“That’s Understandable” Podcast - Season 1 - Episode 5
Data Science & AI
Final Transcript

Brendan 00:06
- Welcome to "That's Understandable." A podcast aimed at making the complex world of healthcare more well, understandable. I'm your host Brendan McEvoy, and when I'm not hosting this podcast, I'm the US head of external communications at AstraZeneca. We live in a world inundated with data. Not only are we generating more than we ever have in human history, but due to technological advances, we now also have access to more data than ever before. This uniquely impacts the realms of healthcare and pharmaceuticals where it's critically important to accurately analyze, interpret, and apply data. That's where data science comes in. The intersection of math and statistics, specialized programming, analytics, artificial intelligence, and machine learning with the overlay of subject matter expertise. In healthcare and pharmaceuticals, we apply data science to help us develop life-changing medicines for the patients we serve. At AstraZeneca, we pushed the boundaries of science to deliver the best possible medicines for our patients, which means that we're no stranger to the trending phenomenon of AI. Long before it was used to help college students finish their term papers, AstraZeneca has been implementing data science and AI in our research and development processes to optimize the time it takes to take a medicine from its initial discovery phase to the final product. These tools help us better understand diseases, identify new targets for our medicines, inform which molecules to make, and how to make them, and better predict clinical success to improve the lives of patients. So if you're feeling uneasy about the vast potential of AI, know that we have, thankfully, been able to harness this technology for good. Joining us today to make data science and AI more understandable are two individuals with extensive experience in this area. Cindy Hoots, chief digital officer and chief information officer at AstraZeneca. And Deborah DiSanzo, president of Best Buy Health. First, let's welcome Cindy who spearheads AstraZeneca's embrace of digital technology to ultimately impact patients and society. She serves as an independent board director at Zoom. And is a co-founder of Philadelphia's Hope For a Cure, a nonprofit organization supporting the Pulmonary Hypertension Association. Thank you for joining us, Cindy.

Cindy Hoots 02:34
So great to be here with you and Deborah today, Brendan. Thanks for having me.

Brendan 02:38
Yeah, absolutely. So, Cindy, something I know you firmly believe in is leveraging technology to make a meaningful impact on society. How have you seen this realized throughout your career thus far?

Cindy Hoots 02:49
Yeah, so I think technology has really evolved over the last few years. And what we're seeing is, you know, its ability to help reach people around the world and connect people. You know, we now have things like networks and lower orbit satellites, and this ability to just create an inclusive environment. We certainly see it in the advancement in business. The ability to really be able to join processes across our company, to be able to go from research and development into how we manufacture our medicines, into the way in which we then make sure we can get them to patients. Technology underpins all of that. And I think even most recently with the, you know, the pandemic, what we saw was technology really creating, you know, the foundation that allowed businesses, and universities, and education systems to really continue to function. And so it's been really phenomenal to see this profession that I've loved over the last 30 years, you know, go from something that was kind of in the, you know,

the basement of buildings to now being such, at the forefront of the way in which society just lives and how we run our daily lives.

Brendan 04:06
It's something you hear about quite often. It's interesting, as you mentioned, it's sort of everywhere, right? And things that you do on a daily basis, probably in work, sort of become a bit ubiquitous. As we focus more specifically on technological advances in data science, in the pharmaceutical industry, how is this useful for the type of work that we do here at AstraZeneca?

Cindy Hoots 04:27
Yeah, you mentioned at the opening, you know, what we're doing in terms of using data and AI around drug discovery. We have things that we call knowledge graphs, which are an ability to kind of link unrelated or seemingly unrelated information, and taking vast quantities of data and making sense of it in a way that as individuals doing our day-to-day work, use it to really find more novel drugs. But also one of the things that we're doing is applying it to how we serve patients. We're able to then work in an ecosystem with startups and other companies to think about how we can look at individual patient circumstances and be able to apply AI, whether that's through things like mammography, and then leveraging AI to look for abnormalities. We're also using it to look at regular chest x-ray scans. We're working with a startup from India that can, using normal chest x-ray scans, be able to apply an AI algorithm on top and detect early lung cancer. So I think a lot of these things are again, helping, not only companies in the way in which we operate our business, but also individuals and how they manage their healthcare.

Brendan 05:32
That's interesting, sort of using the technology to sort of analyze the scan. I would imagine that helps improve the accuracy and probably the speed, right, in which diagnosis or a potential issue could be caught? Obviously, we're talking about patients here, about their medical information, what we're talking about, sort of their scans and whatnot. And I, you know, that, analyzing that is how we determine what medications or treatments options might be best for an individual. And, you know, having worked at AstraZeneca for quite some time, really an industry standard is that we're all very committed to high ethical standards in everything that we do, but especially when it relates to personal data. Could you share a little bit more about the importance of ethics when we're dealing with sensitive data, like patient information?

Cindy Hoots 06:23
Yeah, so I think ethics is so important and it's becoming even more important. You know, people wanna make sure that the company that has their data is handling it in the right way and that there's a trust relationship in the way in which we'll use that data. And AstraZeneca a few years ago was one of the first pharmaceutical companies to put out an ethical use statement around the way in which we would use AI, and use people's personal data because we take it so seriously in terms of making sure that we don't ever breach that trust that we have with the people that share their data with us. So I think for me, it's one of the things that we have to really make sure, is always at the forefront of our mind. It's something we talk about internally and externally on a regular basis to just make sure, and our team is educated on the right way to use this data, and how it can be shared, and what protections we should ensure are there for people to feel comfortable. (soft music)

Brendan 07:25
I really appreciate how thorough Cindy's answer is here. As the human race dives deeper into the sort of dimly lit depths of artificial intelligence, it's imperative we keep a firm grasp on its potential to get out of hand, especially with personal data. I'm proud that we at AstraZeneca

have been able to keep a tight grip on patient information, but I'm all the more curious to know how that security will reshape itself as AI gets stronger, smarter, and faster. Only time will tell. (soft music) Yeah, it sounds like it's a powerful tool and it just needs to make sure that we have all the right tools and guardrails in place to ensure that we're doing right by the patients and folks that we serve. So we've learned a little bit about data science so far. Another piece of the technology that's impactful in healthcare is AI. And Cindy you mentioned it a bit and we're hearing so much about it right now. So joining us now to speak a little bit more about AI is Deborah DiSanzo, who's president of Best Buy Health. With more than 30 years experience at the intersection of healthcare and technology, Deborah is a recognized thought leader in AI and big data. She oversees Best Buy health strategy, connecting people with technology to enable care at home. She's also an instructor for AI and health at the Harvard T.H. Chan School of Public Health, is the director of Project Hope, a nonprofit organization helping families journey out of poverty, and serves on the board of directors here at AstraZeneca. Thanks so much for joining us, Deborah.

Deborah DiSanzo 08:01
Of course, Brendan. I'm very happy to be here. And hello Cindy.

Brendan 9:00
So Deborah, you work for Best Buy Health and I'm sure that for for most of our listeners they think about Best Buy, when they think about Best Buy, they're thinking about, you know, buying a computer or some sort of, you know, technology. So can you tell us a little bit about Best Buy Health and what you and your team do there?

Deborah DiSanzo 09:17
I always get do you mean that Best Buy? Yes, we mean that Best Buy. Because we are all about, you said it, enabling care at home. And when you think about care at home, you think of that as a logistics problem. How do you get the monitoring devices to their home? How do you train people to use them? How do you keep them working? How do you get them connected to the electronic health record or where they ever have to be? So that's what we do. We enable care at home through our care at home platform. And using the omnichannels of Best Buy and Geek Squad to help people with technology in their homes. So where Geek Squad used to help people with TVs, now Geek Squad is among other things, helping people with health technology at home.

Brendan 09:58
Oh, that's interesting, sort of moving that concept. As someone who used Geek Squad to have our, you know, computer and sound system put in, I think it's interesting to take that concept, and sort of envision it use for a different, in this case, as you said, care at home. I know we mentioned, I was talking a little bit about with Cindy about AI, and it seems like it's sort of everywhere these days, right? Like it's showing up, you can't turn on the TV, you hear it all over the place. It's almost like it's a new concept, but we know that this isn't a new phenomenon, we're just finding new ways to leverage the technology to make it even more useful for us. So could you share, Deborah, is how the new advances in AI are helping companies in the health space like Best Buy Health and AstraZeneca further innovation and help support patients?

Deborah DiSanzo 10:40
Brendan, absolutely. I just want to affirm what you said. Actually, the term artificial intelligence was first coined in 1955 at the Dartmouth Summer Camp Institute. And so it's an old term. I did my first AI project 30 years ago, so it's not new. But what is new today, AI needs to run on data, and now we have vast amounts of digitized data. AI still needs very fast computer systems and our computer systems are getting faster, and faster, and faster. And then it is really novel math in the form of algorithms that takes that data and creates patterns out of it, or

makes predictions. So we've been working in AI and health for 30 years. Now though what the data and the compute power enable us to do is, for example, all of our remote patient monitoring at Best Buy, we're using predictive algorithms, AI algorithms to watch a person's gait to see if they're going to be at more risk of falling, or if their disease is progressing. We use AI to look at all the physiological vital signs on a person to see if they are going to get sicker and if they're gonna need a more stringent intervention. We use AI algorithms to determine if people are staying on their, not taking their drugs, 'cause at Best Buy we're about devices, not medicines. But we use to see if they are in compliance with how often they're supposed to take their blood pressure or whatever they're supposed to take, and then predict what the outcomes of that will be. Of course, Cindy already mentioned reading images and natural language processing, which is a form of artificial intelligence is being used to help physicians in their office today record the conversations that they're having with their patients to help them write their notes. So it's really in a lot of places now. And even though there's a lot of hype right now, people have been slowly working through ways that artificial intelligence can help for a number of years. (soft music)

Brendan 12:45
It's mind blowing that Deborah has been working in artificial intelligence and healthcare for decades, yet we're only just starting to understand the impact it can have. It's pretty simple actually. It's all about the data. The more information AI can access, the more accurate the result. But back then the sample sizes were just too small. We didn't log enough or even share enough information with each other. The platforms didn't even exist yet. I mean, just imagine where we'd be today if smartphones were developed in the '70s. (soft music) It's a surprise to me to hear that this dates back to 1955. I think the majority of the listeners will probably think this is a concept that started in the 2000s, maybe a little bit before that. So it's interesting to hear how long it's being utilized and probably the amount of evolution to get us to be able to leverage it in new and different ways. It's obviously clear from talking with you both that there's a lot of positives from using AI in the health space. But we know that there's also some perceived negatives as well, especially when you think about, you know, the potential impact on the human workforce. So Deborah, could you talk a little bit about from your experience and perspective how AI has impacted either helped or hindered work done by humans?

Deborah DiSanzo 13:59
Absolutely, and I want, you know, just to we said that it started, AI was coined in 1955. And I think the first time that someone said that AI was gonna take over the human race was in the 1960s. Marvin Minsky at MIT was one of the founders of AI. And it was in the mid '60s that he said, oh, by, I think it was 1972, "Computers are gonna be as smart as humans." So this is not a new discussion we're having. Some of the best places in healthcare that I think it has helped actually is clinical trials. For a physician to put their patient on a clinical trial, there's a lot of inclusion and exclusion criteria that needs to be taken into account, and that is in electronic health records that are thousands of pages long for patients now. So AI has been used effectively to read through the electronic health record and take the inclusion or exclusion criteria to see if a patient is available. I think that is a great use. That's not taking anyone's job at all, it's just simply getting more patients on clinical trials where they could be helped by it. Another great use Cindy mentioned is really in radiology. If you think about it, radiologists have to sit in a dark room reading, reading images all day long. And some of those images really, they're completely clear, there's nothing on them. And so AI can help augment, as Cindy said, intelligence for the radiologists by saying, "Okay, these images we don't think there's anything on, but this image you really need to look at." And then the radiologist is working at the top of their license to, you know, really look at the difficult images and then go back to the other images that may have not have anything on it. I think in healthcare another great advance is what I was talking about earlier, that if you are being monitored either intermittently or continuously for all day, to have an algorithm that can help just see the patterns in the

monitoring data to determine if there's a combination of factors together, if you're actually getting better or getting worse, also augments a physician or a nurse to see what's going on in their patients. So those are some of the ways that, you know, I think AI is really helping.

Cindy Hoots 16:06
And Deborah maybe a little bit as your last example was what you can do is as it's monitoring you all day long, it can actually send you alerts, so you're only having to think about your disease, or think about your issue when an alert happens, versus really having it occupy your mind all day long. So I think again, some really nice things that can help people manage any condition they have more easily.

Brendan 16:41
Yeah, thanks Cindy. It's interesting about the workforce question. There was, I was in a, listening to a panel discussion a couple weeks ago and it was, the discussion was really around how COVID, you know, the impact of COVID on healthcare workers, and how there's this huge lack of healthcare workers. As you're talking about sort of maybe taking over some of the, you know, analytical components of the healthcare worker's job, or sort of supplementing where there are gaps, how this could really have a significant impact, and, 'cause who knows how long this workforce shortage will last.

Deborah DiSanzo 17:14
Well, it's gonna last a long time. And in fact the data is that physicians spend like 60% of their time not with patients, but in doing the work they need to do in the electronic health record, and nurses spend 40% of their time documenting. And this can really be helped with what we call natural language processing speech, text, text to speech, or even generative AI that we have now. I see this as, you know, you have to be careful, you have to be ethical, you need to make sure that the AI is not making things up, because in generative AI does that at the moment, but there's lots of, in capturing conversations, helping to write notes, helping to find something in electronic health record that's gonna give physicians and nurses time back, which they need.

- Yeah.

- Yeah.

- Yeah.

Brendan 18:01
Yeah, that's a great point. (soft music) Today's culture and Hollywood especially, continues to push this misconception that AI is some sort of malicious, free-thinking robot plotting to take over the world, or something equally egregious in nature. So it's refreshing to hear the perspective of actual experts who illustrate artificial intelligence as the lifesaver or even as a much needed reprieve for healthcare workers on the frontline. Almost the exact opposite of the stuff we see on TV. So both Deborah and Cindy, you know, obviously have extensive experience in data science, AI, and technology as it relates to health. And we touched on this a little bit, but what do you see as the role of AI in public health, both in the US and even globally?

Cindy Hoots 18:53
Yeah, maybe I'll start, I was on a recent trip in South Africa a few weeks ago. And we were working with some startups there. One was able to take an iPhone or a smartphone and capture nine different vital signs just by looking at it for 60 seconds. And then shortly after that we met with a second company, Medsol, and they have a handheld wand used for breast

cancer screening. And it was tied to an AI algorithm that could help nurses be able to identify if there was something concerning that they should then refer to for a second follow-up visit. And we then went into some of the clinics that are in some of the more rural areas of South Africa, and all of a sudden you could start to see how having, you know, just an iPad or a smartphone available to be able to take vital statistics. Then being able to have, you know, more routine nurses be able to do breast exams with a level of confidence. And all of a sudden you can see how we could, kind of democratize healthcare in a way in which we could make it more accessible to people who really don't have access today, and kind of think about, you know, how will do we get equitable health? And so for me, where I get really excited is the fact that, you know, these technologies are now allowing us to reach more people than ever before. And I think for me, whether it's in the US or, you know, even in some of the emerging markets around the world, all of a sudden you're starting to see that we can create more equity in terms of the type of care people get and you know, their access to follow-ups. So it was really exciting.

Deborah DiSanzo 21:11
Cindy, that is really the stage of AI that we're in now, right? It's the democratization of AI. What the advancements now in data, and compute power, and generative AI made available to people. So, you know, generative AI can help you code. So we are seeing an upcoming of all these startups that you talked about that really can do very, you know, very good for people who otherwise would not have had healthcare. Even in the US we're seeing in Medicaid populations where we can help treat chronic disease in home using remote patient monitoring and the algorithms to check on disease progression, that we have fewer returns to the hospital than we did before in the Medicaid population. Because sometimes, you know, it's easier for someone to be monitored at home or whether at work, or, you know, and if we make the tools available, then we can help people get better. So this is a new era that we're in and it's very exciting.

Cindy Hoots 21:46
Well, and just think Deborah, when you think about what you guys are doing and being able to allow people stay at home, a lot of people either have to take off work, they may live three or four hours away from a healthcare facility, so there's incurring a lot of expense to be able to go into the home. So this movement around how do we keep people in their homes, whether it's your day-to-day monitoring of your illness, or if you're on a clinical trial, or something else, we're removing the barriers to care, which I think then, you know, will provide better access regardless of where in the world you live. So I think the combination of all of these things coming together is really exciting. And we were talking about, you know, in the 1950s you needed a lot of math, science, computer science skills to think about how you would use artificial intelligence. And for the, you know, up until the last few years that was true for decades. Now, what we're seeing is that people with a variety of different backgrounds can now have access and use AI on a regular basis. And I think that's what's really been a game changer.

Brendan 23:04
Yeah, it's, you know, just to double click on that, the health equity piece, I'm glad that you bring that up. The ability for the AI and this new technology to bring essentially healthcare to people or meet them where they are, recognizing that there's so many barriers for people all across, you know, the US and the world, and getting the right healthcare that they need. So I'm glad that you brought that up 'cause it's such an important point. So we've talked a lot about how all of these technological advancements have made gathering, analyzing data much easier in recent decades, but I imagine that there are still some gaps here. In the work that you do and the experiences that you have, have either of you identified some gaps in this work? And if so, what do you think the solutions are to helping to close those gaps?

Deborah DiSanzo 23:48
I'll start this one. So, you know, the first thing is that the models are changed on the data available. And so if the data available isn't, there's not enough data, it's not clean data, it's not representative data, then one of two things will happen. One, the accuracy of your algorithm won't be high enough, or it might be only good for that dataset that you trained it for, or it may not be representative of the population that you have. So when you're making models, there's a lot of testing that needs to go on. And I just encourage anyone out there, now, we talked about the democratization of any AI, anybody out there who's making a model, make sure that you have enough data, that your data is diverse, that your data is representative of the population that you want your algorithm to help. Otherwise we get in these, you know, situations where we have algorithms that are predicting the wrong things. So we work on that all the time. When we have an algorithm that is looking for advancement in gait to see if somebody's gonna fall, we need to make sure that we look at a whole lot of different people, tall, short, you know, all sorts of people to make sure that our gait algorithm is gonna be appropriate, and we really need to do that in everything.

Brendan 25:05
Great, thanks Deborah.

Cindy Hoots 25:07 And I think you speak as well there, Deborah, to the bias that, you know, a lot of our historic data inherently has, and, you know, what Deborah was just talking about is this active conscious effort to make sure that you're getting great representative data, and you're trying to minimize any bias. And it's something you constantly have to look at because, otherwise the outcomes of those algorithms are, you know, continue to have that inherent bias in it.

Brendan 25:37
Yeah, I guess it's fair to say that it's, you're only as good as the data that you have, right? Or the, you know, so this. It's so important in getting it right among a diverse population, and making sure that you're collecting all the right information in order to have a true and reliable, you know, outcome, or recommendation. So one last question here and a little bit forward-looking. So we just kind of, we talked a little bit about the gaps and potential solutions, but what do you both see on the horizon as the next big accomplishment in data science and in the AI space, especially related to health? And what do you each hope we're able to accomplish next?

Cindy Hoots 26:17
Yeah, so maybe I'll start. I think one of the things that we're starting to see in ChatGPT and kind of these, what we call large language models, have really transformed and made accessible AI to the average person. You know, we were always consumers of things that were driven by AI. So whether that's, you know, your smart refrigerator, or your microwave, or, you know, we talked a little bit about things like, you know, Amazon being enabled. But I think what's happening now is more people can just access things like GPT. And I think that's why you saw it, you know, just accelerate, and get so much prominence is it's no longer just for people with scientific, or computer, or mathematics background, it's really for everybody. So I think that's going to really transform the way we kind of live every day. And imagine in a world where, you know, with some of the diagnostics and the monitoring, Deborah was talking about, you don't call your doctor when you're sick, they start to call you when you're sick. "Hey, we noticed, we got an alert that, you know, your blood pressure is above normal for a particular period of time." And all of a sudden you get this proactive kind of care. So I think that's one kind of big area that we'll start to see in the future is this transition from you having to manage

your yourself and your care to being able to have this augmentation that then just makes it seamless and easy.

Deborah DiSanzo 27:53
I agree with everything that Cindy just said. Let me, I'll take the end of your question. Well, where do we hope it goes next? One of our businesses at Best Buy Health is actually to help seniors age independently in their homes. I'm really excited about ChatGPT now. And, you know, we have all had these experiences with really bad chatbots. But now we're gonna get really, really very good chatbots. And I'm very excited to think about what a chatbot can do for someone who is aging independently in their house. Remind them to take their medications, remind them to eat, remind them to get up and walk. Just, you know, answer questions for them about their, about, you know, how they're feeling and their diseases. I'm excited about how people, how chatbots we'll be able to help people in their homes, particularly people aging independently in their homes.

Brendan 28:48
Yeah, I think that's both great points to end on, sort of the optimism for the future, and, you know, what we can hope and maybe even expect in the future. I, before we transition, I just wanted to sort of give you each another opportunity. Is there anything top of mind for you on this topic that you just wanted to make sure that we're able to share with our listeners before we move on?

Cindy Hoots 29:11
Deborah, anything on your side? You wanna go first?

Deborah DiSanzo 29:12
I, you know, I'm an optimistic of AI. I think that AI, as Cindy said, helps augment, will help augment our physicians, our nurses, help get patients in clinical trials. We have to be careful, of course, about the algorithms having enough data. We have to be careful about generative AI making stuff up that's not true. We need to be careful of all that. But I think it's an opportunity to really help us help people more than we do today with augmented intelligence.

Cindy Hoots 29:46
And I think for me it would, I would just say this is not something you need to fear. You know, it's not a sci-fi movie. We've seen multiple different advancements in history that have helped us to be better. As individual citizens, we each have a responsibility to think about how it could be used for good and how it could be used for bad, and making sure that we're making the choices and creating an environment where we get the best out of this technology. And so I would say it's great that your listeners are trying to get themselves educated and learning a little bit more. You're immersed in it every single day. It's all around us today. And I think in the future we'll see it really be able to help individuals live more healthy productive lives. (soft music)

Brendan 30:33
I know we've talked a lot about artificial intelligence in this episode, but it's hard to ignore the immense respect that both Cindy and Deborah have for it. If you listen closely, they'll often speak as if it's not artificial at all, as if it is in fact very real. And to be honest, they're right. This isn't about our capability to control a scary piece of tech. It's more about building a bond, a stable relationship between human and technology. Generative AI follows a trail of invisible breadcrumbs that certain life-threatening diseases can leave behind and leads us to a potential remedy or preventative tactic. In best case scenario, it helps us uncover a cure. My takeaway, it's a strategic symbiotic partnership and a fragile one at that. (soft music) Yeah, absolutely. I think, I know for me this has been an interesting and informative conversation. You know, I

think we don't, I haven't really taken the time to really think about all the ways in which data science and AI sort of surrounds me on a daily basis, but also the ways in which it can make life so much better on many different levels, including healthcare. Thank you, Cindy and Deborah so much for taking the time to be with us today and sharing your information and expertise. I'm sure the listeners are gonna take so much away from this. But before we close, we have a bit of a tradition on this podcast to get to know our guests a little bit more on a personal level, right? Because we're all multidimensional, you know, we have various different hats that we wear. And so this last portion is called five questions where I'll just ask you all five questions in sequence and really just looking for sort of whatever is top of mind. So would you both be willing to play along? Okay.

Brendan 32:29
Let's go.

Brendan 32:23
Okay, cool. So I'll ask them, both of you the questions. Maybe Cindy, let's have you answer each question first and then, and Deborah right after, okay. All right, so here we go. First question, what's your favorite way to spend a summer afternoon on the weekend?

Cindy Hoots 32:36
Oh, definitely by water. The pool, the beach, a river.

Deborah DiSanzo 32:41
And I was gonna say floating face up in the ocean.

Brendan 32:45
Both sounds amazing. Sounds like water is the place to be. I'm right with you both. (chuckles) All right, Cindy, if you could be an expert at any skill, what would it be and why?

Cindy Hoots 32:56
Oh, I actually would love to be able to work at a florist and make beautiful flower arrangements. It's something I think about all the time. Having more of a computer science background, there's something fun about the creativity of living plants and making them look pretty.

Brendan 33:11
That's great.

Deborah DiSanzo 33:13
And again, and so watercolor artist. Probably painting those flowers that Cindy's gonna arrange.

Brendan 33:20
There you go. It's interesting that you both wanna kind of tap into that creative side a bit more. What about, what is your go-to comfort food, Cindy?

Cindy Hoots 33:28
Ooh, mine's something called roti, which I'm originally from Trinidad and Tobago, and it's kind of like a curry stew that we grew up with and that's probably my all-time favorite.

Deborah DiSanzo 33:40
And mine is ricotta gnocchi that my Italian grandmother taught me to make. And I just made for myself Mother's Day because I just, she would make it every Mother's Day. So ricotta gnocchi.

Brendan 33:53
Sounds good. Yeah, I'm not quite ready for lunch yet, but I'm starting to get some ideas. (chuckles) Yeah.

Cindy Hoots 34:01
That sounds delicious. (laughing)

Brendan 34:02
So if you could time travel, which era would you visit?

Cindy Hoots 34:07
I kind of like the Victorian kind of old grandeur, thinking about what it's like to live back then. And I would love to kind of seen what it was like. We take our modern conveniences, I think for granted. And I think that's just a really rich, historic tenant time era. It's either that or I would leapfrog to the future. I don't know.

Deborah DiSanzo 34:28
I was gonna say like the 1780s with the birth of the United States and just like being able to see, I don't know if I would've been able to see, but being able to see Hamilton, and Washington, and Adams, really what really did go on then.

Brendan 34:48
Yeah, yeah, it would be interesting. I feel like with all the popularity of shows like "Bridgerton" and all of those, I'm kind of with you Cindy, like back to that, you know, Victorian era. Yeah, it's, you know, I don't know if it as realistic as it actually was, but seems like an interesting time period to visit. So the last question here is what's the last song that played from your music streaming app?

Cindy Hoots 35:12
“Thank God” that new song that's coming out about a couple that thank God they found each other so.

Brendan 35:20
I’ll have to check that out.

Cindy Hoots 35:21
Yeah.

Cindy Hoots 35:22
I don't know if that's the actual name of it, but everyone will know be playing everywhere right now.

Deborah DiSanzo 35:27
And mine was "Happy Dance" by MercyMe.

Brendan 35:30
Hmm, I'll have to add those to my list of songs. I'm always looking for new songs, so it's great to get recommendations. So thank you both for playing along and sharing a little bit more about yourselves. I think it's always a great way to, you know, end on a bit of a lighter note, although this topic, you know, was sort of light in general and really interesting. So to close then, it's so inspiring to me to hear about how we're able to utilize data and technology to make people healthier and their lives better. It feels like we're witnessing the future happening

right now and we're getting to play a role in its realization. It's exciting to think of how far we've come and the potential this technology has to improve the quality of life and wellbeing for patients today and into the future. So thanks so much for joining me today. Until next time, be well, be healthy, be understanding. (gentle electric music)