

## Story:

In the last couple of decades diabetic patient care has advanced due to innovations in medical technology. Wearable Glucose Monitoring sensors are now being used to record and monitor patient's blood glucose levels continuously. Insulin pumps are being used to deliver the insulin more precisely when needed. However the physicians would like to get better view of their patient's blood glucose levels through the glucose monitoring sensor data to monitor and advice on administration insulin delivery more precisely and in timely manner. They also would like to have a better view of their glucose level history so they can provide consultation to the patients on the changes in in their regimen and dietary habits and insulin infusion schedule

This App is intended to enable the physicians to view and monitor the blood glucose levels of their patients over the time and also view if the insulin delivery is being administered accordingly in precise levels per the schedule depending on factors such as each patient daily regimen, food intake etc. as opposed to the estimated doses and fixed schedules.

As there are efforts under way to develop implantable insulin pumps and bionic pancreas are under way, this app can be enhanced to gather data and from such devices and monitor the patient condition remotely and centrally by medical care providers and improve the quality of patient care to a greater levels.

# Persona



## Karen

The Endocrinologist

“ I would like to real time info about the condition and history my diabetic patients remotely at any time, so I can determine the most appropriate advise and provide consultation to my patients more efficiently

About

- 42, married with 2 children, 10 years clinical specialist experience in endocrinology
- As an endocrinologist who makes the decisions on patient diagnosis and care, I have to keep the balance between improving the patient care quality and ability to see more patients
- Very busy schedule visiting 3 clinics in a week
- I work with Primary Care Physicians, Nurse practitioners, Medical Equipment technicians and Admins

### Responsibilities

- I am responsible for diabetic patients that consult with me in the clinics
- I am responsible for seeing or advising patients in multiple clinics per week.
- I spend more than half of my time in the offices in clinics and access patient data via computer.
- I also do after hour consultation in case of a need
- I use desk top or tablet to enter and view my patient information

### Needs

- I always need the Patient ID and the associated device# to review patient history of glucose levels and the insulin delivery amounts from insulin pump. It can become hard to locate and view all this information
- I need to record and review the history of insulin pump adjustment done on each patient which is currently entered on a paper.
- I need the ability to view patient glycemic levels instantly since I am away from my desk most of the time and need provide consultation after hours during urgencies

### Main Goals

- Being the person who makes the decisions on patient diagnosis and care, I have to keep the balance between improving the patient care quality and t to see more patients per day.
- Better management of actual time spent with patients in each clinic







### Pain Points

- Can't view patient blood glucose level and insulin usage history quickly anytime, anywhere and in a way to analyze easily to make decisions.
- Gathering patient history is somewhat complex, and is time consuming.
- Need to see the weekly view patient's blood glucose levels and insulin usage in the form of graphs

## Point of View


As an Endocrinologist I need a better way to access and view my patients' blood glucose levels and insulin delivery history centrally in real time and in an easy to use interface so I can provide quality care more efficiently.

## User Experience Journey

<p><b>ACTIONS</b></p>	<ul style="list-style-type: none"> <li>Reach clinic.</li> <li>Review patient schedule and Charts</li> </ul> 	<p><b>Find out list of patients with blood glucose level history that need additional review</b></p> 	<p><b>Check the weekly history of blood glucose level and insulin delivery details of specific patients</b></p> 	<p><b>Review the device readings in charts in central monitor.</b></p> 	<ul style="list-style-type: none"> <li>Make observations</li> <li>Prepare consulting notes</li> </ul>	<p><b>See patient and provide consultation based on the study of charts.</b></p> 
<p><b>MINDSET</b></p>	<ul style="list-style-type: none"> <li>How is the patient schedule?</li> <li>Hope it is manageable and I can spend quality time with patients</li> </ul>	<ul style="list-style-type: none"> <li>Any patients with abnormal readings that need special attention?</li> <li>I wish there is an easy way to view summary of such patients with alerts</li> </ul>	<ul style="list-style-type: none"> <li>Let me see the readings from glucose monitoring sensors and insulin pump</li> <li>It would be great if I could see all this info from the same App</li> </ul>	<ul style="list-style-type: none"> <li>Hmm..I have to see the readings in graphs form in equipment central monitor</li> <li>Can I access this info and view in my computer or tablet?</li> </ul>	<ul style="list-style-type: none"> <li>Let me note down my observations so I can discuss and advise my patients</li> </ul>	<ul style="list-style-type: none"> <li>At last ! I got enough info needed to discuss with patient</li> </ul>
<p><b>FEELING</b></p>						
<p><b>TOUCH POINTS</b></p>	<ul style="list-style-type: none"> <li>➤ Patient schedule print out</li> <li>➤ Admin staff and Nurse staff</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computer</li> <li>➤ Patient charts</li> </ul>	<ul style="list-style-type: none"> <li>➤ Patient history charts</li> <li>➤ Central monitor for Glucose monitoring sensor data</li> </ul>	<ul style="list-style-type: none"> <li>➤ Central monitor for Glucose Monitoring sensor data and Insulin pump</li> </ul>	<ul style="list-style-type: none"> <li>➤ Patient Charts</li> <li>➤ Computer</li> </ul>	<ul style="list-style-type: none"> <li>➤ Patient</li> </ul>

# Continuous Glucose Monitor & Insulin Pump

SAP
Connected Goods v



### CGM and Insulin Pump

DXCG4-19278

ANVI-187656

Blood Glucose Level

## 126 mg/dl

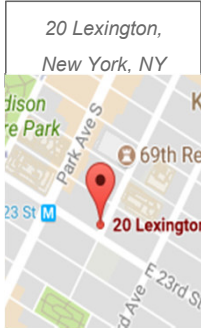
● Mapped ● Connected ⚡ On
 

John D, Patient


Notify

Replace CGM sensor in 10 days	2 Hrs ago
Insulin Pump suspended	180 min ago
Insulin vial has 50% capacity	80 min ago

20 Lexington,  
New York, NY



#### Glucose Level



#### Insulin delivery

