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## **Novo Nordisk and Glooko partner to develop jointly-branded digital tools; initial launch this year; smart pen to pilot in EU in 2017! - January 9, 2017**

### **Executive Highlights**

- Early this morning, Novo Nordisk and Glooko [jointly announced](#) a non-exclusive partnership to develop digital tools for diabetes management, with a first jointly-branded digital product launching in 2017.
- In major news, Novo Nordisk plans to pilot its own connected Echo insulin pen in Europe in 2017. We assume it will be reusable and Bluetooth-connected to a Glooko-developed smartphone app.
- This big partnership will ultimately bring insulin dose titration software to market, assist healthcare providers through population-wide data reporting and remote care, and drive real-world data collection on Novo Nordisk's therapies. It also confirms that Novo Nordisk is IN on digital health, and committed to partnership and not a siloed solution.
- While the initial Novo Nordisk-Glooko product will not leverage the IBM Watson partnership, we believe all three companies will ultimately work together in bringing more intelligent digital solutions to market.
- Glooko recently surpassed the one-million-patient mark via its merger with Diasend, and this partnership could now bring Glooko's data platform to tens of millions of patients. We're not sure of the business model or pricing, though the companies appear to be committed to broad access - details on how it will be accessed aren't yet fully available. Certainly this could help Novo Nordisk move towards outcomes-based reimbursement models and bring real-world data to payers.

*Early this morning, Novo Nordisk and Glooko [jointly announced](#) a non-exclusive partnership to develop digital tools for diabetes management. In calls with both companies, we learned that the first co-branded product is expected to launch in 2017, including Glooko's mobile and web platform and data downloading capabilities, along with Novo Nordisk's education, support, and expertise for people with diabetes.*

*In major news, Novo Nordisk SVP of Strategy, Access, and Marketing Mr. Christian Kanstrup told us that the company has developed a connected insulin pen with dose capture, which will pilot in Europe this year. The product will leverage the existing Echo pen, and this timing could make Novo Nordisk the first of the big insulin companies with its own smart insulin pen on the market. Given Glooko's expertise, we might assume it will build the paired smartphone app for the pen. Glooko CEO Rick Altinger called it a "walled garden" within Glooko, allowing Novo Nordisk to leverage the best of Glooko's data platform (e.g., interoperability with many devices, mobile user experience), but do it in its own branded way.*

*A major goal of this collaboration is to develop insulin dosing titration software, giving patients and HCPs much better tools to use insulin - we're not sure if this will launch in 2017 or subsequently. While the initial Glooko-Nov Nordisk product will not leverage IBM Watson (Novo Nordisk and IBM [partnered about a year ago](#)), we believe all three companies will work together in the future - combining Novo Nordisk's therapeutic and patient education expertise (e.g., Cornerstones4Care), Glooko's user experience/data integration expertise, and IBM Watson's cognitive computing intelligence. This could eventually bring to market a "virtual diabetes coach," helping patients use Novo Nordisk's therapies more effectively.*

*The press release offered few details on the near-term products, but stresses personalization, digital services to support aspects of diabetes management such as treatment adherence and blood glucose management, and population-wide data reporting to help healthcare providers engage and manage patients. We see all*

as major needs and a strong combination in Glooko and Novo Nordisk to bring them to market - particularly patient-facing apps to titrate insulin and a dashboard for providers to monitor patients remotely. The first Novo Nordisk-Glooko product will be patient-facing - possibly a smartphone app for the new pen? - with provider-facing options coming later. It is too early to speculate on price or business model, but the companies want to ensure broad access and availability - details on how it will be accessed aren't yet fully available. The companies are jointly responsible for regulatory and commercialization.

This new collaboration, along with Novo Nordisk's existing IBM Watson partnership, yields a well-rounded consortium that should be able to bring meaningful diabetes digital health interventions to market that combine drugs, connected devices, and software in more impactful ways. It also confirms that Novo Nordisk is all IN on digital health, something we're increasingly seeing from all the insulin companies. Noted Mr. Kanstrup, "We don't do digital health just to do digital health. We do it to better help people with diabetes." We're glad that Novo Nordisk is taking a partnership approach, realizing it cannot build everything on its own and should not come to market with a siloed solution. Mr. Kanstrup further emphasized that digital health is about launching products and learning quickly - not in the traditional DNA of pharma, but something Glooko can help with. Mr. Kanstrup sees CGM as a "critical" part of the future and an "integrated" part of this partnership.

Mr. Altinger told us that Glooko has been talking with Novo Nordisk for 3.5 years (!), and a number of factors fell into place that have accelerated discussions in the past few months:

1. September's [Glooko/Diasend merger](#) gave Glooko tremendous international scale, and it now has more than one million users (!), covering 95% of the device market at 4,000+ health systems in 23 countries and 15 languages. Novo Nordisk obviously needed a global data/app partner, and Glooko's EU headquarters is just a couple hour drive from Novo Nordisk's headquarters.
2. Novo Nordisk's connected Echo pen (we assume with Bluetooth) has progressed to a point ready for piloting. As a traditional pharmaceutical company, it will clearly benefit from Glooko's know-how in tech - building apps, using Bluetooth, passively downloading data to a platform, etc.
3. Novo Nordisk realized that it could offer its own branded product with its own educational content, but within the Glooko system. This "walled garden" approach was really important to Novo Nordisk - maximizing interoperability in the Glooko ecosystem while maintaining a branded product.
4. Glooko hired Steven Denys as its VP of Business Development, bringing extensive pharma experience to help craft the agreement and manage concerns.
5. Novo Nordisk's existing [partnership with IBM Watson](#). Glooko and IBM will be excellent complements to each other as they help Novo Nordisk build digital tools around their drugs. Whereas Glooko excels on the front-end, data downloading, consolidating, and presenting data to patients and clinicians, IBM Watson can bring intelligence underneath the hood, making sense of all the data that will now be collected.

We have been waiting for traditional diabetes drug companies to invest more in digital health - wrapping useful software around drug offerings to help patients and providers use them more effectively, and bringing real-world data to improve the products and perhaps drive new business models with payers. As a reminder, Sanofi invested heavily in a ~\$496 million joint venture with Verily, [Onduo](#), while Lilly has several digital health investments, including one in Bluetooth-enabled smart pen developer Companion Medical (expected launch this year). Read on for more details, our views on what each side gains, and Close Concerns' Questions.

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## What do Novo Nordisk and Glooko each gain from this collaboration?

- **In speaking Mr. Altinger and Mr. Kanstrup, it is abundantly clear that both companies are excited about the partnership and think very highly of the other:**
  - **"We are quite impressed with Novo Nordisk on the clinical and digital health side.** They are charging ahead, making decisions, acting like a Silicon Valley company. I am genuinely impressed. The way they've crafted it is to leverage the best parts of Glooko, but doing it in a way that is unique to them and leverages their clinical content." - Mr. Altinger
  - **"I am moved by everything about Glooko.** With how many digital solutions for diabetes there are out there, look how many are successful. It shows how difficult this is. I like Glooko's approach, both with the patient and physician platform, and they have very significant experience. We are building an open and collaborative approach, and they will enable us to accelerate timelines." - Mr. Kanstrup

Novo Nordisk gets...	Glooko gets...
<ul style="list-style-type: none"> <li>▪ Global data management player in Glooko with more than 1 million users in 23 countries.</li> <li>▪ Glooko's expertise in: building apps and web software, Bluetooth communication with devices, interoperability; glucose data analytics; front-end design for patients and HCPs; 510(k) regulatory experience.</li> <li>▪ Clear pathway to insulin dose titration software, leveraging some of Glooko's work developing its own Mobile Insulin Dosing System (MIDS).</li> <li>▪ Remote care platform for HCPs to manage population of patients.</li> <li>▪ Real-world outcomes collected on insulin therapy via smart pen/data management platform.</li> <li>▪ A platform to deliver educational content, interact with patients on mobile devices, could make its insulins more attractive.</li> <li>▪ Clear synergy with IBM Watson cognitive computing partnership - adding more analytics intelligence on top of underlying Glooko data platform.</li> <li>▪ Potentially new business models and real-world data to bring to payers.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Huge vote of confidence from preeminent insulin player.</li> <li>▪ A huge sales force and marketing budget to bring Glooko to tens of millions of patients (hopefully free).</li> <li>▪ Novo Nordisk's decades of clinical and patient care expertise to bring a product well designed for HCPs and many different countries' care and reimbursement models.</li> <li>▪ Novo Nordisk's pharma, payer, and regulatory expertise to drive further use of Glooko globally.</li> <li>▪ Very early experience working with Bluetooth-enabled insulin pens.</li> <li>▪ Novo Nordisk expertise on insulin titration from decades of clinical trials.</li> <li>▪ Room for further analytic innovation through joint collaboration with IBM Watson.</li> <li>▪ Non-exclusive deal to sign further partnerships with other insulin companies.</li> <li>▪ More partnering experience, allowing traditional drug and device companies to outsource some of their software/app innovation.</li> </ul>

- **Notably, this partnership is non-exclusive, so both companies can make other deals.** For Glooko, we wonder if this could pave the way for other pharmaceutical partnerships. As a reminder, Sanofi has its Verily partnership (Onduo), is an investor in Common Sensing, and we heard at CES that it may be working on a connected pen with a company called Vigihealth. Lilly is an investor in Companion Medical (launching its Bluetooth-enabled pen this year) and has its Cambridge Innovation Center focused on devices. We can imagine that one day, Glooko's platform might have numerous jointly-branded products for different companies to connect their devices into and offer educational content. The collaboration also allows Novo Nordisk to engage in digital health in other ways or offer its services to users of other data management platforms.
- **Novo Nordisk is very interested in leveraging digital health to collect real-world outcomes data, which could enable more outcomes-based pricing models.** Discussions are ongoing, and pilots will be run to determine the appropriate business model, but Mr. Kanstrup told us that fundamentally, the goal will be to sell insulin and a move into service businesses is not likely at this point. We imagine a lot will be learned from the initial pilots and the bigger point here is that Novo Nordisk sees the potential. We could imagine this software will be provided to patients who buy Novo Nordisk insulins, adding value to the drugs with useful wraparound software.
  - **Novo Nordisk and Glooko have both individually spoken to payers, and both feel that payers are finally ready to engage in value-based discussions "in a fair way."** This is still relatively new territory for diabetes, and as such there are still many unanswered questions about what payers will be looking for and what companies will provide - e.g., evidence that insulin doses are taken (measured via connected pens)? Proven outcomes like A1c or glucose data from BGMs or CGMs? How will the insulins and paired software be paid for in different health systems?
  - **Real-world data could also be used to optimize Novo Nordisk's product design, prescribing, (i.e., to which populations, what dose, etc.), and perhaps marketing.** Ultimately, more precise prescribing would be a huge win, though we imagine this is still several years away and will require a lot more data and the help of IBM Watson. Mr. Kanstrup added that CGM will be critical to this initiative - we could've guessed that the company would attempt to capture as much time-in-range, hypoglycemia, hyperglycemia, and glycemic variability data as possible in order to truly understand the ways in which their drugs interact with various physiological and environmental factors, but it's great to hear it straight from them.
- **We're not sure what pricing will look like, but both companies are committed to broad access.** We could imagine Novo Nordisk has the resources to make the software free to patients and providers, offering them additional wrap-around value beyond their drugs alone.
- **Glooko only recently surpassed the one-million-patient mark, and this deal could send that number skyrocketing into the tens of millions.** Once this partnership is really off the ground, Glooko will gain access to Novo Nordisk's patient base, increasing its scale by an order of magnitude. Accordingly, it has already expanded its team, hiring new employees in all three offices (Gothenberg, Chicago, and Mountain View). Mr. Altinger attributed the expansion mostly due to growth, but also in light of this recent partnership.
- **Mr. Altinger pointed out that Novo Nordisk has actually been involved in digital health through the online [Cornerstones4care](#) program.** He told us that the content is very good and has been widely used. The program gives free access to meal-planning tools, a "diabetes health coach" (personalized learning and action plan), interactive A1c, weight, and blood glucose tracking, and information. It sounded like some of this content will be integrated into the joint Glooko-Nov Nordisk product - perhaps videos and helpful articles right in the app.
- **The insulin dosing "advice" landscape also includes Voluntas' [recently cleared](#) Insulia insulin titration software and [at least five other](#) pre-market products (along with Sanofi's MyStar Dose Coach BGM, which is [available in Europe](#)).** Insulin titration is one of

the lowest hanging fruits in diabetes, promising provider and patient time savings, facilitating safer and more cost-effective use of insulin, and offering scalable guidance to people with low access to care. The question is how can Novo Nordisk differentiate? The obvious answer is that they can provide their pen to patients when they buy Novo Nordisk insulin, but how can the company use Glooko's and IBM's respective strengths to guarantee a product that patients want to use?

- **What will be the fate of Glooko's own insulin titration software, MIDS (FDA submission was expected by the end of 2016)?** We're assuming that Novo Nordisk's software will exist within the "walled garden," and that Glooko's MIDS will be manufacturer-agnostic - available for any insulin. We're not sure how these products will co-exist within Glooko's platform.
- **We asked Mr. Altinger if connected pens are actually needed to titrate insulin (as opposed to just a titration algorithm with manual entry), and he assertively responded: "Yes, definitely.** Lots of data shows self-reported information is not accurate. It happens all the time with blood glucose data." We were surprised Insulia received FDA clearance for its product, as there is not verified capture of insulin dosing information from a device.

## Close Concerns Questions

Q: When and where will the NovoPen Echo with connectivity launch in 2017? Will Glooko build the paired smartphone app? Will this pen be reusable?

Q: What will the initial Glooko/Novo Nordisk product include, and what does the pipeline look like? When will insulin titration software come to market? When will IBM Watson be incorporated into the joint product offering?

Q: If a provider/health system uses Glooko now, how will this partnership's offerings impact them?

Q: Will patients and providers have to pay anything to access this product? Is there a new NN business model to bring this to market, or is it simply a Novo Nordisk offering around its insulin within existing reimbursement models?

Q: How many patients are using Cornerstones4Care? How will this content be incorporated into Novo Nordisk/Glooko's digital offerings?

Q: What about Glooko's own insulin titration software, MIDS? Will the Novo Nordisk partnership include its own dose titration software separate from MIDS?

Q: What will real-world data show once insulin pens are widely connected?

Q: How much better will digitally-enhanced products make insulin therapy for the average patient and clinician? What kind of clinical outcomes could it drive?

Q: What has Novo Nordisk been working on with IBM Watson thus far? How will Glooko and Novo Nordisk leverage IBM's capabilities in developing products?

Q: The press release says "digital services" - is this implying the potential for a subscription model?

Q: Who is in charge of this collaboration at Novo Nordisk and how big is its digital health team compared to the other insulin companies?

Q: Is Onduo viewed as a relevant competitor for Novo Nordisk and Glooko? Which other diabetes drug companies will dive further into digital health in 2017?

-- by Brian Levine, Adam Brown, and Kelly Close