SHSMD Webinar

From @Home to Care Anywhere

Intentional Strategies and Market Opportunities

Tom Bradach: So welcome everyone to the SHSMD Webinar "From @Home Care to Anywhere: Intentional New Strategies and New Market Opportunities." SHSMD would like to extend a sincere thank you to Accenture for sponsoring today's webinar.

Before we begin I'd like to cover a few housekeeping items. First this webinar is now being recorded and it's broadcasted in listen only mode. We welcome your comments and questions throughout the presentation. Click the Q&A icon in the lower right hand side of your screen to enter your questions or comments. There's alotted time at the end for Q&A. If you prefer to use the chat, please select all panelists to direct your questions to the speakers.

It's now my pleasure to introduce the moderator of today's panel. Greg Smith is Senior Manager and Virtual Lead at Accenture. Greg has more than 25 years creating value across provider, payer and life science companies. He currently leads the telemedicine and virtual health offering for Accenture's health practice. He's provided telemedicine direction to a variety of providers, payers and life science companies as well as to the Veterans Administration, State Hospital Associations and departments of health, and the office

of real health policy and other federal agencies. Greg, thank you so much for joining us. The floor is now yours.

Greg Smith: Fantastic! Thank you very much, Tom and I appreciate it. And for everybody who's participating today, thank you very much.

I think we have a fun conversation we want to have with you for about the next 50 minutes. You're gonna learn very quickly. Greg has little to do with this, and the other experts that are on this slide are the ones who are really going to contribute the vast majority.

Just as a quick sort of overview, here's what we want to do on the right hand side. We have an opportunity today to speak a little bit about what we think are good strategies in good market opportunities in the @home space, hospital @home, stuff @home, care management @home and then we want to sort of take a step back from that and say "Well, okay, are there things there that might very well limit what you might be able to do at home and are there other strategies or other market opportunities that exist to then go care anywhere?"

So we hope we're going to take you on a little bit of journey that's going to talk about @Home a little bit about health equity, and at the same time, sort of finish with this broader perspective about Care Anywhere.

So there are really three main goals for today. Goal number one is to clearly understand as best we possibly can the @Home concept. Mike is here today to talk very much about what Mayo thinks about from a hospital at home perspective. Rajya's here from Microsoft to think about the care management opportunities that exist in the @Home space. And Darryl is here to help us sort of wrap all of this together in terms of where the market's going, how do we sort of bring a product mindset and how can we sort of shape that in each one of the cases?

So we're going to start with @Home. We're going to bring in this interesting concept of health equity. Recognize that health equity is an important consideration, but then how you might be able to address health equity in other alternative modes of delivering exactly the same kind of services. Kind of a Care Anywhere kind of strategy.

Now, rather than introduce each one of these individuals as we go along, I'm going to ask them to introduce themselves as they begin to sort of present their main thing. So those are the goals. The other thing I want you to do, feel free to enter in some chat comments. We're all going to be watching those and we may very well answer them directly or answer them in the chat behind the scenes.

Now, let me just sort of set the stage before I hand over to Mike here in just a second. The important thing about the @Home, especially hospital @Home, is it was how can we better leverage the brick-and-mortar beds such that

we focus on those individuals, which are the highest acuities, are the most unstable, but still be able to care for others and at the same time to be able to better fit that acute care to the patients that are there and create a scaling opportunity over time. And so one of the exciting things and Mike, I'm gonna ask you first of all remember to introduce yourself give us a little bit about your background. And then I'd like you to talk to us about the Mayo's program around hospital @Home. If you would please.

Michael Maniaci: Sure, thank you Greg. I'm Mike Maniaci. I'm an internal medicine doctor, a hospitalist that practice exclusively in the hospital for the last 15 years at Mayo Clinic at the Florida campus. I'm the Medical Director of the physical Florida hospital. I'm also the director for the entire Mayo enterprise for our hospital @Home program, which we call Advanced Care @Home.

Hospital @Home is not a new concept. Doctors visiting homes with doctor bags have been around for 100 years. The newer efforts in treating people in the home setting had been around for 20 years. So, why is there excitement about it now, independent of what we've seen with the Covid pandemic? And really, that's because we've entered a new 2.0 version of hospital @Home. The old version was doctors going around the houses visiting people, making house calls, taking a nurse from a hospital, putting them at a bedside in a patient's home and hospitals sending resources to that home in order to treat that patient. Doable, but not scalable and had many limitations.

One, a physician traveling around town could only see so many patients, a handful at most. Second, a hospital if they gave away their nursing staff, physical therapy

staff to a home, who's left in the hospital, take care of those patients? And then finally a hospital would drain its resources trying to do this in a home setting.

The newer version of hospital @Home integrates virtual technology. So we keep the highest cost resources centralized, and then uses that connection in order to deliver care in the home. Not just by the hospitals resources, but by putting together a vendor mediated supply chain so that the community kind of comes together and vendors deliver things to the home, as opposed to one person doing it. Much like, you see, Amazon, Walmart, and other big companies do today.

The next slides are going to show you how this process actually works. So, first of all we start with a medical institution wherever it may be, and the patient in their home, as opposed to the hospital. First of all, we have to monitor that patient so there's a whole package of home technology that goes into the home setting. That consists of a virtual technology to integrate with the patient to communicate with them as well as devices that collect information and give it back to us so that we know vital signs, how they're doing and redundancies in that backup.

Next, there's a software platform. We have to get all this data from the home and deliver it to healthcare professionals that resides at the institution. And we have to have to make that connection to the patients so that we know what's going on. And that has to be in real time. Not looking in the past 3 or 4 hours. When you're taking care of hospital patients, you have to know what's going on minute by minute.

Third thing we have is a command center. This is where all the information is processed and if you look at a command

center, like at Mayo Clinic, it has doctors, it has nurses, it has physical therapists, it has case managers. It looks like a hospital ward. But the only thing that's missing is the patients. They're at home. In the command center that's the centralized brain of what's going on. They come up with the care plans. They decide what to institute on that hospital level patient in their home setting.

The final piece is the supplier network. How do you deliver that care to the home setting? We have to build all the resources that we use in a physical hospital. We have to build that in the community around the patient, put that into a package and deliver that to the patient so that the command center plan can be implemented wherever the patient may reside.

So now we have four processes over three kind of destinations. We have a command center with software. We have a supplier network delivering care. And we have the patient at home with the technology. What we've learned is that the supplier network has to be around the patient. I'm in Jacksonville, Florida. I can't send care to Macon, Georgia with my paramedics here. It takes 6 hours to get there. I can't do that. I have to build a supplier network around the patient in order to deliver that care very quickly. But my command center, which is here in Florida, has an unlimited space to that supplier network. Meaning here in Florida, I can see patients anywhere and your command center could do the same. That technological and virtual care can be deemed anywhere from that command center. So, as long as the supply chain is there, your central resources are looking around that patient, your central brain of medical care can be located anywhere. I'll show you how this works with Mayo Clinic in the next slide.

In Jacksonville, Florida, as I mentioned where I practice. That is where Mayo Clinic's Florida command center resides, but this command center not only sees patients in Jacksonville, Florida virtually. We also take care of patients in Eau Claire, Wisconsin, and in the Minnesota area as well as in Phoenix, Arizona. So, three different time zones. Threee different sets of patients in different areas. One physician, one command center, overseeing that care and all and theoretically, I could take care of patients across the United States and in other countries all from this command center all in one day.

Greg Smith: So, then Mike, let me ask you a quick question before you jump. So what what is the acuity of the patients? What kinds of things do you move into the home?

Michael Maniaci: So these are hospital level patients. These would would require hospital level say. So, this is heart failure exacerbation, pneumonia, post surgical patients, people with advanced infections that don't need ICU care. We don't want you know somebody who's that ill that they need a ventilator something else or unstable. So they have to be clinically stable, but they have to have like high acuity care. These are not observation patients. This is not glorified home health care. This is true in patient level care and a clinically stable patient that I can take care of in any setting.

If you think of the hospital setting really, how much of my time is spent at the patient? Fifteen, twenty minutes a day a nurse going in and out paying some fluids giving some medications. There's a lot of lag time there and a lot of care that doesn't actually have to take place in a physical building. It can be done at home. And those are exactly the patients we do this with.

Greg Smith: Okay, and one other question I have, and I think this one sort of gets to it down in the lower left hand corner. What have been some of the benefits that you've seen?

Michael Maniaci: Yeah so besides patient satisfaction which is higher than our physical hospital because people love being in the home setting, it's really ownership of patients better. That patient becomes mine. People ask "Is there any loss with a virtual connection as opposed to me being there at the bedside physically?" You think there would be, but in fact I get to see that patient in their home, in their favorite chair, with their family, with their dog, with their food and beverage. I'm able to individualize that care plan just for them and actually ends up being better care so with that there have been multiple health outcomes that have come that show a better quality of care, better safety, reduced readmissions the Mayo Clinic.

This set of patients, we've had 50 to 65% reduction of readmission rate into the hospital as we own them over time. Plus there's no rush to get them out of the hospital. So, when they're ready for discharge, I can slowly hand that off to their community providers and other specialists to make sure they get the after care they need. And that really makes for less escalations to an ED facility or something where you can use resources poorly. And if they need help, I can just deliver it in the home right there. So it's really been a vast system. Our patients have really enjoyed that.

Greg Smith: And where are you going to go next with your program?

Michael Maniaci: Sure, so we're going to go next throughout the whole Mayo Clinic health system. So, there's 9 to 10 hospitals throughout all of the Midwest where Mayo Clinic's interacting with. Then we look at the Mayo Clinic care network, which is multiple hospitals across the United States, which we can partner with. And then Mayo sites in Abu Dhabi, London, across the world, we're looking at all these sites to expand the Mayo platform, and this type of platform is not just Mayo Clinic. This is looking at, you know, multiple institutions throughout the country, really putting this together and expanding this throughout the world.

Greg Smith: And so, if I were to ask you to, sort of, take a step back and say, "What were the two successes that you would communicate out to anybody who's contemplating this?" What do you think those successes would be?

Michael Maniaci: Sure, the largest successes it can be done. So putting together a virtual command center, patient related care and a virtual setting with, in home supplier directed resources is possible, and it is scalable and we're able to expand our reach with that. Next, is we're able to keep the quality, safety, experience and costs all within margin and that's when I started this, I said, "Safe, happy, affordable." Those are my big three things. It had to be high quality in safety, patients had to be happy with it and liked it more than the hospital itself and the same thing with the staff, the staff had to enjoy it as well and it had the affordable. This had the cost less than the actual brick-and-mortar hospital and we're seeing those outcomes.

Greg Smith: And so there's a question in the chat about the one in staffing model and so again, Mike, this is all for me, this is all around. We take a certain portion of our staff, and they are virtually accessible. We're bringing them into the home and that kind of, but a little bit more in terms of your perception of that virtual staffing model.

Michael Maniaci: Sure. So I'm a hospitalist in a normal brick-and-mortar hospital. I see 15-18 patients a day. With this hospital @Home program, I'm seeing the same amount of acute patients through the program as well as supervising up to 20 or 30 restored of post acute care patients I can give advice on as well.

So I'm able to stretch myself out to see a lot of different patients. Because again, I'm not running all over the place in the physical hospital. The same with our nursing ratios, which is the biggest concern. I think this is a big thing, because this will be used, not only hospital @Home, but a model of this can be used in physical hospital. Usual physical hospital has a nursing ratio of one nurse to 4 or 5 patients on the floor. That's because they're very busy seeing patients, charting many different things, delivering medications and such. Because our bedside nurses are virtual in this program, we have a 6 to 8 patients per one nurse ratio for the sickest patients and then when you move to that post acute restorative care patients, that ratio increases the 1 to 10, 1 to 12 and with pure, real patient monitoring right now we're doing 50 patients to one nurse who can just watch an AI run remote patient monitoring of the lowest acuity patients. So you really get to stretch your resources out and and follow patients closely with that.

Greg Smith: Fantastic. Thanks Mike. And so, Darryll, I'm going to bring you in now. And first of all Darryl, don't forget to give a little bit of an introduction as to who you are, but I want you to sort of think of what we've, how we're thinking about this

hospital @Home and where we see the market going? And to some extent, we had a recent conversation with AHA, what have we sort of shared with them about where we think the market's going here?

Darryl Gibbings-Isaac: Yeah, absolutely. Thanks, Greg. So very briefly, I'm Darryl Gibbings-Isaac. I'm a physician. My background, worked as a hospitalist in the NHS in England. I'm currently a Principal Director in Accenture's Health Strategy Practice and lead many of our clinical innovation efforts.

I guess thinking, first, around that question around the AHA meeting, I think the first thing to say is that hospital @Home, which is a really important topic for AHA members, as we actually covered really broad spectrum of areas that I'll call out 3 or 4 areas, which bubbled up in the discussion.

I think the first is around the value drivers and economic sustainability within those hospital @Home models. A lot of questions around it. We've discussed numerous value drivers, not exhaustive, but, including readmission prevention and obviously, we just heard about the importance of that from Mayo. Another was around waste reduction from limiting over investigation for example. Especially as you're a distance from the central site, a reduction in length of stay through limiting hospital acquired infections.

Obviously, if you're not in the hospital, it's hard to capture infections, which live there and reduction in capital costs of the building lead to the inpatient stay. They'll call out that given most of the capital costs are effectively prepaid in hostile environment. Realizing value here really requires that the hospital is able to

effectively fill the available bed with another appropriate case. So, capacity needs to be a consideration there.

And then the final value driver I'll touch on here is that reduction in labor costs through one, ensuring the skills mix reflects the top of the license and then second, which we just touched on previously was that one to many relationship use for virtual care where possible and we just heard about that expansion of nursing ratios even going up to 50 to 1 for low acuity patients.

I think the importance here is that these value drivers emphasized how enhancing the care model to optimize jobs to be done and who does them as well as how technology is used to enable that is really quite critical to unlocking that value. But also how the payment contracts need to reflect the value capture costs the care continuum here.

I think the second area that we discussed here was around health equity and social determinants of health. We discussed the need to ensure that models are in place, which don't amplify the existing health equity issues, for example, in areas with critical access hospitals, which often cannot support a hospital @Home program. Which highlights how important it is to look at broader networks from providing carrier distance. We also touched on how it's best to take the opportunity of being inside the home to enhance the carefully optimizing social determinants of health. Like what can you tell from the fridge, smoke detectors, the medicine cabinet, et cetera?

I'd say the the third point was around incentives and adoption. Really the narrative going beyond profits, splitting between different health factors, as we

often talk about, to really anchored around return to value to society. It was known that the cost structure optimization can have diminishing returns for some of those actors such as payers. And so there was a push to look for other unifying constructs such as patient experience when incentivizing value capture. Cultural barriers to adoption, and also work consideration, particularly in the medical community. That's something that we need to navigate too.

I think a fourth piece, I'll just touch on very finally here is really solving some of the skills gap that's needed to deliver some of these new models effectively. For example, staff you're able to both set up the equipment and ask some of the clinical questions at that point of delivery. For example, EMTs trained to set up the gear. Back to you, Greg.

Greg Smith: I think that's fantastic. And I was kind of watching Mike's head as you were talking, and he was shaking his head often. So, and again to the audience, here's what we want to do. So hospital @Home, and I'm going to watch Mike, I'm going to watch your reaction and Darryl's. Hospital @Home, I think, has begun to prove itself out both in terms of yes, it's an appropriate care model and second of all, it is creating the kinds of outcomes economically and from a patient safety, patient acceptance standpoint that we expected. So, it's something that people should clearly be looking towards. Is that fair? Mike, you agree with that?

Michael Maniaci: Absolutely. I mean, it's. Yeah, I will say, absolutely not even perseverate about it.

Greg Smith: That's fantastic. So here's what we want to do. So, let's take this

@Home concept and I'm going to come to Rajya now and I'd say Rajya talk to us a little bit about how Microsoft is thinking about this condition management @Home. And then we'll sort of begin to generalize about the @Home approach as we go along. But Rajya don't forget to introduce yourself along the way.

Rajya Bhaiya: Thank you Greg. So, Rajya Bhaiya. I'm the Director of My Tech at Microsoft, and the health cloud life sciences team. So spending a lot of time on the PHI data specifically, and the IoT devices.

So the way Microsoft's thinking about it is, you know, what's the big tech play in all of this? So, like, everyone has a place in the world. So, the big tech place in all of this is actually being able to provide a secure data platform that can bring all the data from the different devices and being able to cross correlate a lot of that data. And you know, give the ability for clinicians to actually have you know, the data over time.

So specifically what we're looking at is, you know, at least, from our vantage point is right now, healthcare is episodic care, and we want to convert the episodic care into trends of care. So, you know, with a lot of the IoT integrations, the wearable integration, the precision device integration, we are actually, you know, wanting to make sure that the data's available to view the trends of the patients specifically.

And then the way we're thinking about it is more around, what are the top chronic conditions that exists so this is a slide from the CMS 2021 and the top conditions that were paid for, you know, by the Medicare system. This is kind of showing the different ranking of it and if you go to the next slide.

You can see that if you look at all of these different condition types, there's about 6 or 7 vitals that actually help, you know, correlate to bring those conditions and manage those conditions. And if you look at the devices that are getting cheaper and cheaper, like, you know, you have the Apple watches, the Google Fit, the Fitbits. So you're about a couple, you know, a sensors away from being able to actually have primary care, you know, done every 5 minutes, if you will through technology. So, that's kind of the harness of what, you know, Microsoft's doing in a lot of these arenas here specifically.

So then the other big thing is, you know, what we're also trying to do is better the world. So, what we've done is we've taken health care, which the Apple's ecosystem, the research care, the fact that in Google Fit, and we've created connectors to FHIR. So, we believe FHIR's the future of healthcare it's early stages, but that's where it's going to go and we've put all those technologies on open source. So you can go to GitHub and actually get all the connectors available. So, that we can better the world here. And then what Apple and Google are also doing is connecting into different devices as well. So, yes, the one touch to matrix and other devices also being connected into those ecosystems. So, where we are seeing a big uptick is specifically around blood glucose, so being able to actually measure the blood glucose at home, and then the doctor doesn't really have access to that data. So, now, with actually having this integration, the doctor can view that within the Epic system, or the Cerner system directly within their charts as well. So, now it's bringing a lot of data to the doctors closer to be able to provide the type of care that Mayo was talking about.

Greg Smith: And so Rajya does this require someone to be in a home setting, in a fixed kind of setting to be able to do this or is the expectation that this thing gets to be even more mobile, more expansive than just at home?

Rajya Bhaiya: Yeah so we're starting with at home but there's two arenas of what we are looking at is this can be more expensive than home. But the two specific areas we're looking at is, you know, early detection of problems. So that, you know, we can actually keep people healthier longer. Yeah and then the other part of it is the recovery side of it. So, you know, as Mayo was talking about, where you recover faster at home, because you had your preferred setting and so on and so forth. So, now you have the ability to actually monitor the vitals and being able to see that at home. So, those are the primary targets today, but there's absolutely a lot of wellness care and mental health care use cases in the future that can leverage this technology.

Greg Smith: Okay and the capability of the devices, and Mike, you might want to chime in on this too. To what extent do we begin to see clinical capability in these devices that physicians feel comfortable with?

Michael Maniaci: Yeah often we have to test these devices out. From the clinical side nobody trusts anything, even the IT people say "It works" until we see it on a patient and get their old blood pressure our typical way and the new blood pressure through the patch or wearable, but they've been you know many devices have improved and very, very reliable moving forward so but they're always tested before we do it in any patient situation.

Rajya Bhaiya: Yeah, and one of the things that we're doing to kind of help with some

of those things is, we actually, you know, are given the classification of the device with the appropriate ICD-10 codes back to the doctor. So that they can say, "Hey, you know, Dexcom works great in a specific arena versus, you know, the other. They all work in different arenas. So, that the doctor has an opinion on, hey, you know, these devices work better for certain condition type. So, they have the ability to see that at the device level.

Greg Smith: So, it's fantastic. So, Darryl, I'm gonna reach out and grab you again. So, I think in this particular case, and Mike mentioned it and Rajya has spent some time talking about it, it's kind of the remote patient, monitoring condition, management sport, sort of space. So, do you have any thoughts about where you see the market going and, and the direction that that's taking place?

Darryl Gibbings-Isaac: Yeah, sure. So I think there's still a lot of activity happening in the market, but perhaps with a shift of focus on where that level of effort is, and innovation is still happening in the monitoring device level but perhaps a little less around incorporating new biometrics. And more around how to help increase adherence through aggregating existing biometrics in a single device, probably optimizing for convenient form factors, such as slim profile wearables, or medical apparel, et cetera. Seen quite a bit of innovation around that. In that aggregation, there's been some merging across safety, wellness and medical care as reimbursement still remains a challenge at that device level.

So optimizing value remains at the forefront of design choices there. I say the bigger focus though is perhaps on the steps that happened downstream of that data

collection, more in that data aggregation and insight generation piece and finding ways to do this within the provider workflow. And within the system records, as the HR, as Rajya was mentioning, that Microsoft had been pushing on and also providing clinical decision support, which is cost effective and valuable and most and most importantly trusted by the providers on the other side.

I say the bigger level and perhaps, even broader white spaces around appropriate intervention, in a way, which means metrics in becoming increasingly is... Sorry, that's becoming increasingly core focused with much of the exploration around how to use ecosystem partners to really provide that comprehensive solution, which clearly demonstrates value because value is really at the top of the agenda here for pretty much all payers.

Greg Smith: And so I'm going to ask each one of you to sort of tackle a question that Nicole has asked in the chat. But I'm going to add a little bit of piece on it. And Darryl, I'm going to start with you. And what it is the question around, do patients really see benefits from this and are there more tangible cost reductions for patients that if we take the two that we've heard about so far that we can sort of articulate what that is? And then Mike, when it gets to you, I also want you to sort of tackle, where's the cost benefits from a provider perspective at the same time? So, Darryl, initially your thoughts around where patient benefit, patient cost reduction has occurred as a result of these kinds of programs.

Darryl Gibbings-Isaac: Yeah, absolutely. So I think I'll have it starts off. Patient experience is really at the core of a lot of these delivery mechanisms right and then

so the hope is definitely that patients benefit from this, some of the evidence is saying that patients at least in the early phase have benefited and do prefer being treated in the home environment as opposed to in the hostile environment.

I think we did talk about some of those value drivers which do link to patient satisfaction, righ,t and if you're reducing the morbidity period by preventing hospital acquired infections that is obviously an appropriate piece for the patient. If you're reducing the length of stay most patients don't want to stay in hospital longer than they they need to that is also a really important piece. Reducing the travel to and from hospitals for patients as well as their caregivers, families and that is also another kind of important piece here so the home where appropriate is definitely seen as a preferred place for for patients to be from that kind of perspective.

In terms of the cost side of things, that's something which, is probably a lagging indicator, right? As in, I think, as these programs get scaled the cost can then be pushed back into savings for patients, right? You can deliver the service with a lower unit cost and release those savings for for patients. I think it's slightly early in the maturation to be able to tangibly do that today. But that's definitely the path of where things are trying to go.

Greg Smith: Rajya any thoughts around where you've heard from patients, "Here's why I love the concept of being able to deliver this, get care at home and use devices as a way to help enable them?"

Rajya Bhaiya: Yeah. I mean, the biggest places we're hearing is so on the proactive side, you know, the biggest places where we see is the correlation of the data, and

then, you know, suggestive nudges associated with it. So right now there's a lot of devices that, you know, spend a lot of alerts out. By qualitative nudges is what the patients are asking for to say, like, "Hey, you know, didn't sleep well so, you know, suggested do X, Y, Z to actually have a better day or so on and so forth." And you know, if there's a degradation and health, you know, suggested nudges to change the behaviors.

But the biggest place where we are seeing is actually on the post surgery rehab side of it. So, like, you know, if someone had a knee surgery, for example, and their stride length went from 42 inches down to 38 inches. So they're clearly having some discomfort. So, those kinds of things is where devices can actually help with a better precision to saying is extended rehab and extended exercises needed to actually get better faster.

Greg Smith: Fantastic. All right. So, Mike, I'm going to give you the hard one, which is sort of what have you seen from a patient side but at the same time, what does it mean from a provider? Where's their level of enthusiasm and what's driving their enthusiasm to practice in this way?

Michael Maniaci: Sure, well, I think, you know, it comes down to when it comes to the value for the patient, and for the provider and the institution, there's several. There's tangible and intangible. The tangible is the pure black and white costs that we look at. 50% of health care costs in a hospital setting or not related to actually implement a care. It's the cost of building the huge building that costs 500 million dollars.

It's the cost of cleaning the beds, keeping on the lights, utilities all these other things. None of that go... It helps the patient, but

isn't actually health care. So, if we remove those from the equation, if you're treating patients in the home. All of a sudden, there's a large black and white cost benefit it costs more to implement a supply chain, but that is less than the actual cost of these buildings that we're building and what it costs to actually keep them clean open and running. So, there's a black and white cost there with our program 2 years into it. When you compare somebody who is in a bladder infection at home versus a bladder infection at a hospital, we've seen about a 10% reduction in cost. We think over time as we scale, and the technology gets better, we can probably get that up towards 20% and that's comparatively right there.

Then there's this value equation of intangible things, which is what I mentioned before, reduce readmissions, which costs health care millions of dollars a year. Escalations in the home, as opposed to using ED or other acute care resources, better recovery of patients. If they're in their home, they're much more mobile up out of bed, 10 hours a day versus one hour in the hospital. They're using nursing home and skilled nursing less in the recovering faster that saves hospitals down the line. Opening that bed in the hospital for high acuity patient, a cancer patient or patient needs emergency surgery. As opposed to that, that is a value equation and then just, you know, the chance to recover home patients really enjoy that. And patients actually were very accepting of this up front. I wasn't sure if they would take this upfront or something, but 3 out of 4 patients at first offered to accepted this program and that stay consistent throughout the plan. Physicians were wary of first, like, just like the wearables or anything else. They had to see it in action to work. But as as we've seen over a 1000 patients, now in our program, we've seen very good outcomes, very safe

program, very low or morbidity mortality, lower than our physical hospital itself and that's given the confidence to providers to to exemplify this program to their patients and share it with them as an option.

Greg Smith: Fantastic and so one of the things I'm interested in next is, is to sort of say, well, great, we see this @Home happening in hospital @Home, in condition management, remote patient monitoring @Home. We're now starting to see people then put on that thinking cap. Well, what else @Home? So, for example, I know that we've had conversations with people around skilled nursing facilities @Home. So, Mike, and Rajya, I'd like to come to you and sort of say, what else are you guys thinking about that can go @Home? And then, Darryl, I'm going to ask you to sort of wrap up the @Home sort of piece of this in, which is there a way to start sort of thinking about this from kind of a product mindset so that you sort of get involved in identifying all of these opportunities in a structured way? So, Mike, where else are you contemplating the @Home?

Michael Maniaci: Sure, so, on the screen, you all see that there's basic medical conditions of what we've conquered first. I think the two things we're really looking at are what you mentioned versus advanced care. What are we not doing at home that we could do? I think this pertains to chemotherapy, post transplant care, somebody's very high acuity things that take a lot of hospital stay. So we have bone marrow transplant patients, we've done three through our system. Usually you get a bone marrow transplant and then you have to spend 2 to 3 weeks in the hospital recovering your cell counts, getting infusions, labs, blood transfusions and such. But usually, that care is very streamlined and protocolized. Anything that's

protocolized is really you could put into the system as long as you build a supply chain to deliver that care. You can do that. So we've had transfer bone marrow transplant patients get their transplant immediately move home and then take care of them for 2 to 3 weeks in the home setting. And we have to escalate their care if we need an advanced imaging or something we can bring them back to the hospital do very quickly. Get them back home, but, you know, they stay in the hospital hours to days, as opposed to days to weeks and that's a big impact to their care.

The other thing we're looking as you mentioned is post acute care. What is the way we can longitudinally own patients and take care of them in their recovery phases? A lot you know, there's not enough skilled nursing rehabs. Not enough psychiatric facilities and other places. Behavioral health across the country is very limited, but we can share those resources, those doctor's minds virtually and have places where we can implement this care at home. Then we can tackle some of these problems that we're dealing with today.

Greg Smith: Fantastic. Rajya any other thoughts about where Microsoft thinking @Home?

Rajya Bhaiya: Yeah. So, I mean, along the same lines as Mike here is, like, you know, we'll see is wherever the first start to this journey but then we're seeing, like, in a position devices being rented out to patients and being able to actually extract that same information over time. So, for a lot of the cases that Mike mentioned that's exactly it. And then the other one that we're seeing a very big uptick in is mental health care. So, a lot of the chronic conditions that actually happen, they start with some mental reasons. And, you know, mental

stress related reasons. So, what's the correlation between, you know, people's work habits living habits, which are causing the stresses, which is causing the stress to the body as well so, what's the correlation associated with that? So that's the next pattern we're seeing.

Greg Smith: Fantastic and Darryl any last thoughts on the @Home and sort of is there a way to begin thinking about this from kind of a product mindset?

Darryl Gibbings-Isaac: Yeah sure. I think principles at least have the product mindset could be applied in at least two ways. I think one is taking a patient centric view and pasting their experience at the center of the offering and that's something I think we've been hearing throughout our discussion so far. But this really can help overcome some of the potential friction from regulatory and payment silos between programs. For example care transitions especially for those who are eligible for multiple programs whether that's hospital @Home, SNF @Home or otherwise and move towards more of a total help @Home or similar similar molecule in that sense.

The other is looking at productising some of the technology components within the offering so that the offerings can be scaled in an economically sustainable way for example the demand and supply aggregation and matching or the orchestration and distribution of medical resource bundles or the analytics capturing and reporting on care effectiveness. I think the overall the key here is to be intentional experience based and continuously thinking about how to effectively scale the offering.

Greg Smith: That's fantastic. Now, when we all had a chance to get together the other day, and Darryl, you kind of just hinted

at it. We can all get excited about @Home, but that also, then sort of encourages us to begin thinking about health equity issues.

So folks, where we are in this sort of webinar today, is, I hope we've convinced you at home is a great way of thinking about it. @Home, though immediately surfaces some of those health equity sort of concerns and so on the right hand side of this slide is some work that's gone on and within Accenture around generally health equity along with HIMSS. But I think Mike and Rajya I'd like you to look at the left hand side of these. These are the ones that we've sort of identified as a group that are high equity sort of issues. If you'd like to highlight Mike, a couple of those. And then Rajya, there's a question in the thing that talks about privacy and security. I'd also like you to sort of tackle, along with the health equity the role of security and privacy in this. But Mike first of all back to you around how you're thinking about health equity and and the things on the left.

Michael Maniaci: Sure. If you look at the things in the left, although different they all have the same theme, which is an ability to get the resources and that's the problem with health care today is we have great institutions with excellent care. In 10 miles this way we have people that have the means that get to them in 10 miles this way we have people the same distance that can't get to them or sometimes they live right next to each other. So, how do you break that cycle? You have to decentralize the healthcare system, which is really what hospital @Home is at the first step of doing is decentralizing healthcare, so that all these means can get to the people that need it the most and often don't get to use it the most. And that's really what we're pushing towards and that list their lists all these populations that need healthcare.

They can't get to it. So, we have to deliver them despite them, living in different parts of the country, despite them, not having a home to go to and being in a mission or church or shelter, despite being an advanced age, despite not having the digital technology. So we have to build the infrastructure in this country around delivery. Just as we've done with everything else with shopping and food. We do that with healthcare. And then we're able to deliver this to many people and that drives better health in our population, which then pays dividends down the road.

Greg Smith: Fantastic. Rajya and your thoughts and then the security and privacy thing along the way.

Rajya Bhaiya: Yeah and health equity is top of mind for us at Microsoft. I mean this is the conversation almost comes up daily in the conversations in their teams around a lot of those topics that's listed there. So like, you know, urban care, rural care that's actually teams with Microsoft focusing on on different aspects of it.

And the biggest thing that also ties into that is privacy of that data like you know like you mentioned like the question mentioned. So the biggest thing that also comes with specific mental health care what we are seeing is you know the privacy of that data is very critically important and it's not a, you know, it's everything is consent based at least in the platform and it's secure at transit and storage, but what we're also seeing is, you know, the implementation within our platform of being able to grant consent on specific vitals to specific people as well. So I may choose to only share my cardiac data with Mike and I make sure to share my mental health care data with Darryl. So you know there's the ability to

actually have consent at the granular level is the utmost importance and everything has to be driven through consent as part of it and through patients consent specifically. Which is the core aspect of it. That's where things get broken down and when doctors actually need the data there should be templates available for those kind of the futures take a little bit where templates available of you know specific practice areas need these type of data which is trying to through consent over time.

Greg Smith: Okay, fantastic. So the interesting thing is, is that I'm going to sort of play a little bit of a game with you guys that says a minute ago we had up this SNF @Home sort of concept and I've sort of circled 5 areas in here in which I think it starts to sort of highlight where you might have health equity or issues that would preclude you from wanting to bring someone home such that you have to go do what Mike just said, look for alternatives. And Darryl I'm going to come to you in a second to start talking about what that alternative sort of care, anywhere kind of thing.

So if I go to the bottom Rajya, I see the bottom ones as typical sort of digital divide kinds of problems. People don't have access to broadband. So, consequently, you can't do certain things. How was Microsoft thinking about the digital divide and how to resolve the digital divide kind of issues?

Rajya Bhaiya: Yes, I mean, there are programs at Microsoft for the cellular network and the cellular back thing. So, like, you know, while broadband might not be available, but cellular is pretty available in most of the areas, you know, it's getting popular at least. So, you know, how do we make sure the payloads are small enough at

the transcript of the data you can do some of those? But, I mean, that's kind of like, you know, where we are spending some time. But then, also, how do you create clusters of, different, you know, early stages where, how do you create clusters of technology that's available at the edge itself? So that's why it's a little bit edge processing can also help.

Greg Smith: Right and so Mike some of the ones that are towards the top, so again I grew up in rural areas and so if I'm a rural patient and you say to me "I want to go to a hospital @Home program, but I don't want to do so in an environment that's not safe doesn't have weapons those kinds of things" I'll be honest with you that precludes the vast majority of the people who are my neighbors. So how do we begin to sort of resolve that from a health equity so that that becomes still a possibility for me?

Michael Maniaci: Sure, I think there's several options. First is flexibility. I mean, many Americans own a weapon. We go to patients homes that have weapons as long as they're locked up, we'll go in the home, so you have to have flexible rules. You can't say, "Oh, if you own a gun, we're not going to do this." You have to be flexible and it's not, you know, your standard of what a home should be. It's it's what's really safe for both the staff and the patient to recover and their basic essentials and then there's luxury things that we can work with. So, I think you have to be flexible.

Next you have to think of other options. If a patient can't safely get care in the home. what's closer than an institution that's one hundred miles away do we build medical communities or hubs where people can come to and get the care they need do we partner with supply chain partners? So

instead of you know if you get diagnosed with cancer in an average year you have to make eighteen trips to a medical institution for chemotherapy file checkups and labs. Can you instead do 16 of those around town? Maybe 5 in your home go to the local CVS that we've partnered with and get your chemotherapy, a local radiologist to get some studies and then travel to the institution twice that saves you time money travel time everything else. And if so there's hybrid versions of this, it doesn't have to be all or one in this type of mode. I think those type of ideas kind of go to some of this. And then, you know, I think again. We can partner with other institutions and develop ways of delivering care. So then you're in the extreme rural, you know, we can't get a physical therapist to your home, but maybe I put one of those big screen workout sessions in your house the mirror one of those. And a virtual physical therapist can now come to your home. You have weights, you work out, they guide you through it as a coach, the same type of things we're doing for home gyms and such we can do for physical therapy. And that just separates to all the types of medical care there is. We'll come up with new innovative ways of delivery care where we can in conjunction with what the patient needs.

Greg Smith: So I think this is a great introduction and Darryl I'm going to go to you. So then Mike where we've sort of grabbed onto that is this care anywhere concept in which it is, Darryl, very much about identifying. If I can't do it at home, where are some alternatives? Do you want to speak a little bit to sort of the intentional nature of identifying where those people are?

Darryl Gibbings-Isaac: Yeah, absolutely. So I think the key here is appropriateness. Just finding an environment, which is appropriate to deliver that care and that is

really determined by the use case. Right? That you have there. Different places would be appropriate, depending on what that use case is if we think about what determines the appropriateness, there are some things which are specific about the location and that could be, you know, elements around ability to provide privacy or the the sterility of the area, and all those kinds of pieces within it. There could be a part around the resource characteristics and resources have to be moved within it, right? So how mobile those things are space that's required for those resources there.

There also could be a piece around the, you know, the carrying density. So essentially. How much supervision is required? What's the degree of medical staff? And how far are they away from that location itself? Right? These are some important considerations there on top of that. You have to think about. I mean, kind of traditional capacity pieces, which is around the volume to a number of people that need to come into that to that space effect, particularly if we're talking about things outside of the home, right as you've got on the right hand side side of the page, but also, how long does it need to be there for right? Then? Is this something which is up for, you know, hours days, weeks or more than that? And I think we've seen a least with Covid that we've kind of stretched our minds as to what can be done outside of the hospital. Field hospitals were created pretty quickly that could scale up or scale down. And we've seen things, you know, much much lower scale than that too. So, I think some of these considerations are there that, mean that some of these things that you're looking on the page, such as place of worship or hotels, et cetera may create a visceral reaction when you look at them outside of the context. But when you actually think about what can we do to

build around those things, for example, you know, if you have mobile care units with imaging within, it could be an adjunct to some of these places, which could be converted into outpatient centers, et cetera. Really, the possibilities are quite endless, but the key is having that appropriateness at the center. And flexibility, and a bit of imagination as they do.

Greg Smith: So, if I get to sort of the key, so if you go all the way back to what Mike talked about in the hospital @Home, you had to build yourself an ecosystem. You had to build yourself an environment in which you could be successful. Can you now take that successful environment you created and simply point it at different places? The answer is yes, of course, if you take what Rajya said, and I want to build a technology infrastructure and have devices, such that I can get into the home. Now, all you're simply saying is, "Oh, let's take that infrastructure and now point it at a different location." The interesting thing about it is, I'm the old one in the group. If everybody remembers the beginning of the pandemic and the question was, can we now do telehealth into people's homes and people said well, "But there are reimbursement requirements, originating sites. You had to see somebody." Well, if you take the concept of an originating site, I was old enough to be around when it did it. The whole point was @Home wasn't stable and didn't have the technologies to be able to do so. So the belief was, you needed to move people to inappropriate place that had the right technologies. Had broadband had the right staffing. In essence, this is that same basic concept. We've proven @Home, but there are reasons where @Home doesn't fit, are there alternatives? I think Darryl, I want you to sort of wrap up on one thing and then we'll turn it over to anybody

who has questions that's sort of them back to this product mindset. Then again. So now we're thinking about SNF at a critical access hospital or SNF at someplace that's near a home where you can do additional things. I now can do synchronous telemetry because I have it in a place that has the appropriate technology. So, remind me again around this sort of product mindset, how that enables us to maybe think about things differently and encourage people to think about it that way? Does that make sense what I'm asking?

Darryl Gibbings-Isaac: Yeah, absolutely. So, I think it really speaks to that first principle, which is putting the patient and their experience at the center, as opposed to taking a service line view when it comes to these things. Because I think if you do that, you can actually transcend some of those silos that wouldn't actually be introduced if you're looking specifically at SNF @Home or hospital @Home, or any of these other kind of programs, which have a very specific set of regulations and requirements around it.

I think if you're looking at, what are you, what experience are you providing and obviously the care that you're providing within that you can then start productizing the components that are required to provide this care. And those components can have some flexibility around it in terms of their application. I think what you just spoke about, Greg, before this was, we have these components, which are played in a specific setting, such as hospital @Home. Some of those things can be redeployed with a new location as a focus, but you need to have that structure around those components to know what are you redeploying where? So, I think that is the key is to have that kind of intentionality around that organizing principle. And to be

able to then reapply those where required.

Greg Smith: Right. Mike, let me come back to you and Rajya just real quick any last sort of thoughts around this, this sort of journey we've been on in the last 40-45 minutes.

Michael Maniaci: Go ahead Rajya.

Rajya Bhaiya: From my viewpoint I mean I think the episodic care transition to trends in care is a very critical part of health and that's a transition that you know care at home could actually provide because you can actually detect a lot of things early. So this is where you know being able to have a better mental state of the thing which is cross correlated with your working habits and eating habits so this is kind of, you know, the all those associations is what leads to better health which probably hopefully helps with care at home and you know less people in the hospital overtime.

Michael Maniaci: Like, yeah, no, I think this is only going to get bigger and I think it'll lead the two big things in the future that I think we'll see, and we'll have to invest into. One is total care in the home as an option meaning you'll feel sick one day, worst headache you've ever had. You'll say it out, your Alexa will pick it up. It'll tap into your smart watch and a smart camera in your house and say, "Oh, your blood pressure's up and your pulse rate is high. Would you like to connect to the emergency room physician to do an analysis" and you'll say yes or no and they'll do that. And ED care in the home will take place they'll make a decision do you need hospital level care do you need a sub specialist and they'll drive that forward and do hospital in the home or into an institution if you're critically ill. Really, this care will be kind of built around the patient and what we have in technology. And I think that will also mean that the

future of medicine isn't institutions per se, but really, it's acuity. need and resources.

The acuity able to determine, both with the providers and the technology feeding into it, the need will be based on what you need mostly decided by providers, but as well as technology. And then the system will decide the cyber resources you need so if you're ill and there's not a lot of resources available. It'll direct you to a hospital emergency room because that's the best thing. But if there are reasons is available, they'll say you have an infection. You know what? Walmart can give you your IV antibiotics right now. Walgreens can give you some IV fluids and you're in a perfect geography for hospital @Home and we'll move you there. And the system will move you through, as opposed to a bunch of people making a bunch of phone calls, trying to get something to you. So, you'll get very expedited care at low cost at what's best in the system pushes you through. I think that will get care to many different people, throughout this country and throughout the world.

Greg Smith: Right. So I think if I were a strategy or a market development professional, like, the audience that we have on this call, I would argue the @Home creates any number of opportunities. Finding ways to then build around that ecosystem such that there are other alternatives. So that care can be delivered anywhere, creates even more opportunities. I think, Darryl, to borrow word that you said, "It's just about being intentional and being appropriate and then constructing that ecosystem in a regional area," such that you can address whatever comes up.

So first of all, Mike, Rajya, I want to say, thanks. I do believe Tom, we might have 1 or 2 minutes for some questions in case.

Someone wanted to ask them. But I will open it up for some questions if that's the case. And if not, I'll turn it back to Tom and Tom, let you do any little house cleaning that you need to do.

Tom Bradach: Thanks so much is a reminder if you want to submit questions, you could do so in the chat or the Q&A.

Michael Maniaci: I tried to answer everybody's that I could.

Tom Bradach: All right, if there's no more questions at this time, just want to say big thank you to all of our panelists for sharing their expertise with us today and another thank you to Accenture for sponsoring today's program. A recording of this webinar and a short survey will be shared via email later this afternoon. And if that's it, that concludes today's presentation. Thank you all and wishing you all a great afternoon ahead.

Greg Smith: Thank you all.

Rajya Bhaiya: Thank you.

Michael Maniaci: Thank you guys.

Darryl Gibbings-Isaac: Thank you.