

Improving Diabetic Patients Care by Connecting Doctors and Patients Daily

Aegis Digital Health builds innovative digital health solutions to improve patient care. SweetSpot, Aegis' first product provides clinicians data for their diabetic patients that is actionable and accessible.

TOTAL METRICS IN LAST 14 DAYS

88% Time in Range



15 Hypo Events
⚙️ 2 / 🌙 13



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THE WHAT

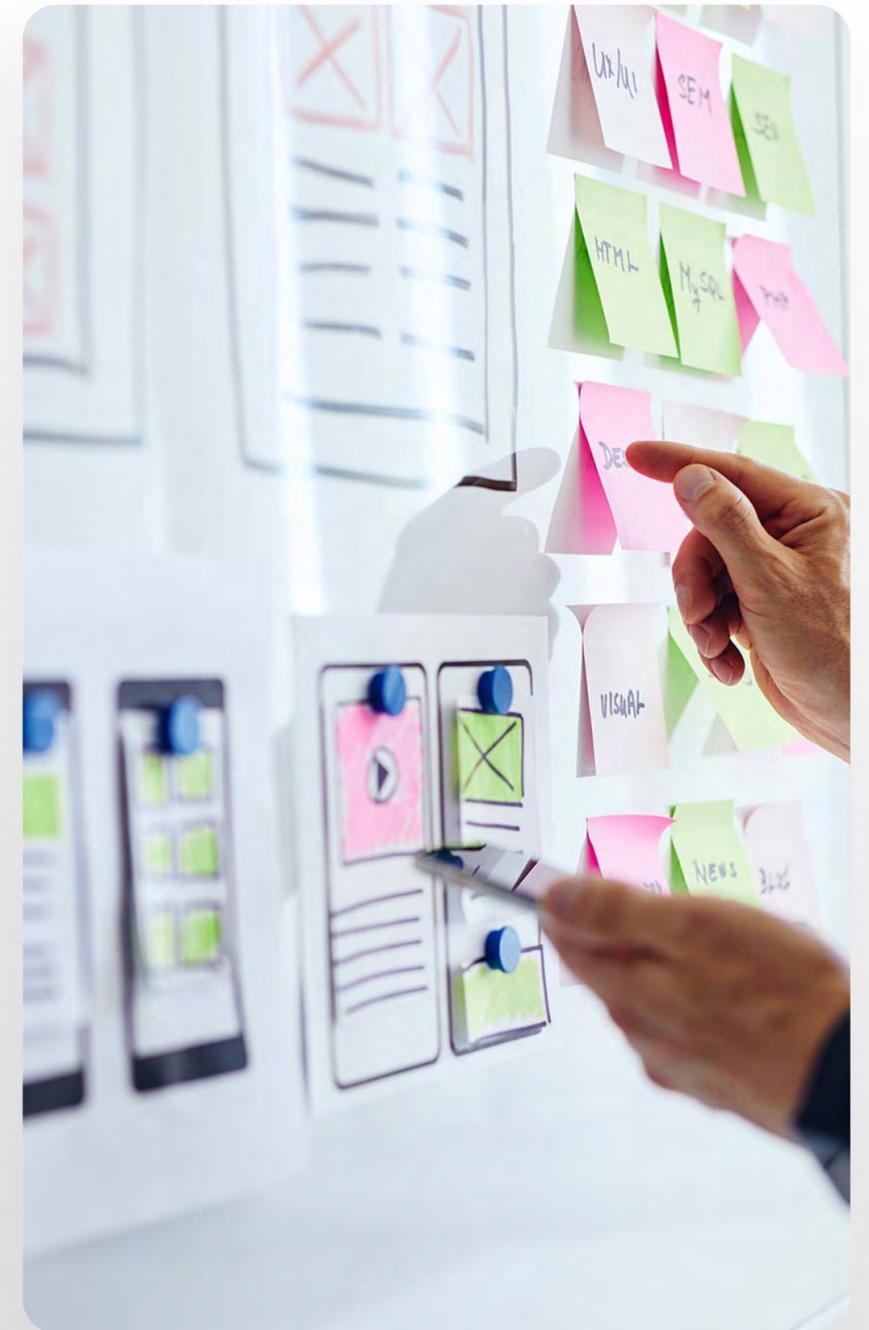
Build a SaaS Platform from the Ground-Up

Aegis Digital Health needed a partner to conceptualize, design, and develop an MVP solution for its SweetSpot platform. SweetSpot would be used by physicians and their staff daily to monitor diabetic patients.

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THE WHY

Improve Diabetic Patient Outcomes

SweetSpot enables clinicians to review data from remote patient monitoring of devices such as glucose monitors and insulin pumps in one unified platform. Better data means better care.



Aegis Partners with Parux to Design & Develop their Platform

We worked closely with Aegis team to conduct user experience research which fed full-prototyped designs. These designs were then turned into an MVP application with data feeds from multiple sources.



Ideation



UX Design



UI Prototyping



Data Management



Development

OUR USER

Meet Dr. Alexander

Dr. Alexander has an endocrinology practice with hundreds of diabetes patients using continuous glucose monitors (CGMs). Each week, he must log into each CGM manufacturer's portal and download PDF reports for each patient. Each PDF then must be manually reviewed by his team for patients that are at-risk with out-of-range numbers.



Personality

Tech Savvy



Analytics Centric



Open to Innovation



Organization



Pain Points

- Too many logins to remember across all platforms and specifically every CGM manufacturer.
- Unable to be proactive with remote patient monitoring to improve outcomes.
- Hard to coordinate care across team.
- Missing out on new revenue streams for remote patient monitoring.



THE PROBLEM

Clinicians are Overwhelmed

Clinicians are overwhelmed with data from diabetes devices – CGM (glucose monitors) and insulin pumps. This data is great but comes at a cost – it's time-consuming retrieving and analyzing data from multiple device portals. Each patient's data requires a separate download and review. It's a slow and laborious process.

This time commitment limits how often data is downloaded, which is typically done during in-clinic visits. Patients who are out of range that long can be at risk.

In addition, clinics can increase revenue by conducting remote patient monitoring. However, billing is complicated and recording reviews are often missed.

Research Overview

A key to building a successful platform was to identify the key pain points of healthcare professionals with diabetic patients. Our research included extensive interviews with endocrinologists and other clinicians, as well as administrators and managers. We learned:

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Managing diabetes patient data is **slow, cumbersome** and largely a manual process.

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Practice staff are busy, and workflows were **inefficient and burdensome.**

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This can take hours, and it is easy to miss a data point that might need addressing which could **result in a health crisis** for that patient.

“

For each patient, clinicians need to **log into one of several portals**, download PDF reports, and scan them for problems such as patients who are out of range.

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Managers and administrators **struggle to get proper billing information.** Busy clinicians often miss creating notes and coding, which was significant lost revenue for the practice.

THE SOLUTION

Introducing SweetSpot



SweetSpot gives clinicians a simple, clean dashboard view of all their diabetes patients that highlights those that are at risk with out-of-range numbers. Data is downloaded daily, making interventions with at-risk patients far faster than before.

The screenshot displays the SweetSpot dashboard interface. At the top, there are navigation tabs: PATIENTS (selected), BILLING, REPORTING, and PRACTICE SETTINGS. A user profile for 'HI, MASON' is visible in the top right corner. Below the navigation, there are search and filter options: 'FIND PATIENT' with a search bar, 'REPORT TIMEFRAME' set to '14 Days', and 'SORT' set to 'Alphabetical A-Z'. The main area shows a list of patients with the following details:

Name	Device	Last Data Sync	Last Review	Last 14 Days Time in Range	Changes Since Last Review	Billing Eligibility	Actions
Armondo, Michael DOB: 01/15/1968	Dexcom CLARITY	Yesterday	4 days ago	V. LOW: 1%, LOW: 4.1%, IN RANGE: 82%, HIGH: <1%, V. HIGH: <1%	V. LOW: 15.0% → 15.0%, V. LOW: 1.2% → 1.1%	CGM: READY, RPM: NEED DATA	REPORT
Donovan, Jessica DOB: 04/05/1969	FreeStyle Libre	Yesterday	Yesterday	V. LOW: 0%, LOW: 1%, IN RANGE: 82%, HIGH: <1%, V. HIGH: <1%	V. LOW: 15.0% → 15.0%, V. LOW: 1.2% → 1.1%	CGM: READY, RPM: NEED DATA	REPORT
Graves, Kevin DOB: 03/09/1972	Dexcom CLARITY	3 Days Ago	1 Month Ago	V. LOW: 2%, LOW: 6%, IN RANGE: 60%, HIGH: <1%, V. HIGH: <1%	V. LOW: 15.0% → 15.0%, V. LOW: 1.2% → 1.1%	CGM: READY, RPM: COMPLETED	REPORT
Howe, Ruth DOB: 01/11/1980	Medtronic	Last Week	Never	V. LOW: 1%, LOW: 4.1%, IN RANGE: 82%, HIGH: <1%, V. HIGH: <1%	V. LOW: 15.0% → 15.0%, V. LOW: 1.2% → 1.1%	CGM: NO CONSENT, RPM: NO CONSENT	REPORT
Lau, Lisa DOB: 07/15/1958	FreeStyle Libre	Not Connected	5 Days Ago	No Data Patient has not connected data.	No Data Patient has not connected data.	CGM: NO CONSENT, RPM: NO CONSENT	REPORT
McAfee, Cindy DOB: 11/02/1975	Dexcom CLARITY	Yesterday	5 Days Ago	V. LOW: 1%, LOW: 4%, IN RANGE: 82%, HIGH: <1%, V. HIGH: <1%	V. LOW: 15.0% → 15.0%, V. LOW: 1.2% → 1.1%	CGM: COMPLETED, RPM: COMPLETED	REPORT
Newton, Samantha	Dexcom						

A tooltip for Lisa Lau indicates 'Libre Status: Pending'. On the right side, a 'Recently Reviewed' sidebar lists patients viewed in the last 24 hours: Janice Rome, Michael Stewart, Miles North, Cindy Steen, and Magnus Lowe.

UX Flows & UI Prototyping

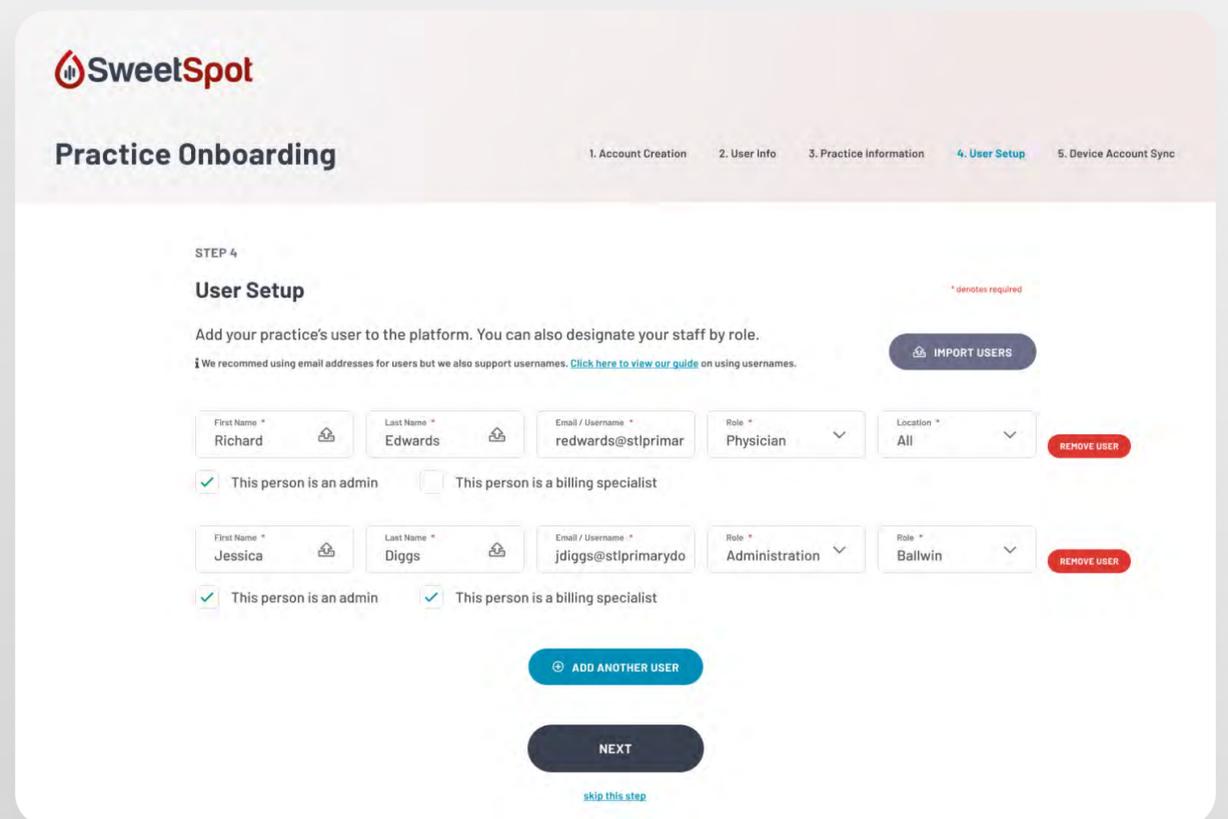
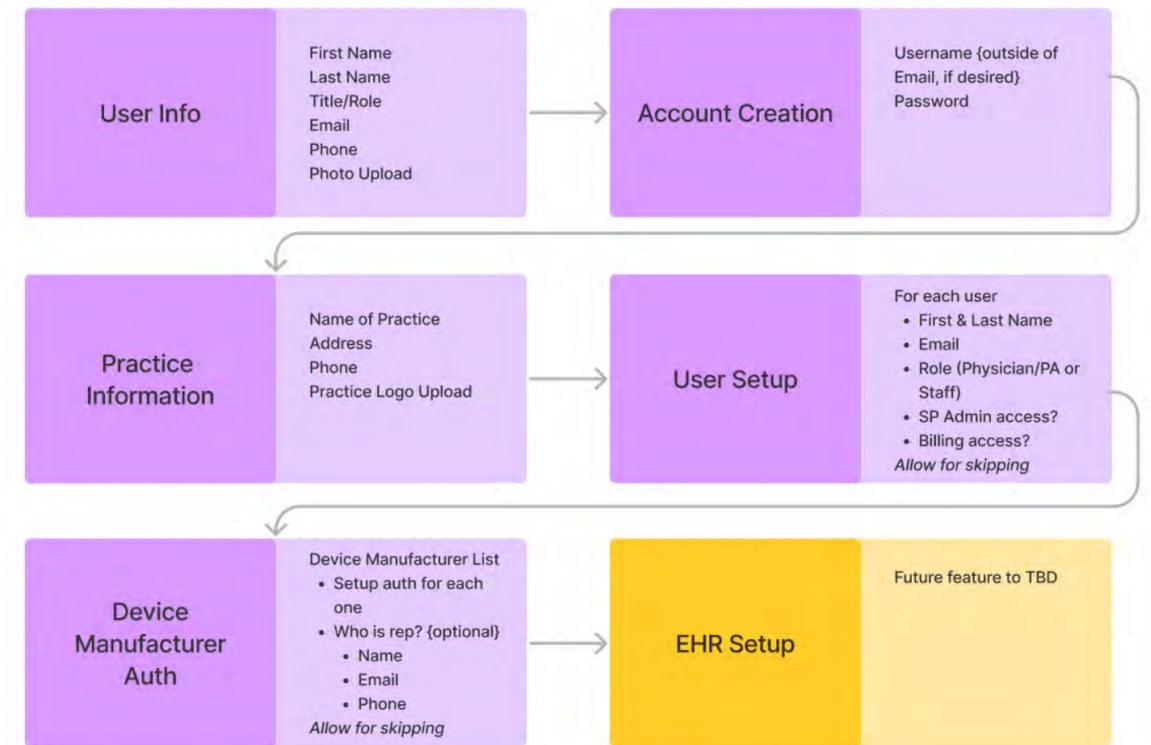
Creating a great user experience and user interface was key to the success of the platform. Throughout the design process, continual feedback with users was used to improve the interface and workflows.

The challenge was to create a dashboard that allowed clinicians to quickly see key data points for each patient within their practice. The data is complex and voluminous, so it was critical to condense that data to the key actionable metrics.

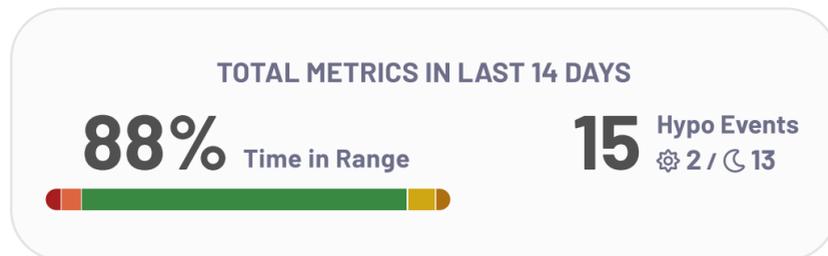
A tiered system allows clinicians to see topline data points, and to drill down for more information. And the original full PDF report is available with a click.

Recording notes is also now far easier, and more accurate. Previous systems required users to view reports and record notes and coding on separate applications. SweetSpot allows notetaking and coding to be done on the same platform, which is far more accurate and less time consuming.

Practice Onboarding Flow

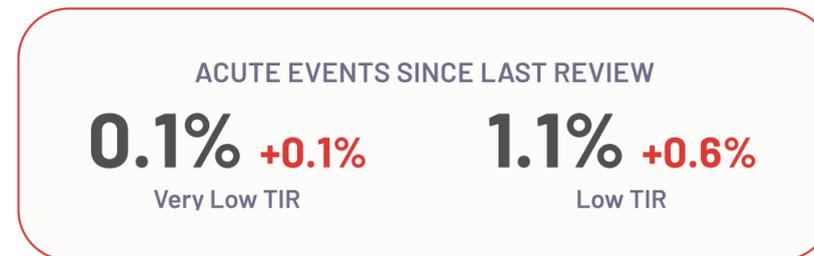


Informative UI to Improve Reviews



The Dashboard is the Heart of the Platform

At a glance, clinicians can quickly see which patients are in range and which are not. Out-of-range patients are clearly highlighted showing who needs further analysis or intervention.



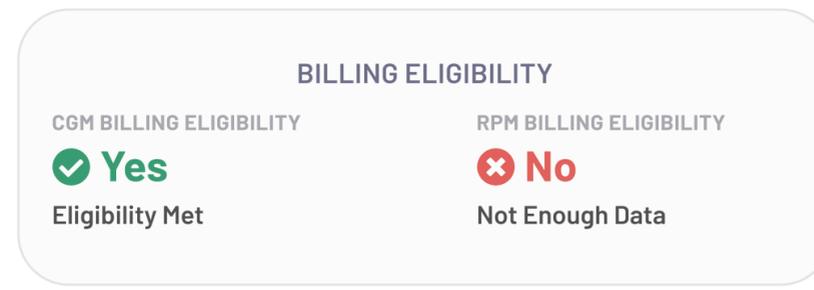
Easy Detailed Patient Reviews

Patient reviews are easily done through the patient details screen. Average Glucose Levels, Time-in-Range, Sensor Usage and more are displayed. Notes are entered, and billing codes applied.

PATIENT NAME	CODE DATE	CODE #	REVIEW TYPE	CODE DESCRIPTION	RECORD	BILL
<input type="checkbox"/> Armando, Michael DOB: 01/15/1968	01/06/22	95253*	Remote	Remote Patient Monitoring w/ Staff Review	<input type="checkbox"/> RECORD	<input checked="" type="checkbox"/> BILLED
<input type="checkbox"/> Armando, Michael DOB: 01/15/1968	01/06/22	95251*	Remote	Remote Patient Monitoring w/ Staff Review	<input type="checkbox"/> RECORD	<input type="checkbox"/> BILL
	01/06/22	95251*	In Office	In Office Review	<input type="checkbox"/> RECORD	<input type="checkbox"/> BILL

Streamlined Billing

As each patient is reviewed, SweetSpot tracks that activity. Because reviews are recorded in real time, missed billings are a thing of the past, increasing practice revenues dramatically.

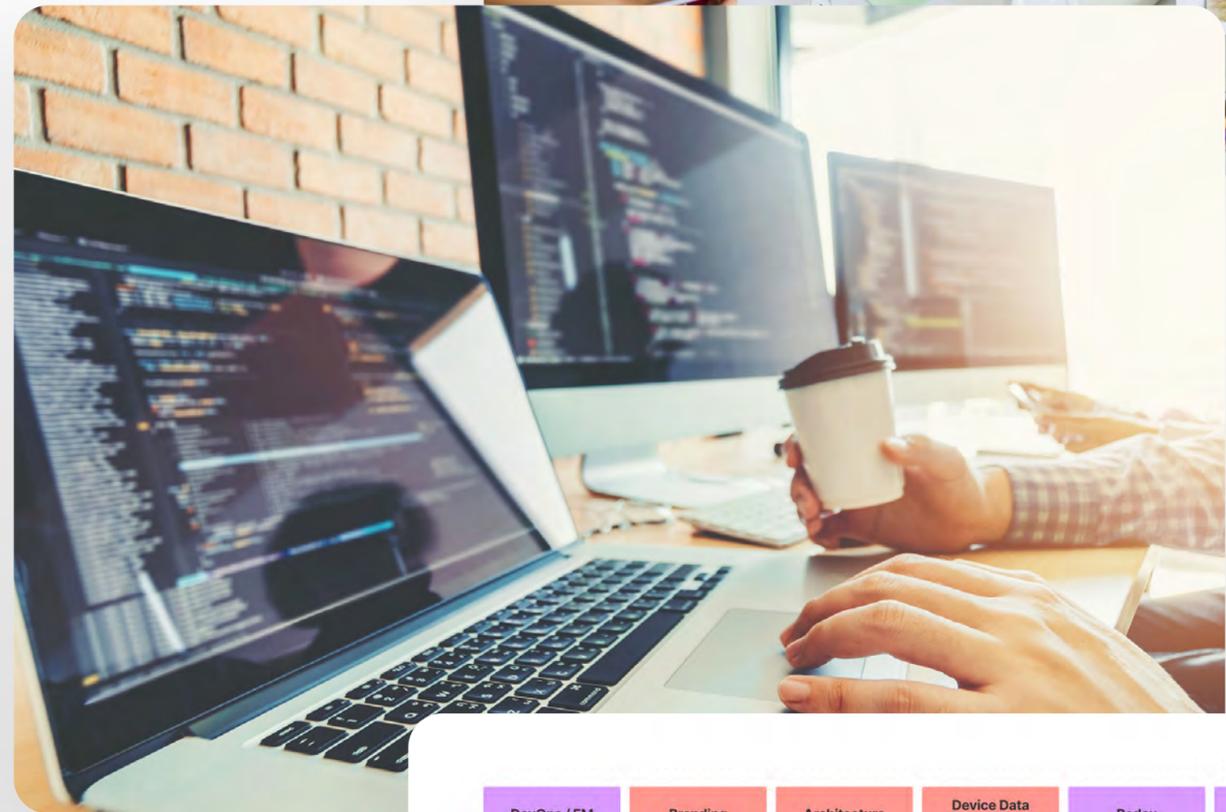


Easy Patient Onboarding

All patients must consent to remote monitoring and data usage. SweetSpot makes it easy to manage that process. The dashboard shows who has consented, who has denied it, and who is pending.

Building the MVP Platform from the Ground-Up

In addition to user experience research and user interface prototyping, our developers began working on the scalable cloud-based solution for the platform. Development solutions included data warehousing, custom patient-monitoring, billing algorithms, backend and front-end framework implementation. The goal was to build a Minimal Viable Product (MVP) platform that would scale with SweetSpot.



DevOps / EM	Branding	Architecture	Device Data Integrations	Redox	Notifications
<ul style="list-style-type: none"> Rituals Grooming Sprint Planning Retros QA/Regression Unit Testing Feedback Loops UX Management PM/Basecamp Walkthroughs 	<ul style="list-style-type: none"> Logo Brand Guide Design System Moodboard 	<ul style="list-style-type: none"> ERD System Device Data 3rd Party Services Repo/Staging Environments Front End Scaffolding Migration Models Establish Framework Prod Environment Setup 3rd Party Tool for Data Viz 	<ul style="list-style-type: none"> Integrations Devices Carelink (Medtronics) POC Done Clarity (Dexcom) POC DONE Eversense (Senseonic) LibreView TBD <p>Post MVP? Need direction</p> <ul style="list-style-type: none"> Insulate Provided Gluco (pump) T-Connect <p>Additional Security Creds</p> <ul style="list-style-type: none"> ex: 2Auth 	TBD	<ul style="list-style-type: none"> Dashboard Report/Record Billable Review Onboarding SS Admin
Onboarding	Dashboard	Report Detail Record	Billable Review	Analytics / Metrics	Profile / Acct Settings
<ul style="list-style-type: none"> Wireframing UI Prototyping Front End Back End Feedback Updates Non-Finished Loops Users Devices Sync Issues 	<ul style="list-style-type: none"> Wireframing UI Prototyping Front End Back End Feedback Updates 	<ul style="list-style-type: none"> Wireframing UI Prototyping Front End Back End Feedback Updates Offline/Print Review 	<ul style="list-style-type: none"> Wireframing UI Prototyping Front End Back End Feedback Updates Note: Automation of Billable Codes (2) Alpha Billable Statuses TBD Billed Created Processed Collected Billable Role (editing) All other read only 	<ul style="list-style-type: none"> Wireframing UI Prototyping Front End Back End Feedback Updates Define Metrics Feedback loops 	<ul style="list-style-type: none"> Wireframing UI Prototyping Front End Back End Feedback Updates Add Users and Devices Password Reset

Scalable Development Solutions



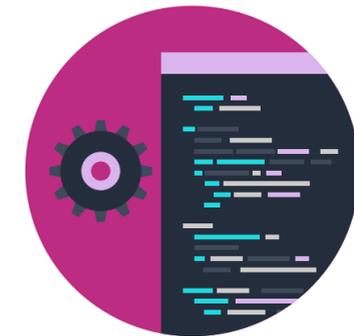
Data Management

To provide medical clinicians with a unified platform, the patient data needed to be aggregated from each of the Continuous Glucose Monitoring platforms. Our data management team worked to create an robust solution that took data from each provider and transformed them into one unified, secured database.



Custom Algorithms

Once patient data was pulled from the CGM manufactures, the platform needed to normalize patient data into a uniform scoring system. We developed a custom algorithm that analyzes each patient and assigns risk ratings based on their data.



Backend and Frontend Development

The development team combined the data and algorithmic solutions into a cloud-based platform. Using an API-first methodology, the platform leveraged Laravel and React to build a responsive, and scalable platform that makes managing patient care easier.

A Successful MVP Launch with Select Practices

In three months, Parux helped Aegis conduct user research, created full application prototypes, and launched a production-ready MVP application. Aegis started to onboard select clinics and the application received glowing feedback. SweetSpot has proven to be a valuable tool for the care of diabetes patients.

KEY RESULT

- Aegis preliminary analysis shows that patients with poorly controlled diabetes had improved glycemic control
- after participation in SweetSpot's remote patient monitoring.

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In a matter of 3 months, SweetSpot has already proven to be very beneficial in the daily management of our patients on CGMs and insulin pumps.



Dr. Alan Rauba

Endocrinologist, Jefferson City Medical Group

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Working with Parux was an amazing experience. They were our partner from conceptions through building the base of or platform.



Stephen Von Rump

Aegis CEO