Case Study: Diabetes Remote Patient Monitoring at Atrius Health

Background

Atrius Health is a nonprofit healthcare leader that delivers a system of connected care across 29 clinical locations, 50 specialties and 750 physicians to more than 675,000 adult and pediatric patients. The Atrius Health practices include Dedham Medical Associates, Granite Medical Group and Harvard Vanguard Medical Associates, as well as the home healthcare organization VNA Care. Together, the Atrius Health practices collaborate with hospital partners, community specialists and skilled nursing facilities to develop innovative and effective ways of delivering care in the most appropriate setting, making it easier for patients to be healthy.

Atrius Health is a national leader in clinical quality and electronic patient record use and has been a Medicare Pioneer Accountable Care Organization. Approximately 75% of Atrius Health’s total revenue is through risk contracts.¹

In 2013, Atrius Health began exploring remote patient monitoring solutions for diabetes to provide optimal care that improves outcomes. The medical practice has a large diabetes population and was seeking to accomplish three objectives:

1) More efficiently manage the diabetes population in between visits and encourage patients to more actively self-manage
2) Encourage patients to share health and wellness data captured at home (diet, activity, blood pressure, etc.) with their clinicians so the data can be used to inform treatment decisions
3) Demonstrate value in patient experience and improve patient satisfaction scores

Glooko: A Remote Patient Monitoring Solution

Today, people with diabetes (PWDs) and their providers face many challenges in the way they manage this condition. Information about blood glucose levels, insulin, carbohydrates, and exercise is stored in disparate places like multiple blood glucose (BG) meters, insulin pumps,
continuous glucose monitors (CGMs), logbooks and diaries, making it difficult to access data, trust the accuracy of the data and leverage the data for better care.

Glooko is a diabetes management system that enables PWDs and their healthcare team to access all their diabetes data in a central location via a mobile and web application. Glooko is a device agnostic solution and is compatible with the majority of diabetes devices on the market – PWDs can sync their data to Glooko from 50+ meters, pumps and CGMs, as well as other health and wellness devices such as activity trackers, blood pressure monitors and scales. Once the data is synced to Glooko, it can be securely accessed from any web browser or the Glooko mobile application. PWDs can grant access to a provider or group of providers, enabling them to securely access the health data from the Glooko Population Tracker, a web based application that gives providers a risk stratified view of the population so they can provide the right level of remote support at the right time.

Solution Assessment and Selection

With the above goals in mind, Atrius Health assessed several different remote patient monitoring solutions and ultimately selected Glooko for implementation for the following reasons:

• **Broad device support.** Glooko’s broad device compatibility was a key reason Atrius Health selected Glooko to be their remote patient monitoring solution. The Atrius Health diabetes population uses a diverse set of devices and Glooko enabled the patients to continue to use their current devices, rather than requiring them to switch devices, which patients are often not open to doing.

• **Wireless syncing capability.** Glooko enables users to conveniently sync their data wirelessly to an app on their smartphone or tablet, which Atrius Health felt was a better, more engaging user experience for their patients in the long term, compared to other solutions they evaluated, some which required cables to download to a desktop solution.

• **FDA cleared.** Glooko is an FDA cleared solution, which Atrius Health felt was an important indicator in the quality, security and trustworthiness of the solution.

Glooko Implementation

With Glooko selected, Atrius Health implemented a two-phase pilot aimed at proving the technology and scaling the solution.
Phase 1: Prove the Technology

Phase 1 began in late 2013, with a group of approximately 50 patients in the endocrine clinic. The objective of this phase was to prove the technology would work and be accepted by patients and clinicians.

Phase 1 identified two opportunity areas. First, clinicians adopted a different workflow for their patients in the Glooko pilot vs. their non-pilot patients, so managing two different processes was a challenge. Based on this feedback, Atrius decided to integrate Glooko with their electronic health record (EHR).

Second, some patients struggled more with technology and were not as familiar with how to use various features of their smartphones, requiring additional support from clinical staff. Atrius Health decided that for the next phase, they would enroll users who were more likely to be engaged with their smartphones – pregnant women with diabetes.

EHR Integration

Atrius Health aimed to streamline clinician workflow by integrating Glooko directly into their EHR. A link was built in the EHR allowing clinicians to click directly into Glooko from within the patient’s chart, so clinicians did not have to navigate to a different system to use Glooko. To help clinicians more easily keep track of their patients, a report was developed to show all patients of that clinician being monitored by Glooko. Clinicians used this report to see patient status and sort patients by site. Clinicians could also click directly to the patient chart from this report. With the integration in place, Atrius Health proceeded to scale the use of Glooko to a larger portion of the population.

Phase 2: Scale the Solution

Phase 2 of the Glooko pilot was rolled out in five of the Atrius Health obstetrics (OB) practices. The OB practices had cumbersome workflows for collecting diabetes data - the practices...
could not receive non-secure patient emails or PDFs (receiving patient records by fax was the primary method of collecting patient data), so they were very interested in piloting a new solution. Gestational patients were younger on average compared to patients in the endocrine practice and thus were more likely to be comfortable using a technological solution. Glooko was offered in the practice to all gestational diabetes patients or diabetes patients who became pregnant, and 70% accepted using Glooko. With the EHR integration, clinicians in the OB practices quickly adopted using Glooko.

“Glooko was a great solution in streamlining the workflow of the clinicians and tracking the status of these patients.”

Dr. Michael Lee, Senior Medical Director of Clinical Informatics, Atrius Health
Results

Atrius Health is steadily increasing the number of patients using Glooko, now approximately 150. Atrius Health has found that once patients start using Glooko, their daily blood glucose testing frequency doubles, and the increase in testing frequency is sustained for up to 20 weeks after starting Glooko (Fig. 1).

![Daily Test Rate Over Time](image)

Fig. 1. Patients using Glooko double their blood glucose testing frequency, and sustain the testing frequency for up to 20 weeks.\(^2\)
Patient satisfaction was high using Glooko – an Atrius Health patient survey found 100% of patients felt their care team was able to easily follow their diabetes during their pregnancy and 100% of patients felt this type of remote patient monitoring improved their experience with Atrius Health. A vast majority of patients felt syncing their blood glucose readings to Glooko was extremely easy, and sharing their blood glucose readings with their clinicians was extremely easy (Fig. 2).

![Syncing my blood glucose readings from my glucometer was:](image)

![Sharing my blood glucose readings with my care team using Glooko was:](image)

Fig. 2. Atrius Health Patient Survey results show patients felt using Glooko was extremely easy.
Providers also indicated satisfaction with using Glooko – in a provider survey, the majority stated that using Glooko was easier than their previous method of monitoring patients with diabetes (Fig. 3).

![Survey Results](image)

**Next Steps**

With both phases of the pilot accomplishing the goals of proving the technology and scaling the solution, Atrius Health is currently planning the next phase of the Glooko rollout, which will be broadly to the entire endocrine clinic. In this next phase, Atrius Health will take advantage of a Glooko on-boarding program which provides patients with simple, customized instructions and support to get started. In addition, Atrius Health is planning to further integrate Glooko with the EHR, including displaying patient sync activity directly in the patient chart in the EHR.
Conclusion

As demonstrated by Atrius Health, remote patient monitoring of people with diabetes can be an effective way to provide more efficient patient population support, while delivering better outcomes for a population that drives a significant portion of costs for health systems today. To learn more about the Glooko implementation at Atrius Health, watch this webinar featuring Dr. Michael Lee from Atrius Health. To learn about Glooko and remote patient monitoring, visit our Resources page on our website.

About Glooko

Glooko is the world’s leading Unified Platform for Diabetes Management and is trusted by the world’s leaders in diabetes care. Glooko provides an FDA-cleared, HIPAA-compliant Web and Mobile application designed to improve health outcomes for people with diabetes, which in turn reduces costs for payers and the healthcare system. Glooko seamlessly syncs with over 50 blood glucose meters and major fitness and activity trackers and supplies timely, verified patient data such as blood glucose, carbs, insulin, blood pressure, diet and weight data. Glooko’s mobile app enables patients to easily track and proactively manage all aspects of their diabetes care. Glooko’s population management web app and API’s offer diabetes-centric analytics and supplies insightful reports, graphs and risk flags to health systems and payers. Learn more at http://www.glooko.com/ and follow us at Twitter.com/GlookoInc and Facebook.com/Glooko.

1 Glooko Featured Customer Webinar: Atrius Health
2 Glooko data warehouse

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