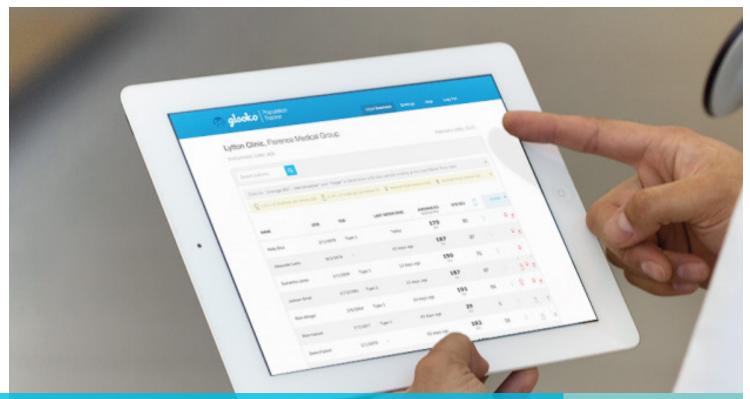
aérasnet

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WELCOME TO THE INAUGURAL ISSUE OF AERASNET



Our goal at Aeras Medical is to keep you abreast of the latest news and best innovations we see in the telehealth space globally and in Singapore through this quarterly newsletter. Telehealth is at an interesting inflection point with the proliferation of Internet of Things (IoT), and the rapid pace of adoption of wireless technology in medical devices. Within Singapore alone, there are many interesting developments, particularly with telehealth identified by the Smart Nation project as a means to manage the increasing burden of major chronic diseases such as diabetes and hypertension that coexist with our ageing population.

Here at Aeras Medical, our telehealth team is involved in a variety of projects and offerings which we will share with you gradually. In this issue, we will put the spotlight on Glooko, our partner in Palo Alto, USA, and its cutting-edge diabetes management platform. We will share the stories of "Emma Weir", a Type 1 adolescent using Glooko to integrate her FreeStyle meter, Omnipod pump, Dexcom CGM, and her Fitbit fitness data into one unified view, and "Papa Chuck", a 88 year old grandfather using Glooko. Finally, we will share some highlights of our Glooko pilot at Khoo Teck Puat Hospital's Diabetes Centre.

AerasNet is a quarterly publication of Aeras Medical (www.aerasmedical.com) covering latest telehealth news and innovations. Aeras Medical is an exclusive partner of Glooko (www.glooko.com)





INTRODUCING GLOOKO -UNIFIED PLATFORM FOR DIABETES MANAGEMENT

Glooko is a mobile app and cloud-based platform which brings together diabetes data (blood glucose levels, diet, fitness, biometrics, insulin and medication) for patients and allow them to share same data with their healthcare providers, who in turn can use the Glooko Population Tracker to track patient level data, and be alerted to at-risk patients. One of Glooko's major attributes is its ability to integrate with multiple devices from multiple brands.

Today, only Glooko has this impressive list of compatible glucometers/CGMs/in sulin pumps/fitness trackers

Please visit www.glooko.com/com patibility/

Plus it is good to know Glooko is FDA-cleared and HIPPA compliant in the USA as well!





HOW GLOOKO HELPED A FAMILY IMPROVE A 88 YEAR OLD GRANDPA DIABETES CONDITION

Scott Bissinger, Customer Success Manager at Glooko, recounted how his 88 year old Grandpa ("Papa Chuck"), who has type 2 diabetes and was recovering from a mild heart attack, was complaining of feeling lethargic and having the need to constantly go to the bathroom. Looking at his paper logbook, they saw that his blood glucose levels were consistently above 200 mg/dl (about 11.1 mmol/l). So the family got an aunt to spend 15 minutes to on-board Papa Chuck to Glooko.

Since then, Papa Chuck has been syncing and sharing his data with the family with impressive progress. His average blood glucose has decreased by 55 mg/dl (about 3.05 mmol/l), and the standard deviation of his readings cut in half. More importantly, he feels much better and has significantly more energy with less visits to the bathroom required!

One key takeaway was how important Glooko was as a tool to bring a whole family together to support a loved one. They would remotely check his readings and give him a call if the readings were high, work with him to make changes to his diet when they learned that certain foods were causing his high readings (such as his breakfast cereal). Papa Chuck also took greater interest in his diabetes care partly because he did not want to let his family down.



EMMA WEIR - THE STORY OF A TYPE 1 ADOLESCENT USING GLOOKO

When Emma started cross-country training, her doctor asked her to use Glooko so he could monitor her intensive exercise regimen. Using the Glooko mobile app, she could sync her FreeStyle meter, Omnipod pump, Dexcom CGM, and her Fitbit fitness data into one unified view.

On Tuesdays, Emma does her longest run of the week, normally 10 miles. From Glooko's Pump & CGM Graph 1 above, you can see she started running between 3-4 pm and ran for about 1 hour and 40 min (see A in graph, data straight from her Fitbit). Before her run, she had a turkey sandwich (B, 42 g of carbs) for lunch and bolused 2.5 units (C). About 30 minutes before her practice, she had a granola bar (D, 18 g of carbs). And during the run, she took two glucose tablets (E, 10 g of carbs). By 5.15 pm, she was done with her run. Her blood glucose (F, data from her Dexcom CGM) started to rapidly descend towards dinner. Emma countered this with chicken pasta (G, 70 g of carbs) for dinner, and bolused 4.6 units (H) of Novolog, 0.4 units less than her Omnipod suggested.

Despite carbo loading, Emma's blood sugar declined to an overnight hypoglycemic event (I). As a response, she had a glass of orange juice (J, 20 g of carbs). This pattern repeated during the following Tuesday's cross-country run.



Emma and her doctor have a shared integrated view of her CGMS, BG, Insulin doses, exercise data and food intake.

Through Glooko, remote consultation and monitoring is made possible.





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The following Monday, Emma reviewed her glucose data with her doctor remotely from her home. She did not have to miss school to go to the doctor, and the doctor did not need to look at separate views for her pump, CGM, and activity. He could see it all in one place using Glooko. The doctor noticed Emma was experiencing Tuesday night overnight hypos and gave Emma guidance on her basal rates, carb intake, and insulin to carb ratio.

The day after (see graph 2), after her cross-country run, Emma bolused a bit less for her usual chicken pasta dinner (K, 4 units Novolog rather than 4.6 units in previous two Tuesday), a 1 unit override compared to the suggested 5 unit bolus by her Omnipod. Per her doctor's recommendation, before she went to bed, she ate a peanut butter sandwich (L, 31 g of carbs). And lastly, she set a temporary basal to 0.3 units overnight rather than her usual 0.7 units. This resulted in her staying in range overnight without any hypo event. Both Emma and her doctor are happy with the results. Made possible by Glooko.

GLOOKO PILOT AT KHOO TECK PUAT HOSPITAL

Khoo Teck Puat Hospital recently concluded an exploratory Glooko pilot for a number of its patients at its Diabetes Centre, and is planning to embark on the next phase shortly.

The pilot involved over 40 participants, selected from one of the following criteria: 1) New insulin starts, 2) Change in medication regimen or 3) Poor glycemic control.

Participants were instructed on use of Glooko by Aeras Medical staff, following which participants were remotely monitored by the clinic for approximately two to three months, and adjustments and advice were given remotely by the clinic when appropriate based on glycemic patterns, and customized flags to identify patients trending towards risk etc.

APN Winnie Chui, from Khoo Teck Puat Hospital, spoke about the Diabetes Centre's experience with Glooko at the recently concluded SingHealth Nursing Conference 2015. Her talk was entitled "Use of 'Glooko' remote glucose sensing in managing people with diabetes - The KTPH experience". The talk concluded on a promising note, stating that remote monitoring is a viable approach with the potential to significantly improve Type 2 patients' clinical and behavioural factors; however, further investigation is required to better understand how the technology actually works to improve lives, while long-term sustainability of outcomes and costs remains open to further analysis. We certainly hope the experience gained from the phase one pilot will drive phase two to be a resounding success!

Richard Lim, a 64 year old retiree and cycling enthusiast, diagnosed 10 years ago with type-2 diabetes and insulin dependent, was one of the participants in the pilot. The following are excerpts:

"I was introduced to Glooko by the Diabetes Centre at Khoo Teck Puat Hospital in March this year, and I have been using it till now. Before Glooko, I used to record my sugar readings in a logbook. I also purchased two other apps to manually record my blood sugar readings. What I liked about Glooko was I could sync all my sugar readings, log my medication, my diet and carb with its food database, connect with my walking and cycling data from my moves app. I could see how they affect each other through Glooko's detailed charts, and make subtle adjustments to my medication. My hypos have also gone down due to Glooko Hypomap's feature, it's a powerful tool for me in improving my hypo awareness. Overall, I found Glooko simple to use, and it has helped me improve my diabetes self management".

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To subscribe to free email copies of AerasNet newsletter, and for all enquiries on Glooko, please contact us at info@aerasmedical.com, leaving us your name and email mailing address.

Thank you!





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