Novel Cohorts
Podcast Series

Dan Housman, Chief Technology Officer of Graticule, and Jeff Wessinger, Vice President and General Manager of PointClickCare, discuss recent innovations in, and the future of, real world data to improve care and outcomes for elderly patient populations.

Dan Housman (Graticule):
Hello. Welcome to the Novel Cohorts podcast. This is Dan Houseman speaking, and I'm here with Jeff Wessinger from PointClickCare Life Sciences. As some of you know, we did a podcast with PointClickCare a few years back, and it's great to speak again, because that was pretty much the beginning the pandemic. Now, we're a few years out from the end of the pandemic, and we can get a great update. It may be helpful to just introduce yourself Jeff, and talk a little bit of PointClickCare for those people in the audience who don't know much about you.

Jeff Wessinger (PointClickCare):
Yeah. Happy to Dan, happy to join you again, it's been far too long.

PointClickCare is an organization primarily focused on the long-term care sector in the US. We are primarily an EHR company with a purpose-built EHR for long-term care, meaning skilled nursing facilities (SNFs). Assisted living facilities across the US. We have significant market share, North of 80% in the space. Our mission as a company is to help the world care for aging and vulnerable populations. Principally through the EHR, but more recently, we've started to make the chart-level data available to researchers to help understand this population, and really improve care. [To help] get [this population] therapeutic solutions or better therapies than what they have now is a big part of our mission.

I think that will lead us into the topics we want to discuss today: access to new therapies in long-term care. I think there's a long way to go, but there's a big opportunity here to help some of these newer therapeutic options available in long-term care. As a company, that's what we do. We're a long-term care focused, EHR company.

Dan Housman:
I suppose you must have been looking at the data quite a bit. It sounds like you found some gaps between standard of care in the general population and in this population. From a life

sciences and patient perspective, these could be very big opportunities. Tell me more about what you've seen.

Jeff Wessinger:
I think there could be several reasons for this, but what we've noticed in the discrete data is that the uptake of new medications in long-term care seems to be lagging the general population.

Meaning, when a new medication is released, it takes a significant amount of time for these medications to make their way into long-term care settings. Aging populations do get access to them but it does take a prolonged period of time before they reach the levels that the general population has; it depends upon the organization and HCP.

There are a number of theories that we've come up with for this. You know, the settings in nursing homes rehab centers, they're typically focused on managing chronic conditions and maintaining and quality of life for residents, and so the introduction of new medications is less frequent. Cutting edge treatments are more commonly adopted in specialty clinics or hospitals. That's where a lot of the research is happening. That's where a lot of the clinical trials are happening. Doctors who show a strong interest in a therapeutic area will participate in a clinical trial and have a high volume of prescribing as a result. In primary care settings, that's common, they have more frequent use. They are looking for innovative solutions. These settings make it easy to demonstrate the potential benefits of these new drugs. Conversely, long-term care focuses on managing these conditions and maintaining some quality of life. So there is less frequent introduction of new medications.

But I think looking at the success that these medications have had in primary care, there's an opportunity for medical directors and people in these facilities to be encouraged [to adopt] new medications. These advanced treatment options can certainly enhance the quality of life and really drive that quality of care within long-term care. And I think, Dan, the interesting question you asked me: Is this a coverage issue and it really isn't like a lot of these new medications. In fact, the vast majority of them are covered by Medicaid. 80% of the population in these settings is dual eligible patients who do have full coverage for these therapies. So, there's a lot of work to be done, but we're working with the manufacturers, academic institutions, government organizations, to really help solve this problem.

Dan Housman:
Why do you think it is that the market access Med Affairs groups aren't pushing harder to do this? If there is reimbursement, you think that they'd want to maximize?

Jeff Wessinger:
They're starting to realize that, you know, this is a pretty massive industry. There are about two and a half million patients at any given time in long-term care, maybe just under that. So really, it's a small population, when you think about it compared to the entire population of the US. However, they are a large volume, percentage-wise, of medication usage. Most of these patients are on eight to 10 medications at any given time. They consume significantly more drug therapies as opposed to the rest of the population. If you think about them in that context, they are the equivalent of a small country. But I think people don't necessarily think of it that way. They just look at the raw number in terms of patients, and they're like "Okay, that's just small, it's just a rounding error, I'm not that worried about it". But in fact, it is. It is a pretty big opportunity from a commercial perspective. And if you roll out the numbers, which we have done in many cases, and you say, if we just got, you know, our natural market share within this space, it's multiple millions of dollars. So then, now, if you can make that case, they start to look at it. So that's where I think our data products have become, you know, most desirable as companies that can foresee that and see that there is that opportunity.

We've been monitoring the number of long-term care focused roles in life sciences over the last year, and it's gone from less than 100 to well over 500 roles in this space. The people that are focused on the long-term care environment are starting to pay attention, and I hope we've had a little something to do with that. And if we think about the demographics of this space, it's only growing. There are going to be 50% more people over the age of 65 even within the next 10 years. So, this market is not only big now, it's going to be huge in the next 10-15-20 years.

Dan Housman:
You have so many different roles you can play, because you have the EMR, I think you might be somewhat integrated into the facility landscape. And you have your real-world data product. If someone comes to you, say a manufacturer with a particular new or existing drug, how do they engage with PointClickCare?

Jeff Wessinger:
The typical engagement is they look at a commercial use case first, so they have a drug in the market, and they're interested in understanding where the opportunities are for it to be

utilized. A good example is with tardive dyskinesia (TD), we have a couple of clients in that space. It's a disease that's almost exclusively in long-term care. There's not a lot of TD patients that are outside of this type of setting. The standard line of therapy within these settings is not optimal. There are products now on the market that can control dyskinesia, and can mitigate the sort of involuntary movements and the disorders associated with them. But the typical frontline treatment is to put them out on anti-psychotic drugs and control them by putting them to sleep. And this is really not ideal. Helping caregivers understand that there are better therapeutic options is something that the drug manufacturers want to do. They need to understand where the standard of care is different, meaning which specific organizations are not adopting a newer standard of care.

We would show you exactly where, geographically, that's happening, and then they can target their resources appropriately. We call that a commercial dataset. It gives them a very detailed geography, but not a lot of detailed clinical or outcomes information. That information or the chart-level patient data anonymized goes into our clinical dataset. The clinical dataset is some 50+ observations per patient per day that we provide without any identifying metrics. So you can't see, you know the facility or the address or the HCP, but you can follow this patient longitudinally over time. And then you can see things like efficacy, treatment patterns, that kind of thing.

So that's this second product offering, the clinical product offering, and that's quite a bit larger. Basically, it is chart-level information that's anonymized. And we go back to 2015, in terms of history. We have about 6 million unique patients going through these institutions on an annual basis. So you buy [the data] either for the clinical use case or the commercial use case. Typically, our customers will buy it commercial first, and then they'll move to clinical. In some cases, if a customer is pre-launch, they might buy clinical first, but they buy it by therapeutic area. So we would sell it for, you know, a chronic disease like diabetes or tardive dyskinesia. And then, basically pick a set of ICDs, you pick a product basket, and we give you the condition for all of that data.

Dan Housman:
I know a little bit about tardive dyskinesia, yeah. And, you know, I actually talked to some of the C-Suite of one of these groups that get off these therapies at the Cowen conference. They mentioned that the biggest challenge they have is the screening process to get patients sort of qualified, because once you've had appropriate screening—whether it's done by a psychiatrist or somebody's involved in care of the patient; it's not too hard to get them on therapy. Is the

whole offering pointing to the right clinicians, or is there also more to it inside the EMR and other things?

Jeff Wessinger:
That's the unique thing, really, that we're not completely dependent on the coding of the ICD. There are many conditions that don't get coded. I'll give another example. There is a condition called age-related anorexia, which is a formal ICD code, but it never really gets coded. Less than 1/10 or 1% of our patients have it coded. The diagnosis is declining BMI over a period of months caused by not eating. So a lot of times it gets improperly diagnosed as “wasting” or just natural aging. In fact, the problem, much like adolescent anorexia, is that they're not eating. In our system, we have a dietary module which measures how much food they consume at breakfast, lunch and dinner. Did the patient eat 25%, 50% or 75% of their meal? Just a simple metric like that that gets correlated with another metric that happens in our EHR, which is daily vitals. We actually measure their weight on a daily basis. We can look at declining BMI compared to dietary patterns, and we can say, “okay, this person lost 20% of their weight in the last six months, and they were eating 25% of what a normal intake would be”. Therefore, they should have the ICD, but don't. We can create a proxy for diagnosis, for symptoms in many cases where they don't get caught. Another popular example is for agitation. Agitation is actually an ICD as well that never gets coded. But we code a number of things in the EHR right, say that there was an abuse of staff, or the resident was in a fight or something, or there was a hallucinogenic incident. We code that as a symptom.

We can actually take symptoms, and we can count the number of events that happen that are agitation by definition, where there's no ICD. So again, if you have an agitation drug or an Alzheimer's agitation drug, you don't just want to see the agitation diagnosis and the dementia diagnosis. You may want to see the symptom diagnosed as well, and we can give you that too.

Dan Housman:
I'm obsessed with translation, so if you find something in there's a treatment in the real world data side, it sounds like you have the capacity. If you take this example of an anorexia incident or case yet it's not coded right now you have a new treatment. I don't know if there's a pharma that has a treatment coming down the pipe. Right? Are you collaborating back with the EMR side and with the folks who are at the facilities to sort protocols and implement new ways to make there are patient lists, tracking and metrics, or is it just the real world data side?

Jeff Wessinger
We do have a pretty extensive disease management application as well, and here we have to be careful with the involvement of pharma, right? In terms of recommending medications or pointing them to specific treatment protocols. No, but it is more the standard of care. But there are some branded-type education options. So we do have a full training module within PointClickCare where people can go and learn about branded meds and different options as well. The other thing we have is different sorts of support around titration. So if you have a product that titrates, once the product has been prescribed, then we can be helpful in terms of how it gets delivered, e.g. how does the patient titrate, for example. Post prescribing, we can help healthcare providers with a lot of education.

Dan Housman:
And I can imagine, it takes evidence-based guidelines. It sounds like sponsors can help basically establish a build out that otherwise might not be funded, because there isn't a mandate. That really might be a business model that could work. I know we've tried that with a couple different manufacturers, not with PointClickCare but rather the EMR. I think that seems to be a win-win for everybody when it aligns with evidence-based guidelines.

Jeff Wessinger:
Yes, especially post, so once the therapy has been decided upon, because there are a lot of things that can happen. Another example is we work with a medical device company now that has a topical for diabetic ulcers, wound care, basically.

And one of the things that's required for reimbursement is to get the wound dimensions right. They need to provide that to the pharmacy to make sure they get reimbursed. And even though our system has it, the way it was implemented was sort of a templated way which, you know, I think less than 50% of the time where the pharmacy was the pharmacy getting what they were supposed to so we worked with this company to change the way we implemented, such that over 90% of those orders were now being supplemented with the proper dimensions. Because what was happening was they were getting kicked back when they didn't have that correct. But again, post prescription, there's not a lot of restrictions on what we can do; in that case it is to provide the landscape and where the problem exists, and then the manufacturer has to go in and work on that education.

But post prescribing, I think there's a lot we could do. Another thing that I think people would object to, but we're not objecting to here, but I know that there's this challenge of your special EMR patients. Normally, when you think of an EMR, you're thinking of Cerner and Epic and

these big EMRs, and they wonder, well, are all the medical records sitting inside a PointClickCare, and how do you connect it to the claims data? Are you doing tokenization? Is that even necessary?

I don't have an opinion either way. I'm just wondering if that's one of the things that happens once they get discharged from the hospital, then we lose them. If they come back, then, let's say, they had a stent put in and in the hospital. We would have knowledge of that procedure.

But if the patient left and didn't come back, we lose them. So, there can be a need to connect with other systems. And certainly we work with the big token providers, Datavant, and we've done a number of projects where we're matching patients outside of the long-term care setting. Even in the commercial sense, there are some cases where connecting it to other datasets make sense.

But typically, it's the clinical dataset. You want to look at a continued period of time, or say you want to go back 5-6 years; I think dementia studies, you want to go back before they actually had the diagnosis, and see what was going on with that patient. And that's typical. I would say it's maybe 20% of our customers that do that. For the most part, our dataset is pretty clean, and I think we have the patients for a long enough period of time that in many cases that researchers can do some pretty interesting research.

Dan Housman:
Tell me about clinical trials. I wonder about this population. I'd imagine they're not the ideal population for clincial trials. They usually would be in the exclusion criteria whatever got them into a long-term care facility in the first place.

Jeff Wessinger:
Yes, typically when you're in a long term care facility, you're probably listed in the exclusion criteria for a trial. But we're starting to see more inclusion of patients over 65 years of age in trials. And certainly, depending on the trial and what you're studying, we may have a predisposition to have patients in these settings. We're doing one right now with Harvard and PCORI (Patient Centered Outcomes and Research Institute). It's around osteoporosis, bone fractures. We've used our network of facilities to recruit. We recruit at the organization level. They are going to be enrolling patients for us right into the study, getting the consent, and then we will bring them back. We do have an offering to help clinical trial recruitment, but it's very high time, right? You've got to have the facilities permission. Usually, you do it at the org level. If you get a large enough organization that has 1000s of facilities, you can get a good set

of patients. And they are at least co-located in the same cities or geography. And then we can help with recruitment. It is difficult to get them to sign up for this study. There was a lot of interest, so they did.

One of the major problems in long term care, of course, is lack of staffing. If you need them to lift a finger more than they're doing now, it's almost a non-starter, so it's a difficult environment. But there's a lot more demand than there has been in the past, given the fact that we need to have more of these, you know, older populations included going forward.

I haven't thought about the requirement to be better represented. If you don't include people in these age brackets, then you have to have a pretty solid justification for why not. And in many cases, there's no good justification. And people are definitely different. Polypharmacy being one of the biggest differences, you've got to figure out how to get them included. It is not easy, but it's something that's more desirable now than it was a few years back.

Another thing about the long-term care environment is that it’s very different than ambulatory. Whereas they go to the doctor, that's the data collection [point]. People in long-term care are there all the time. The medical record is a huge log of their life. What novel data have you seen end up in an LTC database that we just don't think about, because you just don't, it would be unheard of to get that kind of data. Daily vitals are a big one. You don't see that everywhere, right? Maybe a bit more with technology and personal devices. I think that data is starting to become more prevalent, but not consolidated the way we have it for long term care populations.

I think a lot of the different assessments that are out there, thinking Mini Mental exams, that kind of stuff. We have those longitudinally over time at a very distinct frequency. So we probably have it at least monthly, but we may even have it weekly. Or things like ADL scores (activities of daily living) which you may or may not be familiar with. They basically score your ability to clothe yourself, feed yourself, ambulate, that kind of thing. And again, we have that longitudinally. Meaning it is not just one survey from the doctor visit from a year and a half ago. It's every day for the last year and a half. If you are trying to monitor the progression of dementia or Alzheimer's, these are the things that you're going to want to look at and how they're progressing, and compare that to the therapies or the different options that patients are on. So that that's very unique to us. Because we do have these patients in place for long periods of time, in some cases, with very rich outcomes information.

Dan Housman:
Have you seen a lot of interest the life sciences companies? There's a whole bunch now that have a CNS neurodegenerative look on the world; are they digging into this data?

Jeff Wessinger:
It is interesting to me that some are in and some are out, right? It's both sides. And some of them are of the impression that once the person hits a long-term care setting, they're too far gone and not that interesting for research. Whereas I think others take the other view; these patients are still interesting. We're looking at therapies that slow down the impact of some of these diseases so they're still interesting for us. Whereas, others are looking at early-stage detection and altering the disease before it starts. I think it is almost two different worlds. So some of them are not interested at all, and some of them are very interested. It's weird.

Dan Housman:
And are they doing natural history studies, comparative effectiveness? What's the nature of this?

Jeff Wessinger:
Yeah, there's comparative effectiveness. Just descriptive studies, looking at the landscape, seeing how often is something diagnosed. Is it diagnosed as Alzheimer's or dementia, or is it something else? Are there symptoms that would lead you to believe that they should be diagnosed, that they just have mild cognitive impairment diagnosis; no dementia, no Alzheimer's? How is this being coded? How is this being looked at? Again, can we look at other proxies using the 50+ observations we have on these patients today? Is there another interesting way we can look at the data to help determine what the proper percentage of diagnosed patients should be versus just the ones who have age-related anorexia. Are there many more patients that should be included in this cohort that just aren't because, again, given the setting, the providers just don't have enough time to code it properly?

Dan Housman:
Interesting. And are you seeing all these diseases that you get when you're older, like cancer, heart failure, COPD? I would think you'd have three possible long-term chronic ailment represented.

Jeff Wessinger:
Absolutely. As you would expect. We don't have a lot of oncology companies that are interested in data, because we don't have a good image database. Tumor imaging isn't something we do. You probably want to look at somebody like Flatiron, who does that well.

We do have full medication histories. We know the therapies that they're using and the types of cancers. We just don't have a lot of detail in terms of that tumor itself, which in many cases, I think is important. So we haven't done any oncology studies yet. People are investing the most in life sciences there, it's not really our sweet spot. CNS is huge. Diabetes is big. COPD as well. Any kind of chronic respiratory condition is huge. Epilepsy is also a big problem now. You name it. Any chronic condition that's prevalent in long term care is definitely, we have a patient population, for sure.

Dan Housman:
Have you gotten involved in some of the rare diseases? Because I'd imagine just enough people assigned?

Jeff Wessinger:
Depending on the rare disease, in many cases if we have four or five patients that's interesting to them, they give us a call. Depending upon what you're looking for, it's easy enough for myself or anybody to search up and find out how many patients we do have. So we do have people. We do have a few rare diseases as well that are using our products.

Dan Housman:
And so is that how people start? They just call your office and how many patients you have that match this cohort criteria?

Jeff Wessinger:
That's how the first meeting often goes, how many patients do we have, and then they're either floored by it or they are not interested and walk away. But more often than not, we have more than enough patients to be interesting.

Dan Housman:
What do you see as the big things coming up in the next two years? I guess we only talked every three years. I wonder what we're going be talking about three years from now.

Jess Wessinger:
I'm still hoping that the integration of digital health and our EHR is going to come together. I think that, given this population, the use of personal devices may not be as prevalent. I'm thinking of things like diabetes and just measuring glucose everybody seems to monitor that. But to this day, glucose readings, although they do get into our EHR, they're being done manually. But I see a world where a lot of these daily vitals or symptoms and behaviors are going to be captured digitally, and I think it's on us to make that a reality, to make this less of it's going to help with the biggest problem in long-term care. If we can do more of this in an automated way, in a real time way, it's going to make the care we provide for these patients that much better in real time. And also [improve] the research, because now we're going to have much better data in terms of quality and more volume. I look forward to that.

I mean, I think if we can tie in our system to the phone. I mean there's four or five companies that have the equivalent of a mini mental exam done through voice. They can measure your voice over time, and they can tell you, you know, what your mini mental score would be, or they have a proxy for it, which is like 99 times more effective than the survey itself. So rather than asking them if this is a cat or an elephant, it actually just measures you talking; the words that you're using, the way that your voice is modulating, to figure out whether you're actually being impacted. So just like that, this passive sort of receptor of patient symptoms, kind of like the Star Trek tricorder, but on all times, comes back and feeds this source data. I look forward to that. I don't think we're too far off. I think that's what I see in the not too distant future.

Dan Housman:
Sounds pretty exciting. So you think this digital world, with all these things off the phone, are going to come in? I think we have to tie some generic readings. The ones we have to tie in this sort of consumerism of disease management into our world of EHR; we have to tie those things together. And it's starting to happen. But I like to think of it not as a consumer app, rather something that should be integrated into the healthcare system, so we can start to provide better care.

Because you're smaller, which could be considered a handicap, it's actually a huge advantage for innovation. So you have a very focused population of focused needs. And as people start using voice biomarkers broadly within long-term care, it could be 30 years before they start doing that for people who are 20. They are trying to save resources any way they can in these elderly populations from the caregivers. So these tools might be the first place you see them, and then these licenses companies can translate them down into the rest of the world, but first in this more narrow space and work it all out here.

That's great too, because you're looking to help the patients in a long-term care facility. You're saying “there's 350 medications that are underutilized”. Yeah, let's talk to the manufacturers and see if they can invest. They can change the world with how they market.

Jeff Wessinger:
I feel like, if I get up in the morning, I think if we can be a small part of curing a disease like Alzheimer's or something like that; that's a good reason to be making this stuff available. So I’m excited about it. Thank you Dan this has been great.

Dan Housman:
Huge fan of Better Living Through data. And thank you, Jeff, it has indeed been a great chat. We look forward to speaking with you again in the future. Thank you for listening to this edition of the Novel Cohorts podcast series from Graticule, and thanks to our guest Jeff.