Dr. Elizabeth Comen
A lot of Western medicine is built on this idea that women are really this imperfect, inverted version of men, and that we are inherently the weaker, less intelligent sex. What we know today is really that our biology is strikingly different. We present with diseases that are unique to women. We present in different ways, such as with heart disease or autoimmune diseases and there are things totally outside of our reproductive function, which may be predominant in our presentation.

LuAnn Heinen
That's Dr. Elizabeth Comen, practicing oncologist, medical historian, and author of the new book, *All in Her Head, The Truth and Lies Early Medicine Taught Us About Women's Bodies and Why it Matters Today*.

I'm LuAnn Heinen, and this is the Business Group on Health podcast, conversations with experts on the most relevant health and well-being issues facing employers.

Today, Dr. Comen and I discuss how biases inherited from centuries past influence the care women receive or don't receive even today for heart disease, urological problems, and conditions especially prevalent in women, such as autoimmune disorders and irritable bowel syndrome.

Dr. Elizabeth Comen, welcome to the Business Group on Health podcast.

Dr. Elizabeth Comen
Thank you so much for having me.

LuAnn Heinen
I have been looking forward to this conversation since I heard your book talk in Cambridge a couple of months ago. That book is *All in Her Head, The Truth and Lies Early Medicine Taught Us About Women's Bodies and Why it Matters Today*. So you have a background, not just in medicine, you're a trained oncologist, but also in the history of medicine. What is the legacy of early medicine that lives on and impacts physicians and female patients, especially even today?

Dr. Elizabeth Comen
LuAnn, thanks again for having me and for that thoughtful, open-ended question.

We first met, to bring up my background, at Cambridge at the Harvard Coop, and what was such a meaningful talk for me then was because there were so many history of science undergraduates there. I also majored in the history of science and that really inspired me throughout my career, really starting when I was a freshman in college to understand how science doesn't happen in a vacuum, how it's related to our personal beliefs, our religious beliefs, culture, society. We don't need to look any more than 2025 today and the political landscape to recognize that science and medicine and what happens in the doctor-patient relationship is very much related to cultural and societal norms. So for me as an oncologist, and my training right now is as a breast oncologist, I treat almost exclusively breast cancer patients, really gave me a window into the experience of illness primarily for women and being incredibly struck over the years that so much of women's bodies has been misunderstood, invalidated, shamed, and how that plays out to their experience, not only in the doctor-patient exam room, but their cultural social experiences as well. I felt very much compelled to try to understand that legacy within the context of history and ideally move us towards a better future.

LuAnn Heinen
I mean, it's so all-encompassing. You go back to the Greeks. You quoted Aristotle in the 4th century BC saying, “the female is more subject to depression of spirits and despair than the male.” But a lot of the most disconcerting practices that you describe from recorded history happened much, much later. What are some of the biases we've inherited from early medicine that still exist today?

Dr. Elizabeth Comen
Oh, goodness, I think there are so many. I think if you really go back in time a lot of Western medicine is built on this idea that women are really this imperfect, inverted version of men and that we are inherently the weaker, less intelligent sex. What we know today is really that our biology is strikingly different. We

present with diseases that are unique to women. We present in different ways, such as with heart disease or autoimmune diseases and there are things totally outside of our reproductive function, which may be predominant in our presentation, again, such as autoimmune diseases, which are 80% more common in women, or Alzheimer's disease, which is, for example, two times more likely in women than men and yet we don't consider that a women's health disease. In this context, I really felt compelled to try to understand what these biases were and where they come from. But again, there are so many. I think one of the things that surprised me the most was how much our misunderstanding of women's sexual function or bias therein really impacted our understanding of disease. The number of times doctors would say masturbation caused scoliosis or asthma, or that libido wasn't important in women at all, except with respect to their husband, is really quite shocking and it's really woven a lot through medical history.

LuAnn Heinen
Yes, definitely that women is this imperfect, irrational form of man, was a big theme. Then I also felt there was a controlling and blaming women thread throughout where women patients were labeled as difficult for certain conditions. I think you mentioned irritable bowel syndrome as a classic. Then this interest by early physicians in controlling women, recommending against exercise and biking or providing them drugs for “hysteria,” which I looked up and it comes from the Greek hysterica, which is the word for uterus.

Dr. Elizabeth Comen
Exactly, so there is a long sort of history of the word hysterical and hysteria. It does come from the Greek word for womb and initially the idea was that this wandering womb, meaning that they didn't know that the uterus was actually tethered in place, but that it was a wandering womb that made women irrational. And of course, throughout history we learned ultimately through anatomy that it was more tethered in place and it didn't wander, but previously that was where the idea of smelling salts came from or positioning women in different ways was to reposition their uterus or you could put certain smells by their nose or their vagina and that would draw the uterus back into place. So next time you're called hysterical, understand it comes from a very complex wandering womb history going all the way back to the Greeks.

LuAnn Heinen
Then you said once hormones were discovered and the placement of the uterus was understood to be permanent, you know, women were believed to be ruled by their hormones and made crazy by their hormones.

Dr. Elizabeth Comen
Yes, I think one of the interesting things for me about researching the discovery of hormones was how much it reflected a binary misunderstanding of our world, that there would be one thing that made women, women, and one hormone that made men, men, when in actuality, it was quite confusing, because obviously men can have estrogen and women can have testosterone. But the history is really, well, there's going to be one thing that makes women crazy and one thing that makes men, you know, powerful and virile. But when you look about how the legacy affects our understanding of women's health care today, we have no idea how and when to give women testosterone should they potentially need it, particularly postmenopausal for libido and other potential issues. So this binary approach to the discovery of hormones and not recognizing that men and women can have a balance of both really impacts to this day our understanding of how to manage women's health care.

LuAnn Heinen
Yes, so let's just quickly touch on one of the things that I found most kind of distressing was the use of asylums for behavioral problems. You document that throughout 17th and 18th and 19th century, really.

Dr. Elizabeth Comen
The types of things that women were put in asylums for and potentially died there from causes we don't even know is actually a terrible time in U.S. history. There was a psychiatric hospital in Trenton, New Jersey, led by Henry Cotton in the 1920s, where he was championed by *The New York Times* as being the savior of primarily women's psychiatric issues. One of his predominant techniques was to remove women's teeth for bad behavior and the assumption was they were acting irrational because they had infections in the back of their mouths or in their gums and if he cured the infection by removing their teeth, they would

become more rational. He claimed an 80% cure rate when in fact he had a 30% mortality rate because when he stopped removing the teeth, because if that didn't work, he started removing other organs.

LuAnn Heinen
Let's talk about how this impacts care today, impacts potentially women's health today. One powerful example comes from heart disease. Maybe you can talk about that and introduce the influential Dr. Osler.

Dr. Elizabeth Comen
Sure. Heart disease is the number one killer of women in the United States. We often talk about breast cancer, which gets a lot of attention and stokes a lot of fear, understandably, but heart disease is the number one killer of women in the United States. And yet when I was in medical school, and if you talk to many doctors today, we were uniformly taught that the presentation of chest pain and heart disease in women and even a heart attack is atypical. Think about that language. Language reveals so much. Atypical. Why is the presentation of women's heart disease considered atypical when we are greater than 50% of the population and is what kills us most? So we're surprised that women are more likely to call an ambulance on their husband than call a doctor about their own heart attack symptoms. We don't educate women about the presentation of heart disease. We don't understand heart disease in the same way because it is biologically different in many ways. We don't have the same large vessel disease that men may have, it may present in smaller vessels that are poorly imaged by today's techniques. The medical devices that we use to treat heart disease were not necessarily built on women's bodies. Again, this idea that we are an imperfect inverted version of men that you could just scale it down, whatever you're working on, whether it's the cholesterol drugs, the aspirin, the cardiovascular medical devices that we use, it's the assumption that we are small men when in fact we are not. And if you go back in time to look at one of the founders of United States cardiology and really our residency system at Hopkins, there is an extraordinary doctor, his name was Sir William Osler. Again, I am not here to say that every doctor in history was bad. They were a product of their times. I want to expose the complex legacy of these physicians and the foundation of medicine that they built, not say that everything that they did was horrible. Yet when you go back and look at Sir William Osler's treatise on heart disease, when he speaks about men, he talks about the classic man to have a heart attack, the white-haired man, age 55 years old that you could imagine in Hollywood clutching his chest with pain like an elephant sitting on his chest. That's not often how women present with heart disease. When he describes countless women with chest pain, he refers to them as having neurotic angina, neurotic chest pain. Essentially it was all in their head is what he described. He even so far as went to say these women do not die. So can you imagine, these women do not die? Well, we do. It wasn't just a hundred years ago that we were dying of heart disease that was missed. We are dying today and there's massive problems in our understanding from the preclinical laboratory science, to the medical development, to the medical devices, to what we do when we see patients in the emergency room. Women are often misdiagnosed or there is a delay in diagnosis when time is of the essence, when a woman presents with heart attack symptoms in an emergency room.

LuAnn Heinen
I came across an example, not of heart disease, but of a difference in anatomy that is completely not explained or seemingly known or talked about, which is that women have much longer colons than men or significantly longer colons and significantly more curvy and difficult to examine.

Dr. Elizabeth Comen
Yes, I had talked to a gastroenterologist for my book about this. He predominantly treats women and one of the things that she really was explaining to me that we don't know as much about women's colons in the sense that they may suffer from more constipation, but the constipation begets more of a torturous winding colon. It may take longer to do a colonoscopy in a woman. Interestingly enough, if a woman is seeing another female physician for her colonoscopy, that female physician may be seeing less patients because she's going to spend more time doing the colonoscopies on the women because they take more time and then in a professional setting, she may be blamed for not having as high a volume as some of her other colleagues, if they have a more balanced or predominantly male group of patients.

LuAnn Heinen
Yes, and they're harder and riskier to examine, so more risk of a mishap. What about in your specialty, cancer, what have you seen?

Dr. Elizabeth Comen
Well, I primarily care for women, but I will tell you, one of the things that I have really seen that I am pleased to see is changing, and there's lots of reasons to have hope, is that for so long the way that we have thought about treating breast cancer is the idea of, well, you're alive, you've survived. If we've cured you, great. But we've often effectively castrated many women in their treatment. We often, particularly for young women, have to shut down their ovaries or render them essentially post-menopausal at a young age, or if they are menopausal, worsen those menopausal symptoms. And that may be where having intercourse feels like glass and shards and is excruciatingly painful or joint aches or hot flashes, and really not addressing the ways that women need to thrive and feel good in their bodies. For example, when we think about sexual function, we are two times more likely to ask a man about cancer-directed therapies and sexual side effects than we are women and that's really changing lately. We're recognizing that central function is as important to many women as it is to men and that we need to be thoughtful in the way that we care for patients, not just to say, well, you're alive and you've survived, but what are the ways that we've impacted your ability to thrive and feel good in your body?

LuAnn Heinen
What was the situation with cold caps? Maybe you could explain those.

Dr. Elizabeth Comen
Oh, yes. It's very interesting. So cold caps are used to decrease the amount of chemotherapy. If you're getting chemotherapy through an IV, that travels throughout your whole body, and that can include, as we know, the common side effect for some chemotherapies of hair loss. Cold caps are like a swimmer's cap that you wear on your head during chemotherapy and depending on the regimen, it can decrease the amount of chemotherapy that's reaching a hair follicle. In some instances result in, again it depends on the therapy, but significant hair retention during chemotherapy, which is a huge deal, particularly for women and yet it has not been covered by insurance. Women have to pay thousands and thousands of dollars out of pocket. It was just very recently that New York mandated that insurance covers these costs, but it is not covered in the majority of states. I do wonder if this were a predominantly male side effect that really uniquely affected men's sense of self, would it have taken so long to be covered by insurance? I don't think so.

LuAnn Heinen
What are some areas of medicine where we've made notable progress in improving women's health specifically?

Dr. Elizabeth Comen
I think lots of ways, you know, this year has really been volcanic for me professionally. I was recently at the JP Morgan Healthcare Conference, which is one of the largest health care conferences in the world where now in its second year, we started a women's health subset of it where you can see companies like McKinsey and other groups really thinking about where can we invest in women's health? And that it's not just about the academics of it, but that we really have to invest in women's health care and able to move the needle. The understanding that women's health care is not just our breasts or uterus and our ovaries, but head to toe, we are different than men. This idea that women's health extends far beyond, again, what I say is our boobs and our tubes, but thinking about Alzheimer's disease, two thirds of Alzheimer's patients are women. Women are the primary caregivers, deliverers, and providers of health care in this country and we need to be thinking about who cares for us when we age. I think it's these broader discussions that relate not only to the laboratory science, to the doctor-patient exam room, but equally how we invest in women's health care from a financial standpoint.

LuAnn Heinen
I'm aware of many more women-led funds investing in women's health startups and the like.

Dr. Elizabeth Comen
Which is so important because we have to put our money where our mouth is. I can bang on the drum all day long as a physician, as a scientist, as someone with boots on the ground taking care of patients, but unless we have the financial investment, we will not move anywhere.

LuAnn Heinen
Pivoting to your care of patients with serious illness. You routinely are in a position to have difficult news to convey and I've heard you share that people experience the same serious diagnosis very differently. So different people respond differently to the exact same news from you. What is that about and how does that happen?

Dr. Elizabeth Comen
Oh, I think that's one of the most beautiful, sacred parts of my job is that I have these incredible windows into really what deeply motivates people, what they love, who they love. It sounds cliched, but I often think about what matters at the end of life is who we loved and who loved us and you really see that distill when patients are diagnosed with a life-threatening condition and/or if they have a terminal illness. I don't even like to use the word terminal because honestly, we all have a hundred percent death rate. Being an oncologist has given me a personal window and motivated me and inspired me from my patients to think about what does it mean to really live as Mary Oliver would say in her poem, our one precious and wild life. And to that degree, understanding that everybody as an individual values to them, who values to them is so uniquely different for all of us. A cancer diagnosis is a biological diagnosis. It doesn't speak to who we are as individuals and what really makes us beautiful and special and unique in our own way. I think that is what makes being an oncologist such a special calling is that it is this window into the book of life for so many people and I feel very privileged to be part of that journey for my patients.

LuAnn Heinen
Are there learnings from the research you've done for this book, which had to be very extensive, that you've been able to put into practice with your own patients?

Dr. Elizabeth Comen
I think writing this book saved my career in medicine. I was in a place of tremendous burnout. I think when you're an oncologist and you see the types of harrowing things that I see, and I'm a mom to three children and writing this book really reinvigorated my passion for improving health care, for connecting with patients. I switched the hospitals that I was working at and now I'm able to spend more time with patients and it really inspired my passion for the larger experience of health care for women. In terms of the one-on-one interactions, really doing my best to think about what are my own biases. One of the things I talk about in the book is I had this 80-year-old patient who I assumed wasn't sexually active and she really schooled me on my own bias towards women or women who may have had a long history of being told that something was all in their head, like a rheumatologic condition or some of the things that we just don't have names and labels for. So many of these autoimmune diseases we call syndromes because we just don't even know what's going on with women. And really trying to pull back this idea that if someone comes in with a diagnosis of fibromyalgia, historically, it'd be like, oh, that person's just crazy, but actually thinking, no, something may be wrong that we really just don't know about and they've been labeled and how does that label influence my bias of care.

LuAnn Heinen
Yes, I love that. I did love throughout the book your willingness to bring your own story into the book that you were writing, so what your own personal experience had been. You didn't hide behind the professional doctor role 100% of the time.

Dr. Elizabeth Comen
Well, I think that we're all human and doctors are imperfect too and there's so much bias that I've had in my training and my own understanding of myself. I mean, there's this whole idea of like doctor heal thyself, but one of the stories obviously I share in my book is how at the end of writing this book, one would think I was so empowered and such a great advocate, but when it came to advocating for myself, I was probably the worst possible patient. Even that's a label, worst patient. What does that mean? That sounds like non-compliant and yet I had all the resources in the world. What happens to people who don't have that sense of advocacy and don't have the resources? I mean, you can only imagine and I really, I really suffered. In full disclosure, I wrote this book about female empowerment, but I am far from it myself. There's all sorts of things that I'm learning about trusting my own voice, my own intuition, and marching to the beat of my own drum that has taken a very long time to even remotely sink in.

LuAnn Heinen
One of my questions is, what can we do as individuals to prioritize women's health and quality of life? What you've done is shed light on narratives about women's bodies and women's health and what women need and desire. I mean, how can the rest of us do that? How can we keep bringing this forward? Is it through conversations at an individual level with our physicians to keep sort of educating them while we're getting educated? What are your thoughts on that?

Dr. Elizabeth Comen
I think there's all sorts of ways that we can think about this. I think having these honest, authentic conversations about what we are struggling with is really important. One of the reasons why I wrote the book as I did and not some, you know, 12 step guide to wellness that you may see and like these soundbites that we might say on Instagram, is that our health is not a soundbite. There is no perfect 10 step guide to wellness. The reason why I wanted to share stories of patients from the past is that I think, at least for me, I could recognize myself in the 17th century woman admitted to an asylum. I probably would have been that woman. I probably would have been burned at the stake. So understanding that it starts with not just the facts, but how we interpret the stories we've been told about our bodies as individuals, by society, and really taking the time to think about that. Because I can tell you all day long, oh, get your colonoscopy at age 45, or make sure you get your pap smear, or whatever soundbite about advocating for yourself. But if you don't value yourself, if you're putting everybody else in your life first, if you think that your body is shameful, if you're afraid to ask questions of your doctor, it doesn't matter what I tell you to do. You have to want to be able and in a place of empowerment to honor and value your own body and I think we do that by unpacking the stories that are far harder to reckon with than just some guidebook on what you need to do.

LuAnn Heinen
If you're looking for a female physician, it's easier now, but the profession is still male dominated. Isn't that right? Even though more than 50% of med school classes are women.

Dr. Elizabeth Comen
I think it depends on the field. One of the things that you notice, there are certainly very male dominated fields, like the field of urology, right? But women pee too. When we think of urology, we often think of male genitalia, but women are 50%, greater than 50%, of the population and often have urologic issues that are untreated, undiagnosed. For example, urinary incontinence after having a child is not something women have to suffer with, or orthopedic surgery, which is often still dominated, although it's changing by men. Then you see these other fields like pediatrics or primary care, which are more continuity of care fields, less procedure driven that are often underpaid. You see people dropping out of it because these are doctors that went into the field because they care about continuity of care. They want to stay in patients' lives for a long duration of time, and yet they are not remunerated well. It's not surprising that these are fields that are often more predominantly women.

LuAnn Heinen
I was thinking that when you're looking for a physician, it's really important, I think, to consider a growth mindset because a physician who thinks he or she, they always have the right answer, is problematic. I recently heard an eminent physician lecture, and he said that the most memorable comment from the dean of his medical school when he was part of the entering class of med students, and the dean basically said to them, only half of what you're going to learn in these four years of medical school is true and accurate. The worst part is we don't know which half. He was making the point that the field is changing so quickly that physicians can't know everything, but there's a lot where you just need to be open-minded, growing, and learning, and almost in collaboration, ideally, patient and physician.

Dr. Elizabeth Comen
Yes. You're really speaking about the necessity of humility. Some of the smartest people I've met, not just in medicine, but in any field, have humility and are able to attract experts in other fields and collaborate and think outside the box. That's how we change health care or anything for that matter, is not by being in an echo chamber of our own beliefs, but really being open-minded to whether it's patient experiences or learning from other subspecialties. I think wonderful doctors know what they know and know what they don't know. Those are the best doctors, not the ones that stand on ceremony and maintain themselves on

a pedestal. One of the issues, I think, with American medicine and its evolution with the rise of medical science at the turn of the 19th century is the body became incredibly fragmented. We developed these extraordinary fields which allowed for the progression of medicine and science, such as cardiology, gastroenterology, neurology, but in these subspecialties, we've also created silos that don't communicate as well, and massive behemoth hospital systems where a cardiologist may never really talk to the gastroenterologist about a patient except for maybe a text here and there, when in reality, we are woven together people that are not just a heart or a lung, but systems that I think is often missed in our health care system today.

LuAnn Heinen
Well, how might employers, large employers who are providing health benefits and well-being services for their populations leverage some of this understanding to inform their strategy for women's health and all the things we're talking about? That's a big question, but what comes to mind?

Dr. Elizabeth Comen
Well, I think we really have to change the system in terms of remuneration. So CPT codes are the way that doctors bill for their care, and if you look at comparable procedures from a man to a woman, and whether it's urology and gynecology, when you operate on a man, you could be paid five times as much for a comparable operation on women. Yes, people don't know about this. There's a phenomenal doctor, Dr. Fitzgerald at Magee Hospital in Pittsburgh, who is exposing this, but yes. We wonder why we silo gynecologists with all of women's health. We need to recognize that if you're a gastroenterologist, you're a women's health doctor too because you're caring for women, right? There's so much that we need to change about how doctors are remunerated, what we literally value in the procedures and treatment of women that we do, and making sure that everybody who treats patients understands that if you care for women, you care for women's health, that it is not just all of gynecology that needs to be saddled with dealing with “women's health issues.”

LuAnn Heinen
Anything we haven't talked about that you think we should?

Dr. Elizabeth Comen
I think one of the things that I've noticed in caring for patients and talking with friends, whether it's in private circles of friends or much larger groups with massive audiences, is that at some point in women's lives, almost everybody has felt some sort of shame about their body or been anxious to speak to their doctor or apologized for something absolutely preposterous that was a perfectly valid thing to ask or wonder. One of the biggest dreams of this book is that I hope people feel a little bit more comfortable saying that this is important. I have one body and I deserve to know more about it. I deserve to feel better in my body. I deserve to have a doctor and health care system that values my questions and that there is nothing shameful to ask. I hope that that is part of what this book helps to be part of a greater mission about is removing some of the apology and shame that I think many women feel about their bodies.

LuAnn Heinen
That's a great note to end on. Dr. Comen, thank you so much for your time today. This is wonderful.

Dr. Elizabeth Comen
Thank you so much for having me.

LuAnn Heinen
I've been speaking with Dr. Elizabeth Comen about her experience as a breast cancer specialist treating thousands of women, as well as her research on how women's bodies and health needs and desires have very often not been optimally addressed. She suggests how employers and individuals can embark on a new conversation and engage in practices that can better support women's health.

I'm LuAnn Heinen and this podcast was produced by Business Group on Health, with Connected Social Media. If you liked the episode, please rate us and consider leaving a review.