
Medtronic begins shipping MiniMed Connect for smartphone viewing of pump and CGM data - September 28, 2015

Executive Highlights

- Medtronic has [started shipping](#) the \$199 [MiniMed Connect](#) keychain uploader device for smartphone viewing and remote monitoring of pump/CGM data (MiniMed 530G, Revel).
- MiniMed Connect brings competition to Dexcom's Share receiver (available) and just-approved G5 mobile system (launching this week), offering some of the same key advantages: patients seeing diabetes data on the phone, caregivers getting notifications, and automatic upload to data management platforms.

This morning, Medtronic [began shipping](#) the MiniMed Connect device for smartphone viewing and remote monitoring of pump/CGM data (MiniMed 530G, Revel). The US launch timing is on the earlier side of the "Fall 2015" expectation [announced at ADA 2015](#) when the product debuted. The small keychain uploader device (picture below) transmits pump/CGM data via Bluetooth to a patient's nearby smartphone app, enables remote monitoring for caregivers on any Internet-connected device, and sends the data to CareLink automatically. MiniMed Connect is reasonably priced at \$199 (cash pay) and initially available to patients on Apple's iOS. A separate partnership with Samsung is working on an Android version, though there is no timing. MiniMed Connect is a US-only launch for now.

We are very excited to see another way for patients to look at their diabetes data and for caregivers to follow it. Indeed, among CGM users in the diabetes market research company dQ&A patient panel (1Q15), one in three patients (32%) listed smartphone integration in their top three most desired improvements (only exceeded by better accuracy and longer sensor wear). This is a direction the entire diabetes technology field is heading in, and it is great to see companies like Dexcom, Medtronic, LifeScan, and Roche building Bluetooth connectivity into their devices.

MiniMed Connect certainly brings competition to Dexcom's Share CGM receiver (available) and just-approved G5 mobile CGM system (launching this week). The connected systems do share the same key advantages: patients seeing CGM data on the phone, caregivers getting notifications, and data automatically uploaded to data management platforms. Of course, there are some pros and cons to each: G5 cuts down the number of devices, while MiniMed Connect adds one; MiniMed Connect transfers both pump and CGM data, while Dexcom's G5 only shares CGM data; MiniMed Connect is rechargeable vs. the disposable G5 transmitter (lasts three months); G5 gives patients notifications without opening the app (e.g., on the lock screen), while MiniMed Connect cannot; and more listed below. Still, the nuances are less important than what both products bring - greater discretion for patients, better remote monitoring for caregivers, and a better data experience for doctors. Those are all wins in our book.

Looking ahead, MiniMed Connect is presumably an interim step until Medtronic launches its own Bluetooth transmitter (Guardian Mobile), a similar stepwise approach to Dexcom's regulatory approach with G5 (Share cradle, Share receiver). There is no FDA submission timing on Guardian Mobile, which has [completed its pivotal study](#). Interestingly, Medtronic's MiniMed 640G will not be compatible with MiniMed Connect, nor will the new pump include Bluetooth. We assume that was a deliberate choice (not a great one in our view), though perhaps the MiniMed 670G will add Bluetooth back in. Other pump companies are moving ahead on the connectivity front or are already there, including Cellnovo (built-in cellular), Insulet (Bluetooth in next-gen PDM), Tandem (built-in Bluetooth, but not turned on), and Roche (built-in Bluetooth).

Below we enclose more details on MiniMed Connect, include a feature-by-feature comparison of MiniMed Connect to Dexcom's G5, and share our key questions.

- **Our first-time demo of the MiniMed Connect app at FFL revealed a pretty simple design, with a focus on prominently displaying the CGM value, insulin-on-board, and trend graph.** We found some of the font on the home screen to be very small (togglng between 3-hours, 12 hours, etc. - see picture below), though the app has made excellent use of indicators to indicate the system's status. The rep emphasized how MiniMed Connect will upload to CareLink automatically, eliminating hassle for patients and doctors and nurses.
- **MiniMed Connect is the first product to send both pump and CGM data to the cloud automatically.** This is a key advantage Medtronic can offer, since both products are in-house. Insulet could be first to market with a cloud-connected G5-integrated pump, though it's a bit unclear when a G5 integrated handheld will launch and what it will look like (e.g., app integration?). Tandem is also in the running on this front, as its t:slim has Bluetooth built-in (though not turned on), and the company recently signed to integrate G5. Cellnovo's pump is already cloud-connected in Europe, though management has never talked specific timing about CGM integration.
 - **We'd note that combined insulin + CGM data downloading is getting easier with diasend, Glooko, and upcoming Tidepool.** All three products can put Dexcom data side-by-side with insulin pump data, though none can obtain both devices' data automatically. Diasend and Glooko can currently pull Dexcom data in the background (via G5 and Apple Health), though uploading pump data will still require a cable.
- **To what extent could MiniMed Connect shift patients' choice of CGM brand?** Certainly, this launch is critical for Medtronic to prevent existing patients (and especially their parents) from switching to Dexcom Share/G5. The bigger question is how new-to-CGM patients will weigh the pros and cons of the two systems. We believe the biggest market for MiniMed Connect is current Medtronic pumpers - particularly very young parents - both on and not on CGM. Those on CGM are obviously far more likely to get on MiniMed Connect, though the non-CGM user group is by far the larger market.
- **Below, we enclose a feature-by-feature comparison of MiniMed Connect and G5.**

	MiniMed Connect	Dexcom G5
Number of Devices	Four: Enlite transmitter -> pump -> MiniMed Connect -> phone	Two: G5 transmitter -> phone
Cost	\$199 for existing Medtronic pump/CGM users	\$0-\$299 for existing Share receiver users Unknown price for out-of-warranty Dexcom users (presumably similar to starter kit)
Country Availability	US for now	US and Europe
Smartphone Compatibility for Patient	Apple iOS; Android in development with Samsung	Apple iOS; Android coming in 2016
Patient Notifications	Shown on pump and within the app; not shown on lock screen	Shown on optional receiver and phone lock screen, similar to a text message

Caregiver Notifications	Unlimited followers can view status on any Internet-connected device Up to three followers can receive text alerts	Up to five followers via the Dexcom Follow app (Apple iOS and Android)
Battery	Rechargeable (Medtronic recommends charging every day)	Disposable transmitter lasts three months
Transmission range	Connect must be within six feet of the pump and 20 feet of the iPhone/iPod touch to upload data to the cloud.	G5 transmitter must be within 20 feet of the iPhone
Device Data	Pump and CGM data	CGM data
Data Management	CGM data and subset of pump data uploaded every five minutes to CareLink. Full CareLink upload of all insulin pump history every 24 hours	Uploads data to Dexcom Clarity in near-real time; data sent to diasend and other apps via Apple Health (e.g., Glooko, Meal Memory) with a three-hour delay

- **Similar to the current Dexcom Share2 app, the MiniMed Connect app will not notify or alert patients on the phone - this makes Connect more of an interim connectivity step** (like the Share receiver), since those using it will hear their pump beep (primary display device), which would inform them to open the app and see what's going on. We do think discreet on-phone notifications with G5 are a key advantage over MiniMed Connect. Still, not needing to pull the pump out is a great advance for many patients, particularly women (who may hide their pump in hard-to-reach places), or young children (parents can now see the data on a phone within Bluetooth range).
- **Caregivers can follow pump/CGM data on any product with an Internet connection via a web display, a nice device-agnostic approach (similar to the Nightscout setup).** Text messages can be sent for uncleared pump alarms or when sensor glucose levels are too high or too low. Given the transformative impact Dexcom Share has had on many families, we imagine parents will especially like MiniMed Connect.
- **MiniMed Connect is currently launching only in the US.** Medtronic's insulin pump systems in other countries use different communication protocols, and the company is currently working to make MiniMed Connect compatible with those systems. Launches in other countries will proceed as that work is completed. [Dexcom announced at EASD](#) that G5 is initially launching in both the US and Europe.
- **If a patient loses the small MiniMed Connect device, the company will provide one uploader replacement for \$99. Replacements beyond that will be the full \$199.** We salute Medtronic for making MiniMed Connect very small, though the one downside is that it will be easy to lose, particularly in younger patients. We hope the connectivity gets integrated into the pumps themselves in the future, particularly with the 670G hybrid closed loop and beyond. Medtronic is presumably thinking about pump case designs that could hook MiniMed Connect right onto the pump.
- **MiniMed Connect will fall under Medtronic's new Diabetes Service & Solutions business.** This business **recorded high-single-digit growth in F1Q16 on "strong consumable sales" in the US and continued integration of the newly acquired Diabeter clinic.** In the [2014 Analyst Day meeting](#), we estimated the consumable supplies/pump accessories

business at ~\$800 million per year (~\$200 million per quarter), meaning this division probably accounted for a significant fraction of the Medtronic's \$445 million in [F1Q16](#) sales.

Close Concerns Questions

Q: To what extent does smartphone connectivity matter to those not on CGM? To what extent does connectivity matter to current pumpers and those on MDI?

Q: How will patients and providers compare MiniMed Connect to Dexcom's G5?

Q: Will Medtronic build Bluetooth directly into future pumps? Why won't the 640G have this capability?

Q: When will Guardian Mobile be submitted to the FDA?



-- by Adam Brown and Kelly Close