Mobile diabetes management — outside the doctor's office

October 26, 2010

With FDA approval and plans to launch commercially in 2011, the DiabetesManager system from WellDoc is setting the stage for a new type of medical technology application. I spoke last week with Dr. Suzanne Sysko Clough, WellDoc's chief medical officer, about how the system works and how the medical tech field is evolving.

How does the DiabetesManager work?

The DiabetesManager was created to help patients from the moment they walk out of their physician's office and are out in the world trying to self-manage their disease. [It's] a tool to help them understand data, like their blood glucose values in real time or how to make better food choices [or] to understand the impact of their medications. The DiabetesManager is not ever [meant to] replace a physician, but to serve as a coach in the self-management arena.

If the patient is connected in the system with their health care provider, we also [offer] health care provider support tools. With primary care today, they're busy. There's a shortage of providers. There is an excess of patients with chronic disease. They just don't have a lot of time to keep up with the evidence-based guidelines for all these diseases they're responsible for managing. We're trying to make [doctors' lives] a little bit easier. [We'll take all the data their] patients are entering, analyze it, map it to evidence-based guidelines and give it to [the doctors] in whatever format they want. We could try to link it with the patient's next office visit, so it's not disruptive to their current work flow. The physicians have appreciated our non-obtrusive way of getting this information. A lot of these solutions just start pegging physicians with lots of data. It's a huge nuisance. We allow access to the raw data if [doctors] want to look at it, but [we'll] simplify it and analyze it.

What does the system look like from the patient's point of view?

We launched our clinical trials a couple of years ago and smart phones really didn't exist. [Even now] there are still people who have phones that are just data-enabled, so we wanted this to be available on as many commercially-available phones as possible. The bottom line requirement is a data plan. The multimedia spectrum of what we can deliver will vary based on the models.

We try to keep the front-end very simple, [by simply prompting the patient on what to enter]. But there is always an opportunity to enter whatever you want. Maybe the only feedback that day needs to be a message of support. Or maybe, based on the data points that are entered, [we will see that] this could be part of a pattern. [For example], you entered an after-meal blood glucose of 300. Let's see how you got there. There would be prompts [such as] foods or amounts of carbs.

We're also trying to make it more interesting, so it's not always text and surveys and data. Inputs could be something like: Choose the picture that represents how you're feeling. You have to almost throw out the

word 'patient' and start using the word 'person.' If you make this all about the clinical, all about the diabetes, folks aren't going to want to use it. We have to be able to approach the subject of the emotional, all the other non-diabetes stuff. All those other pieces are important in figuring out how someone can and will manage their chronic disease.

What happens if patients make mistakes inputting the data?

People bring this up a lot. The algorithms are taught to look for outliers. We also don't give prescriptive advice to the data. If the physician is involved, we will upload the physician's care plan. Whatever data the patient enters, we don't do any dose changes based on the data. Even if they entered a wrong number, they're still going to follow their clinician's instructions.

How much will this application cost patients?

In many cases, patients receive this as a free service from their employers or their disease management or their payers. The return on investment is so big for them. Just showing the clinical outcomes that systems like ours can generate when you do an extrapolation to cost savings, it's huge. If you can lower cholesterol, lower blood pressure and improve medication adherence with these types of solutions, it makes sense for payers to integrate this into their service delivery models. Some folks are thinking of considering it like a medication. As in, if you want to use it you pay a $10-a-month copay.

How do you see the medical technology field continuing to evolve?

We need to stop generating a whole bunch of gadgets for technology's sake. Apps aren't going to work. They're just going to add to the fragmentation of the market.

The solutions that shake out as the winners will do a couple of things. They'll involve patients' caregivers, maybe the disease management, the primary care, the specialists. They'll serve as a platform to be a data aggregator and an information generator to support models like the chronic care model. You're going to have to have regulatory clearance. These one-off apps won't work because physicians can't integrate multiple data sources from very disparate locations. Lastly, reimbursement: Physicians are completely inundated with requests and people underestimate how much time it is to sign a prescription, to call in a fax. But if we get it incentivized, I think that's going to be a game-changer.