up there with pistols to shoot themselves if their plane was going down, because that was a preferable death. They called themselves collectively The 20 Minute Club, the time it took to shoot down one of the planes.

Lindsey Fitzharris: So Lumley's plane crashes. And then on top of being severely burned, he's sent to various other hospitals. And it takes a very long time before he finally finds himself in Gillies' care. At that point, he's heavily scarred. He's addicted to morphine. His condition was very painful. His health had been very depleted, and Gillies comes up with a surgical plan but really wants to put it off a bit longer. And Lumley urges him to operate because he's so miserable.

Lindsey Fitzharris: And so Gillies gives into him and he does this operation. And he lifts a flap up from the chest to graft the skin onto the face. And ultimately Lumley dies because his whole system is overwhelmed. Now, the reason why the story is important in the history of plastic surgery is it teaches Gillies a really important lesson. That when rebuilding the face to that extent, it really is better to do it in piecemeal. And he develops this idea that never do today, what you can put off to tomorrow. And that was certainly the case with Lumley.

Lindsey Fitzharris: So it was a really sad story. But when it came to the inclusion of photos of these patients, number one, I thought that the photos had to be in the book because I didn't want to put them on the metaphorical blue bench, like they were put in 1917. But I also didn't want to exploit them. So in the case of patients like Lumley, who died in Gillies' care, I decided not to include their photos, but to

include their drawn surgical diagrams, and a photo of Lumley pre-injury in his uniform.

Robert Pearl: Interesting. Again, for listeners, explain to them what the blue seating was at the time of World War I.

Lindsey Fitzharris: Right. At Gillies' hospital, if the men left the hospital grounds, if they wanted to take a walk, if they went into the surrounding town, they often were forced to sit on blue benches so that the public knew not to look at them, which was really isolating and sad. And other isolating aspects were the fact that one of the popular things that people have probably seen on the internet are the mask makers. They made these wonderfully beautifully rendered masks to cover the disfigurement. And people go crazy over these masks because they are beautiful and they look very realistic in these still photos.

Lindsey Fitzharris: But of course, if you were sitting across from someone wearing one, it could be very unsettling because it's not reacting like a face. The other thing was they were really uncomfortable to wear. They were fragile, they didn't age. So, the men who were wearing them really tended to hate them. And they were really only wearing them for the viewer. They were doing it for the viewer's comfort, not for their own. So I think it's important to recognize that as well.

Robert Pearl: I love how the story concludes with the credo, which I think should probably be the rule-breaker credo to never let routine methods become your master. And I think that that is such a powerful notion that the methods of the past may be the best ones, but you should not become enslaved to them. And Gillies again, is one of the greatest examples in medical history.

Lindsey Fitzharris: Yeah. I mean, absolutely. I tell people, because I'm a medical historian and the first book, *The Butchering Art*, is like a romp through Victorian surgery. And people can't believe that surgeons ever did this or that, or they couldn't understand why you'd have to wash your hands. But I always remind people, what we know today, isn't going to be what we know tomorrow. And we have to be open-minded to changes.

Lindsey Fitzharris: And certainly Gillies was open to that. And I think Gillies was also capturing the creative nature of plastic surgery and facial reconstruction. And the fact that what is good for one patient isn't necessarily the best practice for another patient because it's highly individualized when it comes to facial reconstruction.

Robert Pearl: So Lindsey, you alluded to this story before, but it's such an amazing story. Can you tell listeners about Private James Bell and how Gillies replaces this outdated rule with one that revolutionizes surgical management?

Lindsey Fitzharris: Private James Bell was a complicated case. Actually, Valadier sent him to Gillies. Valadier continued to work near the front. And because Valadier was a dentist, he could only take the surgery so far. And so oftentimes he would send some of

his cases to Gillies. And so Bell arrives at the hospital in very bad shape. In fact, he has an infection going, I mean, Gillies is really worried that if he goes in there and he reconstructs the nose, that the nose is just going to fall off entirely.

Lindsey Fitzharris: And this is where he learns that returning something to normal, to its normal position is what needs to ultimately happen. And so he goes in there very delicately, and he starts undoing some of the bad reconstructive work that was done by other surgeons near the front. A lot of times these men were hastily stitched up. And in fact, they sealed up a soldier's fate literally, because they would seal an infection. And so Bell, when he gets to Gillies, he's got an infection going and there's a lot of issues happening. So he has to go in there and undo some of this bad work that was done close to the front. And ultimately when he releases some of the tissue, the nose springs back into its normal position, and that was the key to restoring the face. And so that ends up becoming one of Gillies' principles of plastic surgery as well.

Lindsey Fitzharris: But there are so many examples of Gillies', building upon and adapting other procedures. For instance, there's a guy named William Vicarage, he's a sailor who's severely burned. And when he comes into Gillies' care, he has no eyelids. His eyelids have been flipped inside out. And this really haunts Gillies that this man can't close his eyes. So he adapts another procedure by a Dutch surgeon named Johannes Esser, and it's called the epithelial inlay. And he reverses this in order to reconstruct these eyelids. So it's incredible what he's able to do. And again, so creative on so many levels to be able to visualize all of this and to create this from nothing.

Robert Pearl: As a plastic surgeon who's specialized in the same areas actually as Gillies did, I've followed him across my entire career. And it's why I elevate him so high. I've always thought about him as Sir Harold. I've never even thought about him without the Sir in front of his name. I figured his parents must have given it to him. Obviously, not.

Lindsey Fitzharris: That's funny. He was born, Sir Harold.

Robert Pearl: Exactly, exactly. But yeah, I start to think about the things that he did. He started plastic surgery, basically. You alluded to the fact that it had been described long before in a very primitive way. He starts the entire field. He comes up with the notion that plastic surgery has to be a combination of reconstructive and aesthetic and they fit together. Because it's the same structures that you're operating upon just with different starting points.

Robert Pearl: Gender affirming surgery, you write about in the book. This man is so remarkable, again, I'm really interested because you probably know more about him than anyone else. How does he become this unstoppable human being?

Lindsey Fitzharris: Yes, the epilogue, so I write narrative nonfiction. So the core of my story is World War I. The epilogue was actually really fun for me to write because it was

after the war and it gave me the opportunity to talk about how Gillies moves into the realm of cosmetic surgery. Some of this is out of necessity at first because there just isn't the kind of need for reconstructive surgery after the war is over, to pay the bills. And so he does move into cosmetic.

Lindsey Fitzharris: But he's really forward-thinking because he remarks that a small imperfection to someone might have a great psychological impact on another person. And so they should have the ability to change their appearance as they want. He ends up moving into World War II. He does reconstructive work during World War II. His cousin, Archibald McIndoe, he introduces to the strange new art of plastic surgery. And McIndoe ends up operating on the Guinea Pig Club, the burned pilots of World War II.

Lindsey Fitzharris: So people asked me, is this book about the Guinea Pig Club? And I said, no, it's the prequel to that. Gillies is always the connecting force between all of these different stories. In 1949, he performs the first ever successful phalloplasty on a trans man named Michael Dillon. Dillon had come to him in actually in 1945. At that point Gillies was so busy working on the World War II soldiers that this was put off a few years. But he was really well placed to do this operation because he was so forward-thinking, he was always up for a challenge. He was also working on genital reconstruction on patients who had been injured during the Second World War.

Lindsey Fitzharris: So he agrees to do this operation and he goes to great lengths to protect Michael Dillon's identity. Much later, Michael Dillon is actually outed by the British press and there's this media frenzy. And Michael Dillon sadly moves away. He leaves Britain because of it. And in Dillon's diaries, he remarks that Gillies gave support to him throughout this process. And so I said that there were a lot of people who wouldn't have necessarily viewed Michael Dillon as a man in 1949, but Gillies wasn't one of them. And it's a great testament to such a progressive forward-thinking surgeon at this time.

Robert Pearl: And you can well imagine for listeners that have to visualize it, that this tube pedicle that he creates, this cylindrical shape actually starts to look like a penis. And that's how he takes injuries to the face in World War I and applies them to a gender affirming surgery decades later.

Robert Pearl: People often ask me about plastic surgery. What does it do? And I say it's the skin and all of its contents. And that reflects the fact that all these operations, all these innovations break the rules in one part of the body by applying the ones from the other. And Gillies was the absolute master around that.

Lindsey Fitzharris: Yeah. And it was about identity too, wasn't it? It was always about identity because even these men in World War I, they had lost their sense of identity of individualism. And so he was really able to restore that. And in the case of Michael Dillon, he's able to give him a whole new identity. So for Gillies, it was about people having control over that identity and being able to help them realize that dream of theirs to fulfill that.

Jeremy Corr: Robbie, I'm going to mix this one up and give this one to you, the first one, it'll be a quick one. But before you were the CEO of the Permanente Medical Group, you were a plastic surgeon, and like you said earlier, you've done many of the same surgeries Gillies has. What does Gillies mean to both you on a personal level and for the field of plastic surgery as a whole?

Robert Pearl: Before I became the CEO, I probably did about 10,000 surgeries. I was particularly interested in kids with birth defects, cleft lip and cleft palate. And applying the principles from other parts of the body to create the reconstruction of this. And Gillies, and Lindsey talks about in the book, he wrote a seminal work with another individual named Ralph Millard, who is the father of modern cleft surgery, in which all these principles are laid out.

Robert Pearl: So you look at someone with a cleft lip, all the pieces, it's not just the split in the skin, the muscle is in the wrong position. The bone is in the wrong position. The nasal structure is in the wrong position. And it's applying these same principles. They're a hundred years old, but they're just as valid, put things back where they belong. Replace like with like. Reconstruct function and appearance, and the ability to now maintain the spirit, the optimism of these individuals.

Robert Pearl: One of the most important things he did was this idea of creating teams, being able to respect the humanity of the patients. Being able to recognize how you had to restore not just form, but vitality. This was not about just eliminating disease, it's restoring wellness. And his principles and his teachings have helped guide me across my entire clinical career.

Jeremy Corr: Lindsey, when you look at the rule-breakers in the history of medicine, we look at like, Semmelweis, Lister, Gillies, Jenner, et cetera, what are some of the traits that these people share that cause them to go against the grain? And what are the common themes you see among these rule-breakers from medical history who do go on to change the entire field of medicine?

Lindsey Fitzharris: I think that the biggest trait is perseverance. When you look at Joseph Lister, he could have given up quite easily in the face of the pushback cause he received enormous pushback when he started to champion germ theory. And it's hard for us to understand why, because to us, we live in this paradigm where germs exist. He was this young man coming along saying that there are these tiny little creatures and they exist and they're killing their patients. And I can see them with my microscope. And it was a huge leap of faith, but he persevered.

Lindsey Fitzharris: I always joke that if Joseph Lister gets a movie made, which I believe that he's worthy of having a movie made about him, they're going to make it look like this change happened really quickly. Because they're not going to be able to age the actor much. So it's going to look like this happened very quickly, but really it took decades before that change happened. And it was a lot of champion and persevering. And Lister even eventually goes to America to talk about germ theory. And he's met by a hostile audience at that point. And he really has to

convince these men in the medical community at the time to adopt germ theory. So perseverance.

Lindsey Fitzharris: Also with Gillies after the war, he could have just given up and gone back to his old practice. I talk about that in the epilogue. But he really believed that what he was doing was transformative, that it was important, that it would serve humanity beyond the war. And he was correct in that. And so he went through this awkward period where he didn't have many clients and he really had to convince the medical community that plastic surgery was a valuable discipline within the medical community.

Lindsey Fitzharris: So I think yes, looking at that, looking at Edward Jenner and the first smallpox vaccine and all of this, that it's about perseverance. And pushing through and pushing back against the naysayers.

Robert Pearl: Let me ask you a final question, Lindsey. Near the end of the book, you talk about Gillies' commitment to resident education. You quote him as wanting to be surrounded by young, eager minds that have not yet learned not to hope and are oblivious to the limitations. You say it was both their enthusiasm and naïveté that drove them to push the boundaries what could be accomplished in the operating room. How will we preserve that spirit and create the rule-breakers for medicine's future?

Lindsey Fitzharris: I hope that people take Gillies' attitude towards becoming mentors to the younger generation. Certainly that was close to his heart. That was a goal close his heart. When World War I began, he observed a French surgeon that I alluded to earlier named Morestin, and he was in awe of Morestin's techniques. And then later he returned to the hospital in Paris to see Morestin again, and he was shut out of the operating theater.

Lindsey Fitzharris: He later said in his career that perhaps it was because of that experience, he bent over backwards to accommodate all of these young minds who were coming from all over the world, by the way, to study with the great Harold Gillies. And he was extremely accommodating. And again, I think he probably was learning from them just as much as they were learning from him. And that collaborative effect and that a collaborative approach really served him well. And ultimately served his patients well. So I hope that continues, that attitude continues on in the new generation of plastic surgeons going forward.

Robert Pearl: Sir Isaac Newton once said that if I can see farther than others is because I stand on the shoulders of the giants who came before me. And all of us in medicine stand on Sir Harold Gillies' shoulders. I appreciate very much your writing this book. And I know that listeners who read it will enjoy it, learn from it, and engage in tremendous conversations about the ways that medicine can move forward into the future.

Lindsey Fitzharris:

Thank you so much. I'm so excited for people to read this. So thank you for your kind words.