REIMAGINING MENTAL HEALTH: INNOVATION AT THE INTERSECTION OF CARE AND TECHNOLOGY

Rhitu Chatterjee 02:11

Wow, it's a packed room, that's exciting. Well, welcome everyone. Thank you so much for being here at this panel, which is about reimagining mental health. I'm Rhitu Chatterjee. I'm a health correspondent for NPR, and I mostly cover mental health. Now, mental health conditions affect over a billion people globally and are among the 10 leading causes of health loss. And as you've read in the description of the session already, you know, these conditions are projected to cost the global economy $6 trillion by 2030 and our wonderful panelists here today are all working towards addressing that, but they're coming at it from different angles. They're all in different parts of the sort of mental health care ecosystem, and I know you're all just as eager to hear from them as I am, so I'm going to ask our panelists, starting with Amir here, to just do a brief introduction, tell us your name and what you do, and then we'll take it from there.

Amir Inamdar 03:16

Thank you for the invitation. Great to be here and to meet with this panel. Amir Inamdar, I'm the Chief Medical Officer at Cybin, we are a company, a mental health company, that is trying to redefine the standards of care in mental health. I don't know how long you want me to go. I can go on.

Rhitu Chatterjee 03:36

That's good. I will come back to you with more specific questions about what you do. That's perfect.

Patrick Joseph Kennedy 03:41

Patrick Kennedy, I'm kind of here by default. And by that, I mean I was the sponsor of the law in this country that says the brain is part of the body, and I was the—became the—[applause] but I got to sponsor it as the youngest member of Congress from the smallest state and in the minority party, which basically tells you where the brain ranks. So you got me by default, because I was—I put my name next to something called mental and addiction, and that wasn't very popular amongst politicians. I don't know why, but fortunately, I had that chance. So thank you.

Rhitu Chatterjee 04:24

And Patrick, remind us when was that?

Patrick Joseph Kennedy 04:28

So back in—I got elected in '94, and the bill passed in 2008, and thank God it passed when it did, because in 2010 we had the Affordable Care Act, which is—people recall, was getting scaled back by the minute in order to pass. And if, if we had waited for that to be the vehicle for us to get mental health and addiction, we would have lost because it would have been bargained away. The insurance industry at the time was very much against it. We got it in 2008 which many people will recall, was when our economy went down the tubes because of the banking collapse. And I happen to know Chris Dodd, who was someone I grew up with, a close friend of my dad's, who was chairman of the banking committee, and in order to help us get the parity law passed, he wrote the $800 billion bailout of Jamie Dimon and the banks into our bill, H.R. 1424, the Mental Health Parity and Addiction Equity Act, thereby guaranteeing its passage.

Rhitu Chatterjee 05:32

So anyway, we're—we are in 2025, hopefully, and I think, in a slightly different place, where brain and body, I think, are much more central in people thinking and kind of thought of as together. So thank you. Vik.

Vik Kheterpal 05:45

Hi, Vik Kheterpal, I'm a physician, informaticist with CareEvolution, and we spend a lot of time building a digital dial tone to engage with patients and participants to better capture, I think, their lived experience and deliver a return of information and value back to them, even as they participate in groundbreaking research.

Upali Nanda 06:09

I'm Upali Nanda. I'm the Director of Innovation for HKS, which is a large design firm. I teach at University of Michigan as well, and what I represent here is the link between brain, body and the built environment.

Viviane Poupon 06:23

Hi, everyone. My name is Viviane Poupon, so I'm a neuroscientist trained in Europe and who joined Montreal in Canada 22 years ago, worked at the Montreal Neurological Institute, really looking into new ways of doing science, including open science, and then five years ago, joined Brain Canada Foundation, which is a foundation that really matches together funding from government and from philanthropy for brain and mental health.

Rhitu Chatterjee 06:53

Thank you. So Amir, I want to start with you first, because you're working at—sort of in an area that's one of the most exciting in terms of treatment of mental health conditions, that's psychedelics. And there's tons of clinical trials exploring sort of the benefits of psilocybin for lots of mental health conditions, PTSD, depression, even substance use disorders. Now, tell me a little bit about what you're working at Cybin and what's most promising to you.

Amir Inamdar 07:27

So as you recognize there—there is this new wave, this renaissance in psychedelics, which were once maligned for various reasons that we may not want to get into. But at Cybin, we are working on using that knowledge, that wisdom that has been accumulated over centuries of these substances being out there in traditional spiritual use, and what we're doing is refining them, making them better and really following a regulated pathway to approval of these as medicines which will actually allow these substances, these medicines, powerful medicines, to be prescribed to people who need them most in a very safe and effective manner.

Rhitu Chatterjee 08:16

And what specific conditions are—is your company looking at?

Amir Inamdar 08:21

So right now, we are developing two compounds. One is in the treatment of depression, which is our CYB003 compound, the other—and this has got a FDA breakthrough therapy designation—so we are racing ahead. We demonstrated some amazing data with durability lasting out to a year. And then we've got another program in anxiety that's based off DMT. That's the CYB004 program.

Rhitu Chatterjee 08:50

I have lots of sort of follow-up questions that I want to come back to, in terms of, you know, how do you make these when they're ready, sort of accessible to people in a safe, effective way. But I want to go to Vik next, because you're working with digital tools. And we all know that here, in terms of improving access to mental health care, the pandemic sort of really enabled a huge expansion to access just through telehealth. And now, you know, I'm reporting on sort of AI or apps and AI tools getting evidence based mental health care to people. So at CareEvolution, what are you working on that seems and looks most promising?

Vik Kheterpal 09:41

It's a great question. And I think the title of our session, Innovation at the Intersection of Care and Technology, maybe captures a bit of the spirit behind our perspective. I think I have three sort of pillars to think about. One is that I think we are falling behind the consumer. The consumer is increasingly digitally literate in other aspects of their life, and whether they have some ailment that might be defined as mental health or not, whether we're ordering food, getting an Uber, getting on a plane, we're increasingly digitally literate. And I think whether we're delivering care or we are running trials, we often struggle to keep up with their expectations, to meet them where they are. So this idea of digital being an enabler and enhancing equity that it's actually a bridge to reach those who may not be able to participate in research, those who may not be able to engage fully in purely a brick and mortar traditional system, but they want to have a digital dial tone. That's one theme that is really important in our work, and we define it as—somebody coined the term techquity, to really reframe this idea of digital as a divide, but rather it's a bridge, because we see that in our daily lives. I think the second thing in particular with mental health is—you know, we actually are lacking a definitive biomarker. Yes, so much of the work that's going on here with Milken, with BD^2 is all about doing that work, but oftentimes these are clinical diagnoses. These are lived experiences, and the manner in which we capture them, whether it's wearables, whether it happens to be our own lived experience, to do what the researcher would call an ecological momentary assessment, which is, hey, what's my mood today? What's my stress? Being able to answer those questions quickly gives us control over understanding our own symptomatology, because that's often what we struggle in communicating to the caregiver when we have our periodic assessment. And I think that's—

Rhitu Chatterjee 11:51

That's something that people are already sort of starting to use, right? I remember last year downloading the Calm app, or, you know, what have you, and like people are already using, and—a friend of mine recommended it. She was like, oh, yeah, you know, map your mood and—

Vik Kheterpal 12:06

Exactly, so these digital diaries, right? But to what extent are they incorporated as potentially intermediate or endpoints that we can build research to build evidence? Oftentimes, it is those of us in the private sector that on essentially mission and faith push these out. But I think getting that accepted in—formally in the healthcare system as an intervention, as a potential digital therapeutic, that takes still some foundational science to be done to see what's the correlate of—I use the tool I feel a little bit better, and that's, you know, how do I do causal inference between that, maybe there was a different reason for that. And we're going to talk about whether to get these things paid and how we're going to need causal inferences. We're going to need evidence, and that takes a little bit more systematic way of studying these things.

Rhitu Chatterjee 12:53

So you're talking about giving healthcare researchers and providers access to this as a window to be able to better tell what's going on.

Vik Kheterpal 13:03

Precisely, and then maybe a little bit more than that. That actually, it's not centered around the health-care researcher and provider's perspective, but the consumer or the patient's perspective, to give them some self agency, self efficacy, because they are best positioned to understand their health status at any given moment in time, and digital tools may be an important arrow in the quiver of being able to capture that, particularly with new sensors. If we see that sleep, activity, how much—as we're going to hear more—time we spend in open spaces might be correlated with how well we feel. You can imagine your smartphone, your wearable, your Oura Ring, your Apple Watch being able to track those things. So we think the 'what's in it for me' for the consumer, that they generate data as a by-product of getting something by using such tools, as opposed to wait—waiting for 2, 3, 4, 5 years 'til the research enterprise is able to come back to them. So that's a third pillar for us in a lot of the work we do. And I think we included, had the fortunate opportunity to participate with BD^2 to build a digital dial tone for that cohort, and we're seeing 81 percent of folks who've been offered the tool are already on there. And these are folks that carry a confirmed diagnosis of bipolar disorder, that may be, you know, vacillating between a manic episode and a depressive episode, and 81 percent of them have been able to complete that journey in the last four weeks.

Rhitu Chatterjee 14:40

And just for people who don't know, would you mind just quickly telling us what BD^2 is?

Vik Kheterpal 14:45

It's a really ambitious initiative that has multiple components, including putting together a network of 11 leading health systems that are trying to define the biomarkers and the mechanism of bipolar disorder.

Rhitu Chatterjee 15:03

Thank you. Now, Amir and Vik are thinking about things going on inside the body that cause or help address mental health conditions, but I want to bring up—one of the first stories that I did as a mental health reporter for NPR was on a study that came out, I think, in JAMA Network Open, conducted by an ER physician in Philadelphia that involved doing a randomized, controlled trial with vacant lots in Philadelphia, of which there are many. And what they did was they sort of randomly picked the lots. Some were kept as they are, some were just cleaned out, and some had been cleaned out and then turned into green spaces. And what they found was that the vacant lots that had been turned into green spaces led to more than a 27 percent reduction in symptoms of depression in—among people in those neighborhoods. And so for me, that was eye opening, because I was coming sort of in a naive lens of mental health, being determined just what's happening in your life, within your body, but not thinking so much about what's around me that's affecting my mental health too, and that's something that Upali has spent her career on. Upali tell us about your work in sort of addressing the sort of factors in our environment, in preventing mental health conditions or improving mental well-being.

Upali Nanda 16:35

Absolutely, I'm so grateful for this forum, honestly, because I'm guessing not any—not a lot of people here interact with the built environment. Anyone from the architecture, design or real estate industry? So I'm really grateful for this forum, because I hope walking out of here, everyone gets invested. My friend [inaudible] will say all the time that real estate is one of the biggest investments we make. It's one of the highest asset classes, and so is the human brain. And yet, there is nothing in our development of cities, neighborhoods, building, housing that says you are accountable to health outcomes, right? So we are spending the money we're giving no accountability on environmental features at all. So your example is a great one. I think there is so much evidence now, 71 percent of urban dwellers who stay next to a green space have higher level of incidence of neurological diseases. And I can keep citing the kind of evidence base that is growing around this. But for some bizarre reason, we spend so much time thinking about what goes into our body and so little time thinking about what our body goes into. I mean, look around you. This is not a healthy environment. We are here at the Future of Health—

Rhitu Chatterjee 18:00

All of us gathered together in each other's company—

Upali Nanda 18:03

We do—the social connection is amazing. The food was amazing. There was so much intentionality. But there's no light, no greenery, and really what's making it thrive is that we have social connection and lines of sight to each other. In a lot of places where you see mental health disorders, you see simple things like

that, that you don't have access to nature, you don't have access to good air quality, power, water, you don't have access to being able to see each other, and you don't have access to be able to be with each other. And that's huge. And there are two studies I can cite, one from way back when, which was in a psychiatric holding room with women psychiatric patients, just duration of three or four hours while they were waiting for a diagnostic. And all they changed in the room was artwork, and they put some biophilic art there, and the outcome, and this is in the Journal of Mental Health, one of the things they found was the amount of PRN medication for anxiety and aggression reduced.

Rhitu Chatterjee 19:07

Wow.

Upali Nanda 19:08

When you had biophilic art in the room. The hospital probably saved $30,000 in medication. Right? And it was such a passive intervention, it was the environment around you. And a second, more recent example on the built environment side, is a brand new live-learn neighborhood we did in UC San Diego, where the client, the provost of the college, said, I want this new college to be a learning lab for students to live healthier. She gave that and she studied the outcomes, and even though the students moved in the peak of COVID, that particular project, not only did we see improvement in all the sustainability goals, but there was an 8.2 percent reduction in student reported depression. And that's again, a published study. So it matters. And what is the most powerful thing about it is you're already spending the money. You're spending the capital. Why are we not getting more health returns from the capital that we're spending?

Rhitu Chatterjee 20:13

Thank you. Now I want to go next to Viviane, and I'm wondering, as you're hearing about these potential solutions from your vantage point at Brain Canada as a funder, because you invest in research, but also in integrating the outcomes of that research into care. What are you thinking about ways to ensure that innovative solutions actually get to people and communities that need it the most, and how does Brain Canada really approach that?

Viviane Poupon 20:49

So that's a very important question. And so for us, we're at an interesting venture point. As I said, we really marry priorities of the federal government, because we're federally funded by the government of Canada, and philanthropy. And so we really try to marry both scientific excellence, so really inventing in the full spectrum of science, as you mentioned, from very fundamental research to community oriented programs, but we also bring the spark, I would say, of philanthropy, which is to kind of look at ways to catalyze, make a difference and impact, measure the impact, and also be able to take risks. So we take risks, we bet on to

projects, not just based on the hypothesis, but on the potential of impact. The other thing we do is to invest a lot in—and that's with something Vik said—in infrastructure, because really the long term, the research to lead to impact, to reach the communities, needs to be supported by infrastructure. And a lot of thought in terms of things of like governance, and really also have programs that on the very beginning, you're already thinking at the end user.

Rhitu Chatterjee 22:09

Can you give us an example, a successful example, of something you've—Brain Canada's—invested in?

Viviane Poupon 22:14

So we have so many of them, but actually, I'll just use one example. So we also partner in BD^2, and so that's a wonderful example. I want to give another one. So for—we've found fantastic neuroscience happening in Canada. A lot of them are around technology, computer power, informatics, artificial intelligence. So what we funded with—we—because we like—we work a lot with partners—with a bank, RBC, which is one of the major banks in Canada, is a platform to support youth mental health. But the way we designed it when we let applicants apply was, we wanted to have direct impact on youth and youth being at the table. And so the project that is now a platform that's called the Insight Platform, actually was designed with youth for youth, and it's connecting research hospitals with community based services. We in Canada, we have an integrated youth services in five provinces. They all talk to each other. So these are schools in—they are kids in schools, or kids reaching out to clinical or services that they can have access to for the first time. So we are actually reaching 400 kids right now that are part of that network. So we are reaching—what we're gathering in that platform are all the data that are related to them. They acknowledge and they want this data to be shared and used, but they want it to be used a certain way. So what actually this entire platform is about, is about governance, building trust, using data meaningfully from the research in the hospitals to the community and back and with youth at the center of it. So that's how we really figure things, and how we can bridge, really, once again, research and what's happening in academia with community. Because I always say that science is what brings us knowledge, but it's community that brings it meaning.

Rhitu Chatterjee 24:22

Thank you. Now we can't really talk about mental health, mental health care without again, talking about equitable access, and here in the US, for example—and this is a report that came out a couple of years ago, and I covered it, nearly two thirds of people who need mental health care don't get it, and one of the biggest reasons is lack of affordability. Insurance companies make it incredibly hard to cover—they outright don't cover it. They make it hard for providers to get reimbursed. You have tons of providers who drop out of networks, and it's something Patrick, you've worked on immensely with the Parity Act and at the Kennedy Forum. So as you're thinking about the innovations that our other panelists have talked about, what are you thinking? What's—in terms of just, what do we need to really, sort of move the needle

on that very important bottleneck? And outside of that, have you seen any movement, any progress in the past couple of years?

Patrick Joseph Kennedy 25:41

Well, first of all, this town and everywhere else operates on liability. How to minimize liability? And so the point of the parity law was to say there's liability if you as a payer are not adhering to ensuring that people with brain illnesses get the same care, inpatient in-network, outpatient in-network, inpatient out-of-network, outpatient out-of-network, emergency room benefits and pharmaceutical benefits. We want the same as cancer, cardiovascular disease, diabetes. Period. And you're going to be liable under federal law if you do not adhere to that, and we, the Kennedy Forum, put together the most comprehensive way of enforcing that parity law, not only the federal level, but the state level. And this wasn't done by anybody else, because there's no infrastructure or consumer advocacy to enforce this law. First of all, no one lobbied for this law, and there's no opportunity in our political system to capture the fact this is the biggest special interest group of our country with no political power. I'll just quickly diverge here for a second. My wife ran for Congress several years ago. I should know everyone in mental health. I didn't know where to call to get people to come out and vote for her, support her campaign and volunteer for her. But I could get 100 brick layers the day after tomorrow. I got 5,000 teachers to hold signs for her. I got the Laborers International to donate $500,000 to her campaign. Now, who are you going to listen to if you're a member of Congress? You're going to listen to the people that brought you to the dance. We have the opportunity to deliver people to the dance floor with mental health, but we have no infrastructure to connect them to the changes you're—[background noise]—oops—you're hearing—that got your attention. So that's liability so—but there's another draw here, and that's the carrot and the stick. So parity was the stick, so the Trump administration took that stick away from us. Okay, so we're not going to let you beat up on the insurers anymore. Okay, so okay, well, what are we going to do? How are we going to advance this field? The carrot is with new data, we can show that mental health is the secret sauce to saving dollars in cardiovascular disease, diabetes, cancer, oncology, autism, Alzheimer's. And guess what? We've never tested how much mental health, when integrated in overall healthcare—where the money is—how much we can help deliver in terms of the savings to the bottom line. So we are now positioning the mental health advocacy community to do something that they weren't positioned to do before, because all we were positioned to do was say 'give me mine, because we deserve it. We have a primary diagnosis. You're not treating us the same way.' We have to take that aside and adjust to the new political environment that we're in. So now I'm working with the payers, you know, I was the dart board, you know, on their wall, and now like I'm their best friend. Why? Because at the end of the day, they have a fiduciary responsibility to produce the best results at the lowest cost. Mental health, again, can be that game changer. But the other thing is, this is all about the money. So what I mean by that—it's great to talk about all these innovations, but if we don't find a way to capture the savings from mental health interventions, all this talk is academic and paying for mental health on a year in, year out basis is a default to a problem, because we're never going to invest in the things that we know work, where there's actuarial—Milliman, McKinsey, you name it, all will say you do this intervention, but it's five years after the fact, and it's at a population level, so we can't monetize it, because it's not an individual... that's up for Milken and Milliman and McKinsey—all the M's—and the federal government and its partners to figure out, how do we get the smarty pants people to come in here and tell us? How do we design a new financing mechanism in health care, reinsurance, whatever, to capture the savings in our system of integrating mental health earlier? Because when you

consider over half of these conditions are before age 14, 75 percent before 24 if we're not paying for earlier interventions, we're missing the boat in terms of savings down the line [applause].

Rhitu Chatterjee 30:33

Because by and large, insurance companies are still thinking of these conditions as chronic conditions that once they're paying, they're going to be paying forever.

Patrick Joseph Kennedy 30:42

Well, that's another thing, obviously, with interventional psychiatry, with what you're doing, but the problem you have is you have a cure!

Amir Inamdar 30:51

Yep.

Patrick Joseph Kennedy 30:51

And that's to your point. There's no money in not paying for this over and over and keeping people in the cycle of just paying. So we have to change as advocates what our focus is. And you know, we have to figure out a way—how to reimburse a company like yours when you actually solve the problem, kind of like these genetic solutions, like, what is that worth? How do you amortize over time, all the savings that your intervention and others—neurostimulation, neuromodulation—can have in terms of overall outcomes. How do you quantify that? So we have to come—again, this is all about financing, okay.

Rhitu Chatterjee 31:33

So, yeah, Vik, I was actually going to open it up to all our panelists to react to this and what you think about sort of improving access, and, you know, the right incentives to sort of pay for—for care.

Viviane Poupon 31:46

[Inaudible] one point, which is, I think we absolutely need to put the evidence that is generated within research and within innovation into the policy makers and the decision makers. And I'll give one example where it can really happen. And sometimes it's for serendipity, sometimes it's for design. But you were mentioning TMS, and so, in—we supported a program in British Columbia that showed the evidence base

of the savings for TMS and for depression, that led to a policy change where it was reimbursed and became mandatory in British Columbia, that's one province. It's not—and this—but the same study is not replicated from one province to the next. You need to, in Canada, you need to convince every province to make the shift. So right now, you actually have disparity to access to care, if you're in a province where that evidence was put into action at the policy level, or if you're in a province where it hasn't. So it's really about making not just the evaluation, but making in the right hands, and really having this decision made.

Rhitu Chatterjee 32:58

Vik, you had—

Vik Kheterpal 33:00

I was reminded of a comment made this morning in the dementia, Alzheimer's conversation that—which I thought really captured it well, that what's good for the heart is good for the mind, and therein lies this issue that, yes, once we have a diagnosis, then we have diagnostic—diagnosis specific therapies and potentially long term chronic medications, because we rarely are able to come up with a cure. But that, along with, I think probably your comment around primary prevention comes to mind, and I think there was a lot of conversation this morning about dementia and primary prevention, and it tends to be not as much discussed in mental health, psychiatric disorders, whether we call it bipolar, whether we call it schizophrenia, whether the diagnosis happens to be depression, without the added complexity of bipolar. And the idea there—kind of taking the—you know, the—another analogy mentioned by the speaker was, you know, it's a little bit like trying to give statins to somebody right after they have a heart attack. So a lot of the things that are modifiable risk factors. And a colleague of mine, Dr. Sen, over at University of Michigan, he's been doing this study on interns. Turns out—he's published widely that interns, they graduate from med school, and it's a particularly intense year, and they're a captive audience. And when they started studying this about 11 years ago, the incidence of clinical depression in that population is 5x. 500 percent higher, pre and post. And it's a set of circumstances where you're not getting a lot of sleep, you're highly stressed, you're in a new environment, any number of issues are going on, and yet there may be genetic predisposition of what triggers that. So we have genetic predisposition, some great work going on, but I think in mental health, we probably need to think about primary prevention. We already know from that cohort and other work that if you are able to get reasonable sleep, if you have access to open spaces, that these kinds of things can prevent the onset of the most severe things that are very expensive to then treat. So I think thinking about access, it also lends itself to a much greater access, arrests the development of complex and more and more severe outcomes early on. And of course, our perspective is from a digital perspective. That's the kind of thing folks can do for themselves. So it gives people self agency and control over their outcomes and the progression of their disease. But it goes to the cost side of things. If we keep doing stage four cancer treatment, it's a very expensive thing, and no patient wants to be stage four cancer getting heroic therapy. They want to be caught at stage one or better yet, if I give up smoking and if I have certain other lifestyle things that—you know, cancer has been, you know—compared to 50 years ago, I think our mortality rate is so much less, but about 70 percent of that is prevention. It's things like stopping smoking, et cetera, and like 25 to 30 percent is the massive advances in therapy.

Upali Nanda 36:18

I really appreciate that point. And I sometimes wonder if someone traveled in a time machine and came to our times from 100 years ago, they would be so confused. They'd be like, wait again. We have this population. We need to teach them how to eat, how to breathe, how to walk, how to talk to one another, like, suddenly this digital revolution is reminding me, saying, 'hey, eat well, breathe well, breathe in your box breathing,' right? It's a really interesting time that the fundamentals of what keep us thriving in brain and body have become so divorced from our daily life. And maybe one thing I would throw into the conversation is, most of what we are talking about puts the onus on the individual. That's—the individual is exhausted. So if I have to think about what's good for me, then I have to do it, then I have to reach out, then I have to pay for it. I have to—I can't!

Rhitu Chatterjee 37:14

In a system that impedes you and pushes you back at every stage—

Upali Nanda 37:20

Correct.

Vik Kheterpal 37:20

Because it waits 'til you have symptomatology, right?

Rhitu Chatterjee 37:24

But also, the culture we live in is also just sort of keeping us less well and sick, right?

Upali Nanda 37:30

So again, those environmental components that if—if just in this room, we looked around and said, what are the things we actually have control over today? What are the things that we're already spending on or doing. And I think it's one of those things that—how do we make the brain healthy choice the default choice, that that is just the default choice. It's like what I do at the checkout—point in a grocery store, there's a lot of intentionality that goes into all point-of-decision design interventions. Retail has it. Nike knows what to do. Lululemon knows what to do. Like, wellness I'll pay for, but wellness being the default decision, that is an environmental factor that we're just leaving on the table, that I really think we need to

start from. That's the only choice. What does that look like? What is innovation at this intersection where my default choice is brain healthy?

Amir Inamdar 38:28

I was just going to say we don't really think of primary prevention in mental health. And—reminded me many years ago, thinking about the definition of health that was put out by the WHO. And that is not merely the absence of disease, right? It includes mental health as a fundamental part of somebody being healthy, and we don't really think of mental health and primary prevention in that way. And there are reasons, and there are barriers to the access or to making sure that mental health is thought of as—in terms of early intervention, as others have alluded to earlier. So the mindset needs to change, and the barriers to the access of that care also need to change. If we cannot solve mental health, then it cannot become a priority for us. It cannot be primary prevention.

Rhitu Chatterjee 39:26

So all this talk of prevention makes me think back to the past—sort of my beat of the past couple of years, and every time I've to had to cover sort of a USPSTF recommendation on screenings, right, for perinatal depression, for anxiety or depression in kids or risk of suicide. And I've seen those recommendations go out and just comparing to just 10 years ago, where I wasn't covering mental health, but in doing journalism, I feel like at least it's come to—it's been covered more by the media as well. So it's in sort of people's—people are more aware. Health-care systems are thinking more about screening. And yet I can't help—and this goes to one of the questions that just have come through for Patrick—about how the narrative is evolving with the new federal landscape, and that also makes me think of all the prevention programs that have been invested in in the past several years. Because, you know, sitting here in DC as a national health correspondent covering sort of the historic federal investment at least in the past couple of—past four years in mental health, a lot of that towards prevention programs. Yeah, I'm curious, Patrick, what you're thinking of—you've addressed it a little bit earlier. But how are you thinking of given, sort of the, you know that the main mental health agency that funded a lot of programs is now down to less than half—

Patrick Joseph Kennedy 41:06

Just get it out. Just because your cousin's got all the money [inaudible]. Tell me [laughter]—

Patrick Joseph Kennedy 41:08

That was the real question [laughter]! So what I believe is, we're never going to treat our way around—out of these problems. We have to have a primary prevention strategy, and it begins with doing—not doing things we know are making us significantly unhealthy, and adding a commercialization of marijuana, which my party is ready to sign, seal and deliver, banking for commercial cannabis as a new Big Tobacco is

shocking to me, because my dad led the effort with Henry Waxman to hold tobacco companies accountable. All they've done is move all their investments over to commercialized cannabis, which will be devastating, because you've got these young people who are already anxious because of social media—by the way, another addiction for-profit industry in technology. And now how are they going to medicate? Well, now they can go down the street and get some gummy bears and vape it, and all the rest. So, like we are—got our head in the sand, we do not have enough people to treat the existing crisis. And what are we doing? We're pouring gasoline on that fire by—so it shows, if you think about mental illness, what's the single characteristic? Lack of insight. Well, we as a country have lack of insight into the fact that we have within our control a lot of opportunity to reduce the comorbidities of mental illness if we do not continue to push things that are going to be detrimental. So I think the administration needs those examples of what works so that we can invest upstream. Think about it. MAHA is about addressing ingredients in our food, you know, what about the ingredients in our information technology? Like I could see a correlation between a MAHA on, you know, bad ingredients that are unhealthy and toxic in our meals and our food, to the kind of ingredients that are—we're consuming in our brains, that are information because of the algorithms are selling, you know, gaming and sports betting, which is going to, in my view—from the folks that I've spoken to who are pretty knowledgeable in this space, the highest correlation of suicide is going to be gambling addiction. Now the fact that—and I've tried to get the administration to—NIDA to push money into this, Nora Volkow said, no, it's not a mandate. I tried to call up to the Mental Health Caucus on the Hill. Sorry, we're not, you know—so, and when we do a launch of supporting an agenda the administration could get behind. I invited Senator Blumenthal, who is leading the effort, to try to bring some oversight on sports betting. And—in any event, my point is we can organize ourselves to pay for what works, and at the end of the day, this is nonpartisan, because to the earlier point, if the data shows this reduces all of these costs—by the way, across society, which—we don't really capture those savings, because we've never monitored the savings on the criminal justice side. We have reimbursement codes that could dramatically reduce the cost of our criminal justice system. Why isn't that factored into the economic scoring of what CMS is going to pay for? And who the hell is advising the administration to do this stuff? Nobody, nobody. So anyway, my point is, there's a lot that we can do here. And yes, I think our community is in its amygdala right now, fight or flight, given the Big Beautiful Bill and the cuts to Medicaid, but we have to find a way to take what we have to offer and—with especially this data and these digital biomarkers, which are game changers for people like me, who, if I were coming out of rehab, which I first did at 17, could say, Patrick, we can reduce your chance of readmission by this much. Here's your safe driver. You're—you know, whether Progressive or Geico, you agree to have these indicators, these sensors like you say, so that we can track your improvement, or you know your challenges, and immediately get you the resources you need when you need them. Has anyone ever bundled all those biomarkers in a technology? No, they haven't. Do we need to? Yes. Can this administration begin to push that kind of thing? Yes, so we have to work with them. We have three and a half more years, and a lot's going to happen in those three and a half years. So we have to not only just fight what we don't agree with, but we have to work with them on things that we can work together on.

Rhitu Chatterjee 41:13

That was not my intent! [Laughter]

Viviane Poupon 46:27

Thank you. Viviane, I'm curious about how Brain Canada is—you know, are there specific prevention projects that you have supported, that you want to highlight that have been particularly helpful?

Viviane Poupon 46:41

So, yeah, of course, we support prevention programs. We—Brain Canada—so we also support dementia research. So a lot of prevention programs that are happening in Canada that we supported in the past, I want to rebounce on this screens and social media, because it's something where we had a lot of conversation in our organization, and we engage youth on that, and we also engage researchers. And because initially it was okay, do we need to regulate—and we mix screen and social media, and they are two different things. So do we need to regulate screens? And there was banning of—in schools in certain jurisdictions, of banning phones and social media and all of that, and it kind of led to controversy. So everybody wanted the researcher to speak about, and the research community didn't want to commit, because they're like, it's gray. It's not like we have the answer. We still, first of all, need longitudinal cohorts and long term evidence to really see what's damaging and what is not damaging to the brain. We have things telling us, we need to consider it and be very, very wary of what's happening, but we can't come to conclusions that it is harmful. And then we had the youth telling us, well, there's also good things coming up from screens. And so it really shifted for us the conversation, not so much about the use of screen, but how screen is used, and where the positive and the negative can happen, and really have this balanced approach of harm and benefits in prevention. So really, what we're thinking about is really [inaudible] the young, because they're the one who really have lived and don't know a world without screen or social media [inaudible] them. The other element that stemmed from this conversation between users and researchers and policy makers was the notion of accountability. And the problem with social media is that they are not accountable for the product they put on the market, and there's—and they have evidence that it's harmful, and yet they can keep going. So this is more of a regulation of some aspects, and if there was a way to once again gather evidence, it's a small regulatory path, as we have for medication, for all the devices and all the applications and—AI is another thing I don't even want to touch into. But like a way to see if it's harming our cognitive health, if it's harming our mental health or not, they are not complicated to assess. And so if it could be built into a mechanism where you are liable—you know at the end you're liable because you pushed to market something that you knew. And, or—if there's way to prevent something or to redesign accordingly. These are very easy things to do. They are not impossible.

Viviane Poupon 49:11

Yeah, that's part of the mindset is, how can we position? How can we make happen? And it's also the voice that we're really trying to make our government aware, and we're bringing researchers and youth and policy makers together so that they hear that voice, and they consider, even in the implementation of policies, to have this tool and also to really target what's harmful and not remove the benefits, because they're tangible. They're real. You know, youth can be helped into even suicidal thoughts or feeling less lonely through social media—they build communities that are not always harmful. They can actually help them, especially the more diverse, you know, LGBTQ community. So there's also benefits.

Rhitu Chatterjee 49:11

And is there interest in Canada to—

Rhitu Chatterjee 50:12

So keeping track of time, I do want to follow up with Amir about sort of issues of access, right? At this stage, when you're developing a new psychedelic drug, which has, you know, also plenty of risks. How do you—talking about getting it to people who may not—you know, half of this country lives in sort of a mental health care access—like there's no access to a mental health-care provider. How are you thinking of at this stage in getting it to the hands of people safely?

Amir Inamdar 50:55

Yeah.

Patrick Joseph Kennedy 50:56

Can I just intervene?

Rhitu Chatterjee 50:57

Yeah.

Patrick Joseph Kennedy 50:58

He's going through the process. If we don't get opportunities that go through FDA approval, we're going to commercialize this stuff before it's had a chance to be vetted for safety—

Rhitu Chatterjee 51:10

Which is already happening for digital, like AI and social media—

Patrick Joseph Kennedy 51:13

Which is why we need to tell the administration, okay, you're liking the potential benefits of these? Let's do it in a safe and efficacious way.

Rhitu Chatterjee 51:21

It's interesting, tomorrow, the FDA is having an advisory committee meeting on AI and digital mental health. So seems like there is some interest—

Amir Inamdar 51:33

This is somewhat related to this one question that came in from Jeff Winton, founder and chairman of Rural Minds. He says: "My organization, Rural Minds, is the only national nonprofit patient organization focused on mental health equity for the 46 million rural Americans. Access to mental health care in rural areas is getting worse, not better. What are any of you doing to help address this underserved segment of our country?"

Amir Inamdar 51:33

Back to your question, then. Yes, there are risks. There is risk with drinking coffee, right? If you drink too much coffee, you can die. But in the grand scheme of things, with drugs like psychedelics, the risks are more or less known, and they are manageable, and we know how to manage them. These are not medicines that people are going to take at home. They need the support. And earlier, Upali mentioned the influence of environment—there's a difference between tripping in a nightclub and tripping in a clinical setting, where you have had chances—had the chance to be fully prepared for the experience and have the support you need during the experience. A good analogy I often use is you get a hip replacement. You just don't go cold into an operating theater and get a hip replacement. There's a period that you go through education beforehand, what to expect, what to do if something goes wrong. There's a post period as well. There's physical therapy. And this is exactly, I think, the paradigm that we will eventually need to implement for this class of drugs. We're moving from what happened for arthritis and immunological agents decades ago, where we moved to an interventional care model, and this will become an interventional psychiatry model. It's already out there. It's there with things like Spravato, esketamine, there are challenges and the challenges with reimbursement. There are bottlenecks with reimbursements, and all of the paperwork that goes through for that and—some interesting work we did with some of our colleagues here in the room as well. It appears that those 100,000-odd patients that are currently getting esketamine in a year, they are located, or they get this care delivered in the top decile of the clinics. And why is that? The smaller clinics don't want to do it. There's a lot of paperwork, there's a lot of admin work, and they would much rather focus on something else than do all of that, so we have to adapt the system to be able to deliver it and make the access easier for patients.

Amir Inamdar 52:43

So I live in Ann Arbor, Michigan, as do you, which has a really premier, we think, health system and another one next door. The wait for a confirmed diagnosis of depression for a mental health visit at Michigan Medicine is six and a half months right now.

Vik Kheterpal 54:32

And that's probably better than in lots of other parts of the country.

Vik Kheterpal 54:39

So I don't think it's just a rural America problem. I think it's a global problem, and I don't think it's going to get better. We're not going to be able to produce enough mental health professionals to be able to do this. So we got—you know—kind of hung up on the prevention side, because I think we have to right size the therapy, the diagnostics, the prevention through the life cycle of this particular epidemic. I think we need to right size it, to focus more on the left side of this, on the prevention side of things, and some examples of that, why it's so promising is—in those six months, we ended up doing a study, again, with Dr. Sen. He led the initiative. They needed to do something. So you've mentioned some things, some mental health apps that exist for calming, for cognitive behavioral therapy. And so while they waited—it's about 2,500 patients—in those six months, they were invited to use the digital app. And either they got simple nudges to say, track your mood score once a day, track your sleep, your nutrition and how you're feeling each day, at your discretion. And here's some resources, because we run a depression center, and there are some resources for that. The level of improvement in the six month wait while they waited for their first appointment with a mental health professional was greater in that six months than [inaudible] came after they saw the first one. It kept improving. So the point here is not either or. These are both and strategies. Some of these digital strategies, they scale relatively infinitely to the population. They don't require physical presence with folks. And it's not a one or the other, again, it's a suite of things that each of us might be able to use. So we often also tend to think about, you know, is that a person who's going to use digital and technology, and is that person going to not use it? I don't think anybody's like that, actually. Very rarely is that the case. We each—the analogy is, we each might order Uber Eats, and we each also eat out at restaurants. Depends on our mood and our needs and the setting. And I think thinking of technology as part of that armamentarium in a hybrid way might be the way to right size and do precision care for those who need the really high touch stuff, and those who are able to do something at their moment in their journey at a different modality.

Upali Nanda 57:08

That's such a great point, too. And kudos to having this network, because one of the things we haven't touched on is the role of culture, and how much in rural America you can talk about mental health. There's certain cultures, immigrant cultures, that don't talk about—so even the recognition of this is mental health, the pivoting to talking about brain health, to talking about the language that people understand that feels

accessible. It's much easier to say, I think I need a friend. Like you can articulate that easier. So there's something about the public awareness that we haven't touched on that could drive so much of this. The public needs to know that where they live, where they work, what they eat, what they do, who they vote for, everything matters, and it goes all the way to their mental health and brain health, and that's an umbrella in which all their health lives, but if it comes from the average Joe, it's such a different message. And I think there is an—the risk of elitism in how we are addressing this that we really need to—and that's why I would love to take the rural America challenge is, how do we change the conversation where you don't even know you're talking about mental health, that's just health.

Patrick Joseph Kennedy 58:23

We've got a culture change in health care. Because we don't allow oncologists to treat for the depression, anxiety of their patients. We don't really enhance collaborative care codes, which really enhance the expertise of psychiatrists to a greater effect, because it allows them to spread it out amongst the primary care population. We have not educated pastors, rabbis, imams about how to speak about mental health in their own communities. So, you know, I just was able to talk to my church, Catholic church in New Jersey, led by a fellow who's in recovery, cardinal who's in recovery. And we got to talking about this seminary in the Vatican, educating new priests and clergy about how to better address the mental health needs of their congregations. And just from personal experience, I see it in my congregation. I get asked all the time for help by my fellow parishioners, and the clergy who are running the church, they don't have the language, know-how or resources. We have donuts every third Sunday for this and that, but we don't have any use of the church hall to connect people to community, federally qualified health centers. Like, why aren't we trying to connect these gaps when a lot of—

Rhitu Chatterjee 58:23

I know that there's some work going on there. I know at least one researcher at Harvard who worked in India on using the community health care workers and training them in actually doing depression care. And I think there's some early efforts to replicate that. And this is also reminding me of another—a story that a colleague brought in, maybe from Zimbabwe. I may be misremembering the country, but it's called a friendship bench, where you train people in the community, in communities where talking about mental health isn't really—I mean, there's a lot of stigma, but naming it the friendship bench, and having, you know, minimally trained people to actually deliver some care at this bench in a park takes away the stigma and sort of—novel ways of improving access.

Patrick Joseph Kennedy 59:11

But we need to pay for group therapy, not just individual—

Rhitu Chatterjee 59:19

And peer support!

Patrick Joseph Kennedy 1:00:42

That would be like a big change—and peer support, but if you want collaborative care to work in rural America, you need to be able to bring the scale of reimbursement to pay for those things that work.

Rhitu Chatterjee 1:00:56

So one last question, since we're almost out of time, and I'll send this to Upali, there's a specific question for you, if you can take it quickly. What states or communities are doing a good job leveraging the built environment to improve mental health?

Upali Nanda 1:01:09

New York.

Rhitu Chatterjee 1:01:13

And what are they doing? [laughter] What are they doing successfully?

Upali Nanda 1:01:17

So they actually have a design trust for place, so there is a government funded initiative around design. They're taking on the upcoming water shortage, and we talk about AI, but the data centers are going to suck our environmental resources. The environmental resources will come from the communities, the communities have no idea about what is the long term effect of some of this. So New York has these really interesting initiatives in place. I think if you look at Blue Zones in general, and you look at cities that—where people have lived to 100 and beyond, you'll see some examples of how you are using the socio-cultural infrastructure, the built environment and the social environment infrastructure to promote health, and that's where people are living longer. And wealth span is bigger than the health span. And I think that's that's really encouraging to see. These are local problems. We can have global strategies, but they have to be addressed locally and contextually, and environment is a big part of that.

Rhitu Chatterjee 1:02:22

Well that's a beautiful and hopeful and positive note to end on. Thank you all so much for this great conversation.

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