Eazy-e® App

- Main Page
- HBA1C
- Blood Glucose
- Weight
- Step Count

Designed by amazing ppl:
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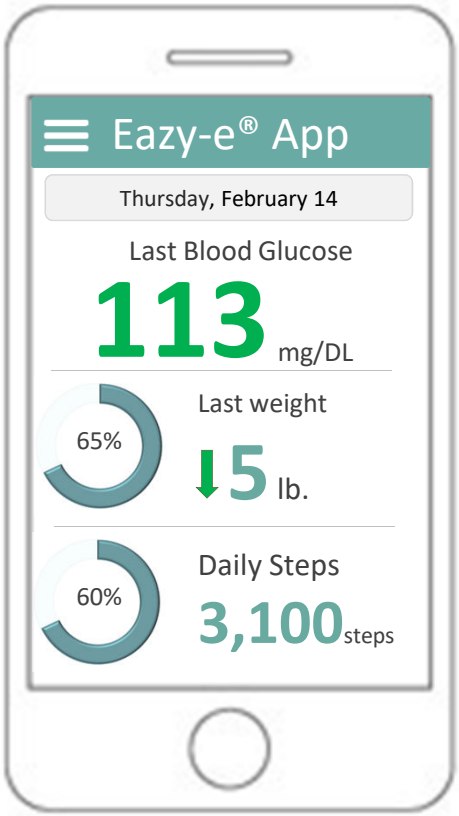
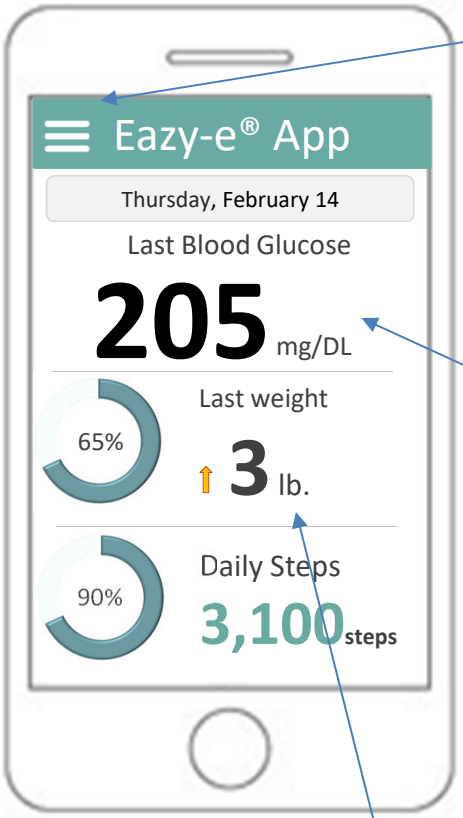




Menu button:
The user can access the main menu clicking here (next slide).

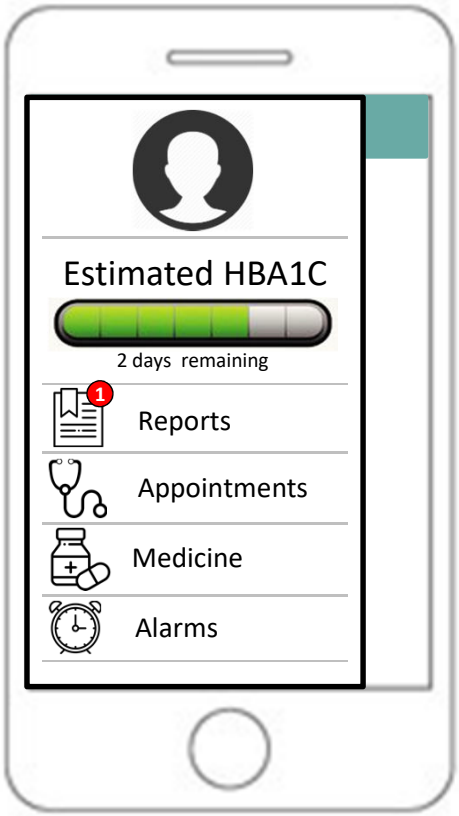
The level of glucose is going to be shown in green numbers when the values is inside users parameters. If not, is going to be shown in black. The user could modify this parameters clicking on the indicator or via the menu

The main screen show the 3 principal variables:

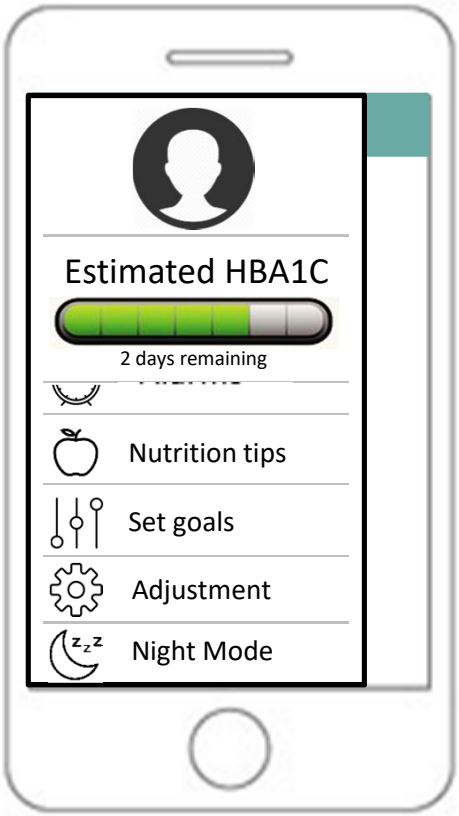
- Blood Glucose [showing the last measure taken],
- Weight [A delta between last weight and before last].
- Steps [The number of daily steps]

Weight and Daily steps have a 'Goal progress bar'. The goals are going to be set by the user. In the case of weight, the real goal is going to be subdivided in several intermediate values. This allow the user to have accessible goals, favoring motivation. **Each of these metrics is clickable to view visualizations.**

Last weight: calculated by subtracting the last weight from the cellular body scale from the previous weight.
We decide not to use total weight because that could be discouraging to the users given their weight problems
To not demotivate the user the arrow showed indicating weight increase is smaller.



The menu has several options.
It would show the user's profile picture (customizable). Below it would show a progress bar indicating the amount of continued days needed to estimate the HbA1c. The report button would show a notification when a new report is ready. The user could access to older reports. Other options will be available as future and past appointments (with notes from the doctor). Medicine (brand and type, quantity, dose needed per day). A option to set personalized alarms.

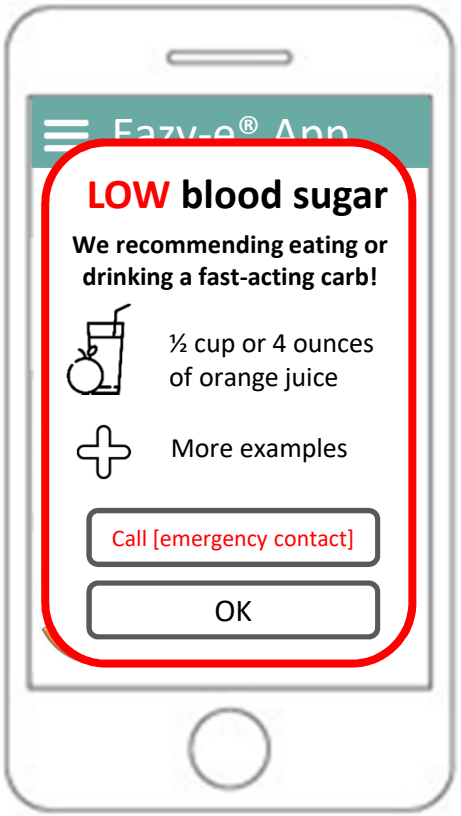


There would be 'Nutrition tips' button where the user could see what aliments is allowed to eat and other tips to have a good diet.

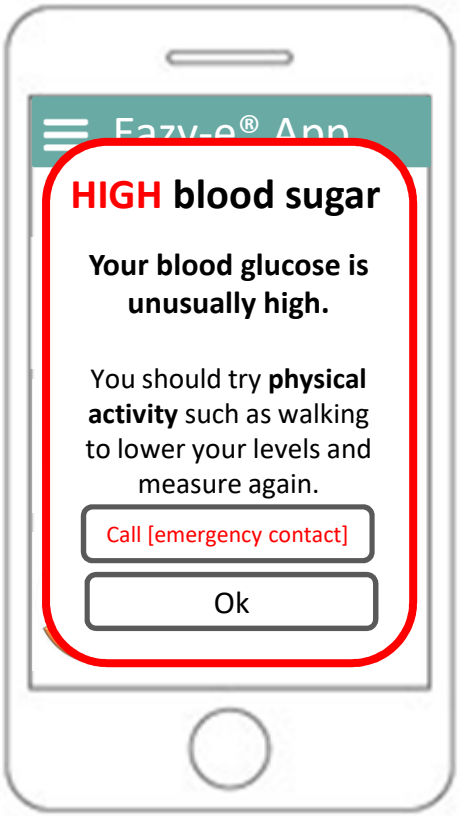
The user would be able to customize the app changing things as fonts color, size , and background.

Weekly Report

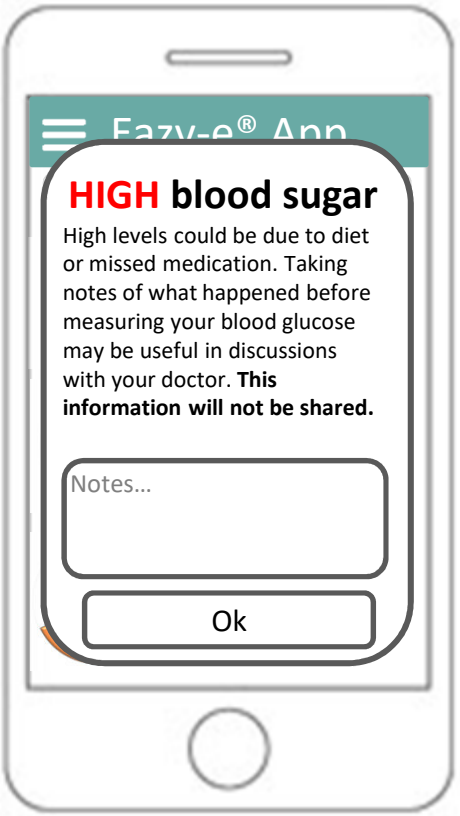
- https://docs.google.com/document/d/1NHDQhWYo9kKfZ27zSX-Ims4T1s5hwWt9sYpNXGr5qZ8/view



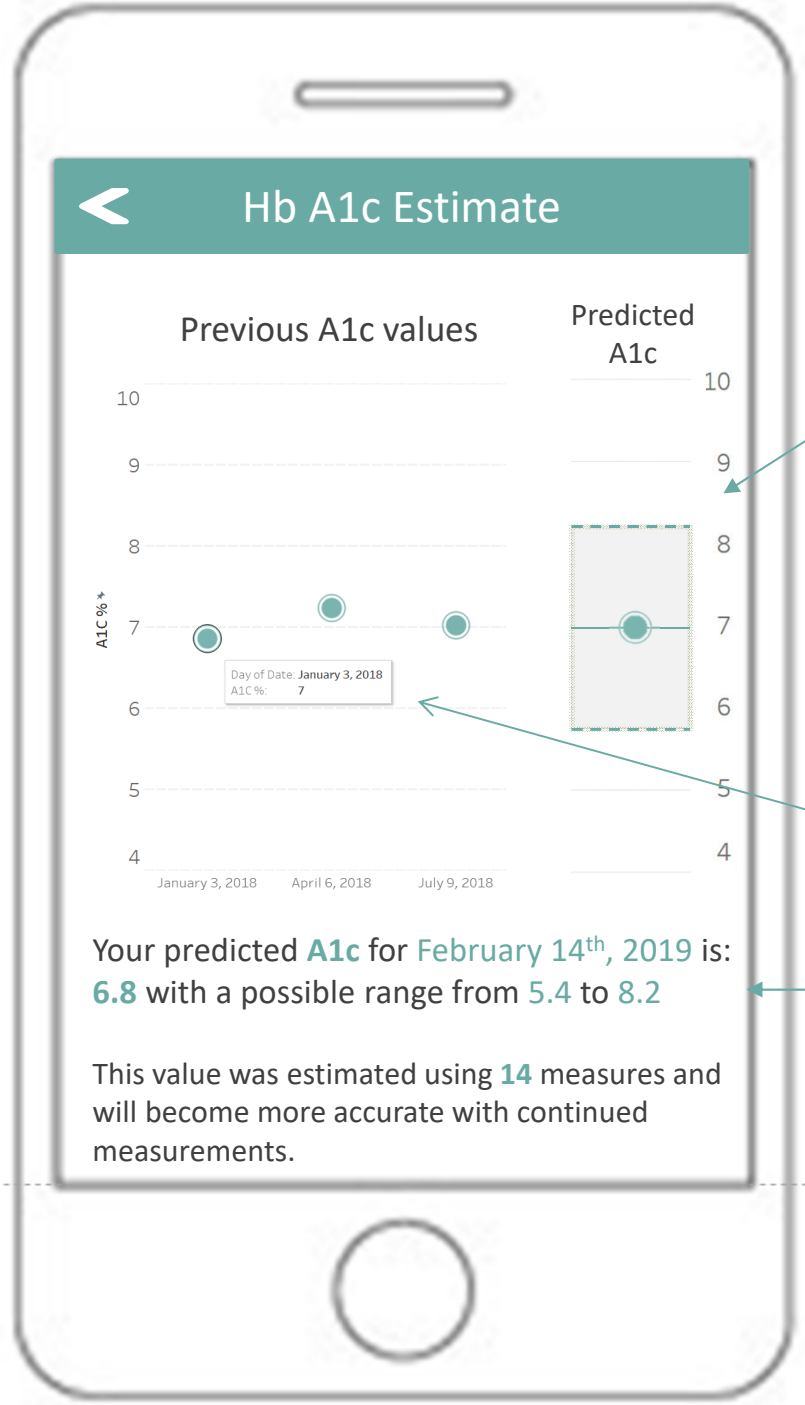
Notes:
+ button shows more advice, e.g.
½ cup or 4 ounces of regular soda (not diet)
1 tablespoon of sugar dissolved in water.
1 tablespoon of honey or maple syrup.
5 or 6 hard candies, jelly beans, or gumdrops.
1 tablespoon of cake frosting.
2 tablespoons of raisins.
½ cup of applesauce.



Notes:
The alarms are automatically triggered when the values of blood sugar are below or above a medical emergency threshold.



Notes:
The user can access to a detailed log diary to see when and what he did before getting an unusual value. This information would be private, but user could choose to share this information with his doctor to try to detect a pattern.



An A1c value would be estimated if the patient measures his blood sugar level at least one time per day during & days in a row.

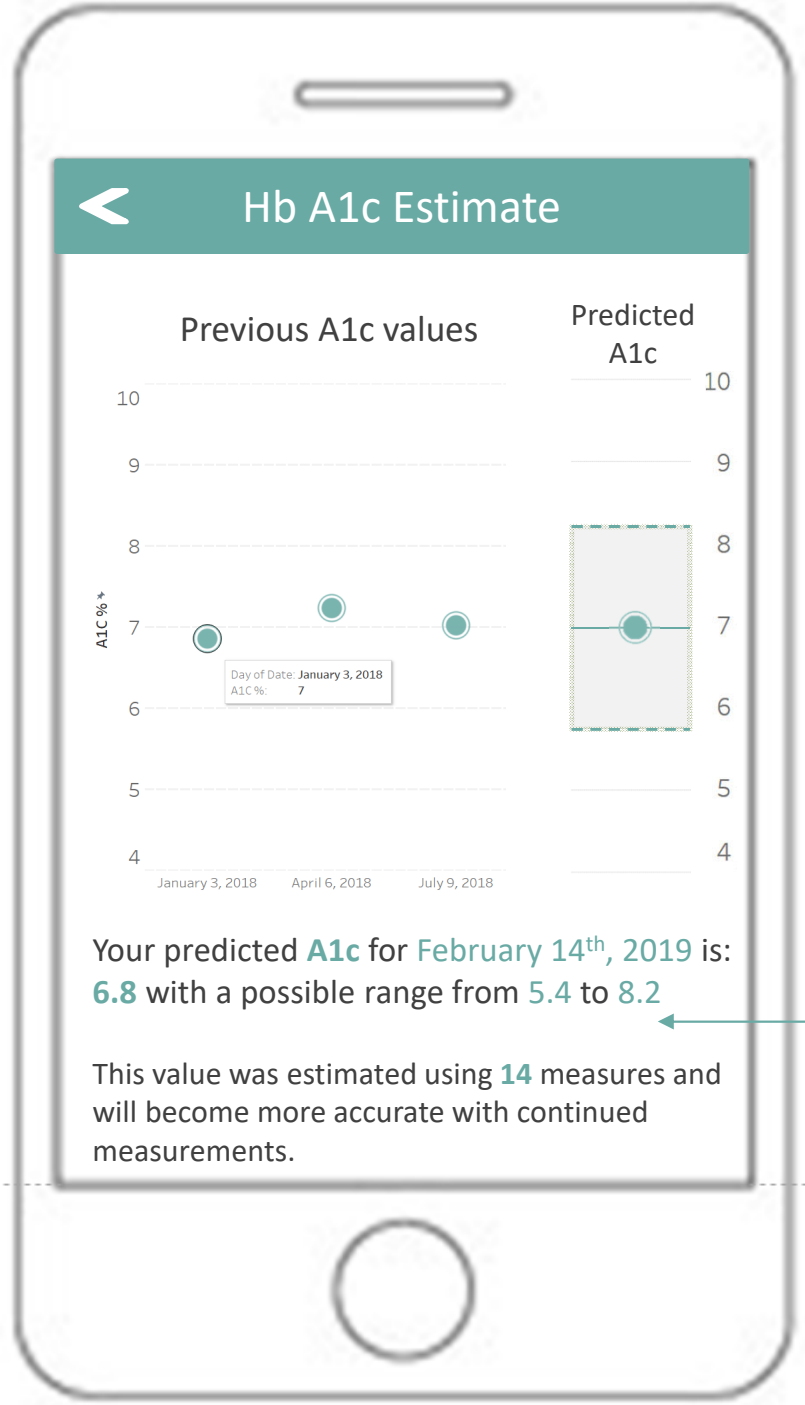
Patients can interact with the visualization by clicking each bar.

The date of the next A1c is modified automatically when the doctor/nurse set the new appointment.

Notes:

HB a1C register

1. Calculations: The values on the left are going to be the lab result from a patient's previous A1C tests. This data would be provided by the doctor using an API provided by the app.
2. The value on the right shows the estimated A1C. This value is calculated using the average glucose (AG) recorded by the app and applying a estimator (Rodríguez-Segade, S., Rodríguez, J., Paz, J. M., & Camiña, F. (2009). Translating the A1C assay into estimated average glucose values: response to Nathan et al. *Diabetes Care*, *32*(1), e10-e10.



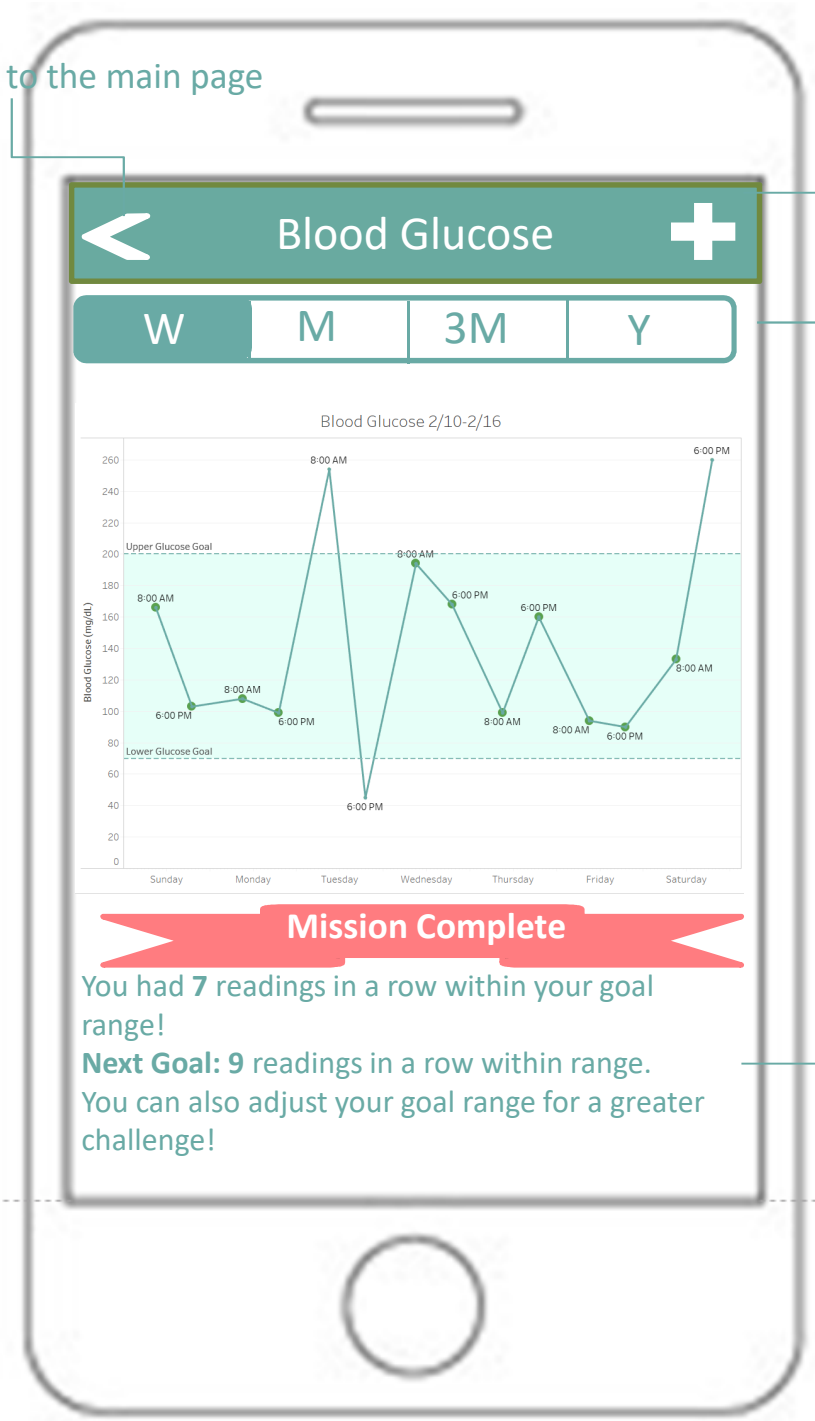
A1C updates every 7 days.
The range becomes narrow with more data. This would motivate the user to continue measuring himself.

The next appointment, expected A1C value, range and Number of measures are displayed and highlighted to agile user's interpretation.

Notes:

HB a1C register

1. Calculations: The values on the left are going to be the lab result from patient's A1C test. This data would be provided by the doctor using an API provided by the app.
2. The value on the right shows the estimated A1C. This value is calculated using the average glucose (AG) recorded by the app and applying a estimator (Rodríguez-Segade, S., Rodríguez, J., Paz, J. M., & Camiña, F. (2009). Translating the A1C assay into estimated average glucose values: response to Nathan et al. *Diabetes Care*, *32*(1), e10-e10.



Back to the main page

Add: Customize Goals for Patients

Change time frame (day/month/3month/year) for step count

Patients can interact with the visualization by clicking each point to view exact reading level, time, and date

If patient accomplishes goal of the week, he/she will receive a badge.

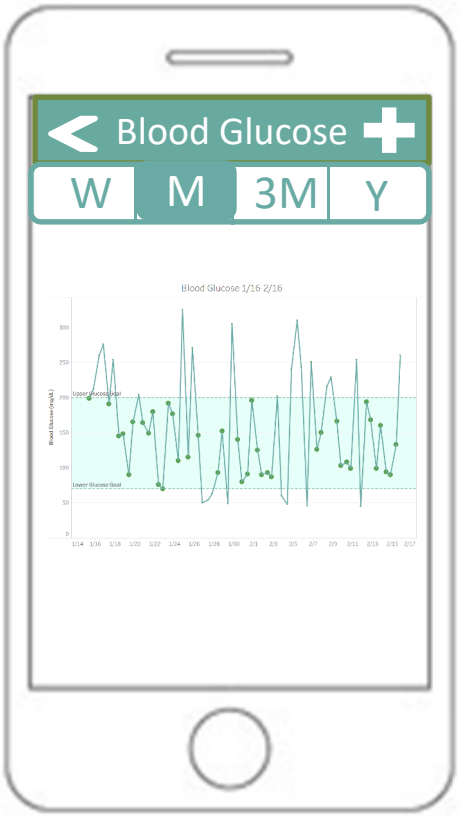
Notes:

1. This is an interactive visualization for blood glucose.
2. User specifies a goal range for their blood glucose with advice from their doctor.
3. Data Fields Used: Blood glucose reading and timestamp from iHealth. Points highlighted with binary variable based on user defined goal range.

Notes:

Weekly blood glucose readings

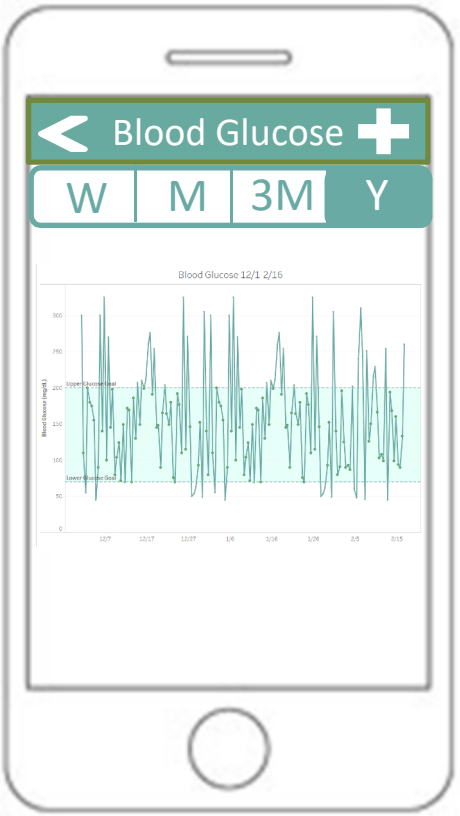
1. Calculations: Binary variable for whether reading is within user defined goal range used to highlight points
2. Data Fields Used: Blood glucose reading and timestamp from iHealth. Limited to last 7 days
3. Shaded region is user defined goals for blood glucose range



Notes:

Monthly blood glucose readings

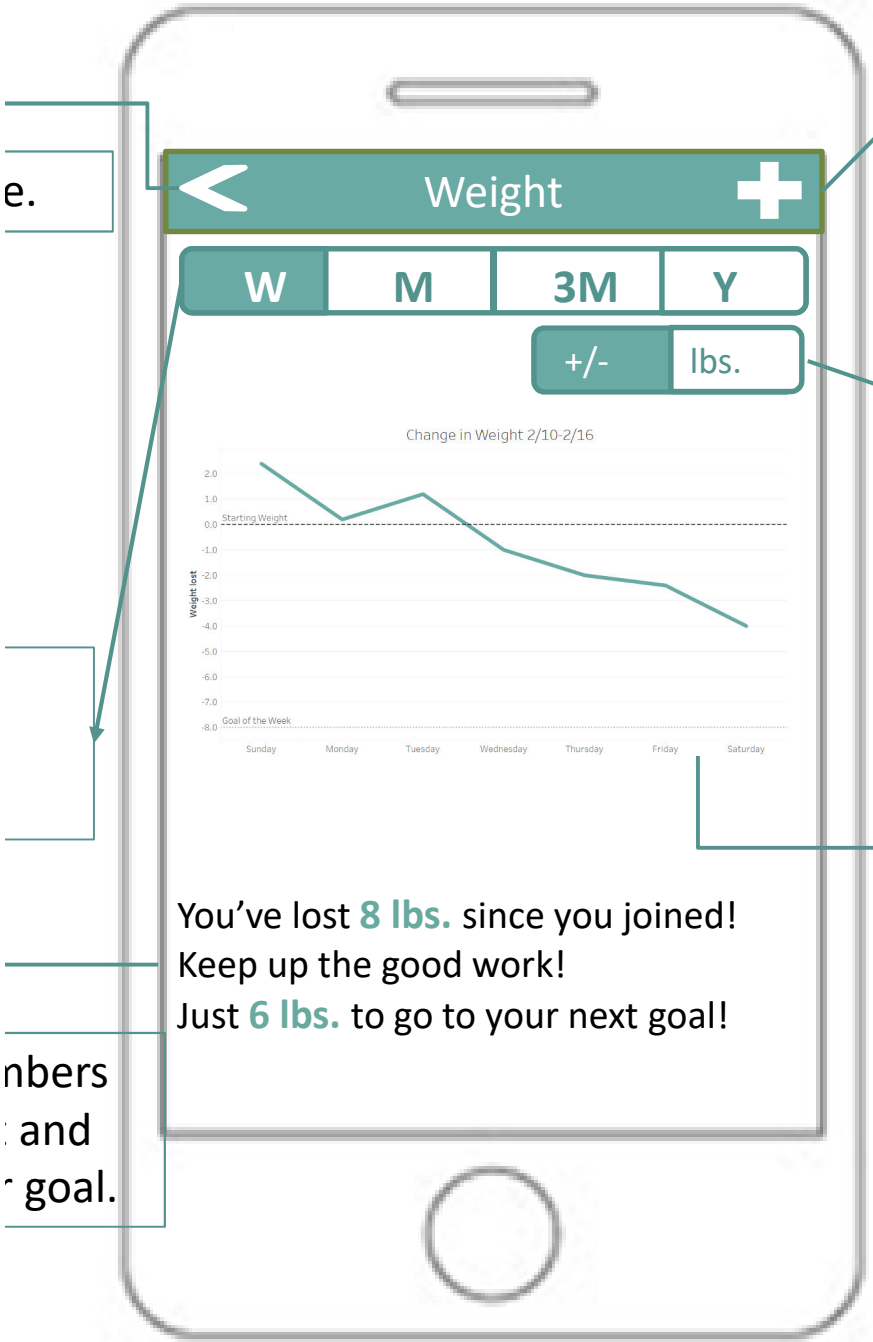
1. Data Fields Used: Same as weekly, but filtered to last month of data. If user has less than a month's data, all available data used



Notes:

Yearly blood glucose readings

1. Data Fields Used: Same as weekly, but filtered to last year of data. If user has less than a year's data, all available data used
2. Not shown: (3M) 3 Months of data. Useful because this is timespan used to calculate HbA1c



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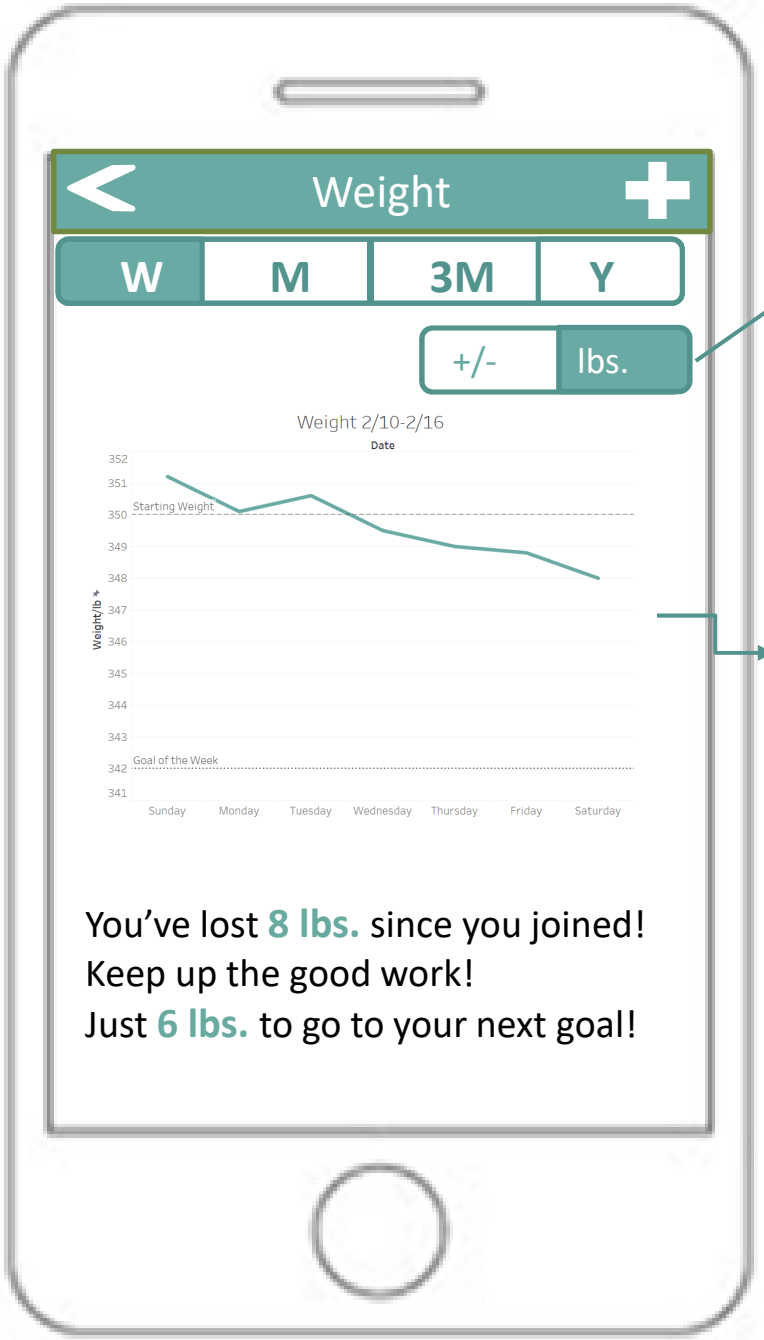
goal.

Button to customize step goals for patients.

List of ways to present the data(absolute value or decrease value). Patients may find demotivating to view their weight in terms of current weight, so we elect to show their change in weight since beginning use of the app instead. However, they could choose to display the raw numbers if they want to. Here we display the situation of the weight lost.

Weight data of a single day is plotted in a dot. The X axis is time and the Y axis is the weight lost. The calculation of the weight lost is to deducted today's weight from original weight. The reference line is the weight when the goal was set.

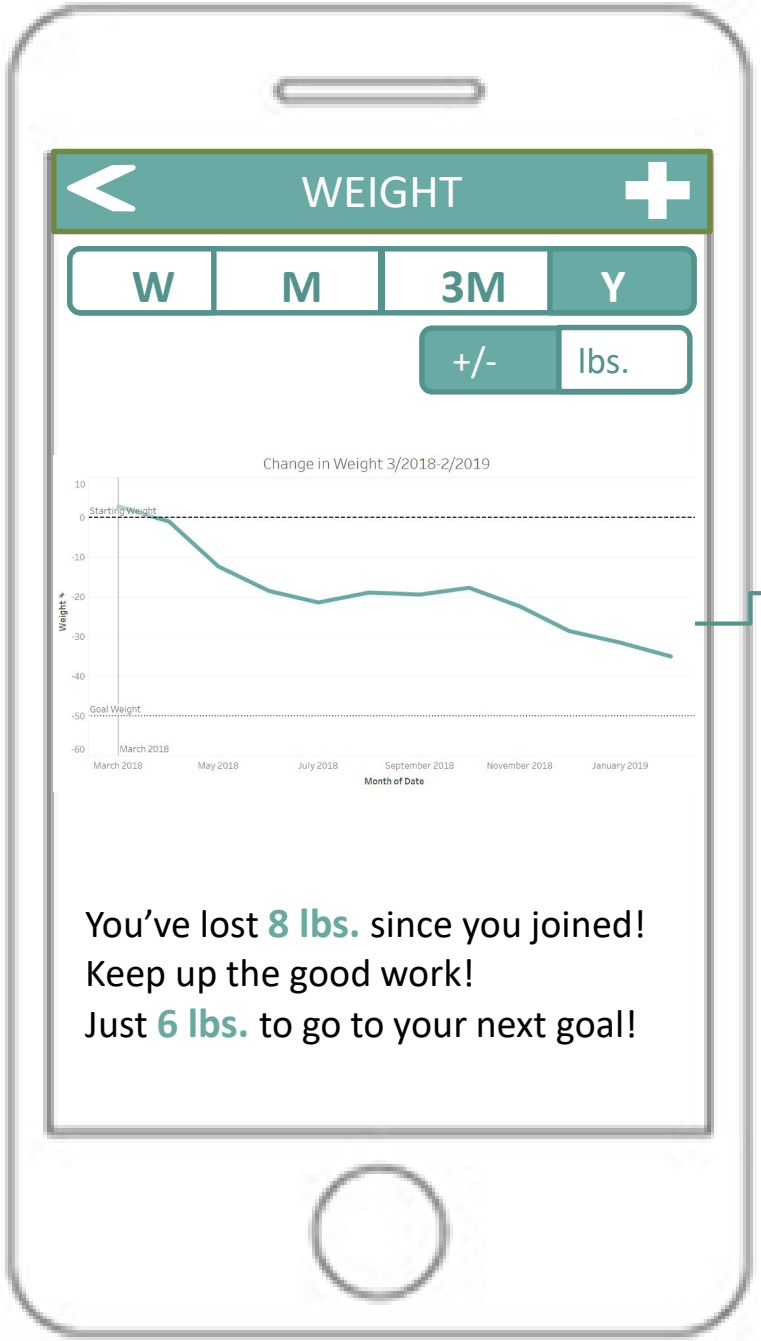
Notes: This page displays the weight data of the patient. Patient could choose the time frame to be covered and choose how they like the weight data to be presented.



List of ways to present the data(absolute value or decrease value). Instead of the default setting that displays weight lost, here we display the situation of the real weight.

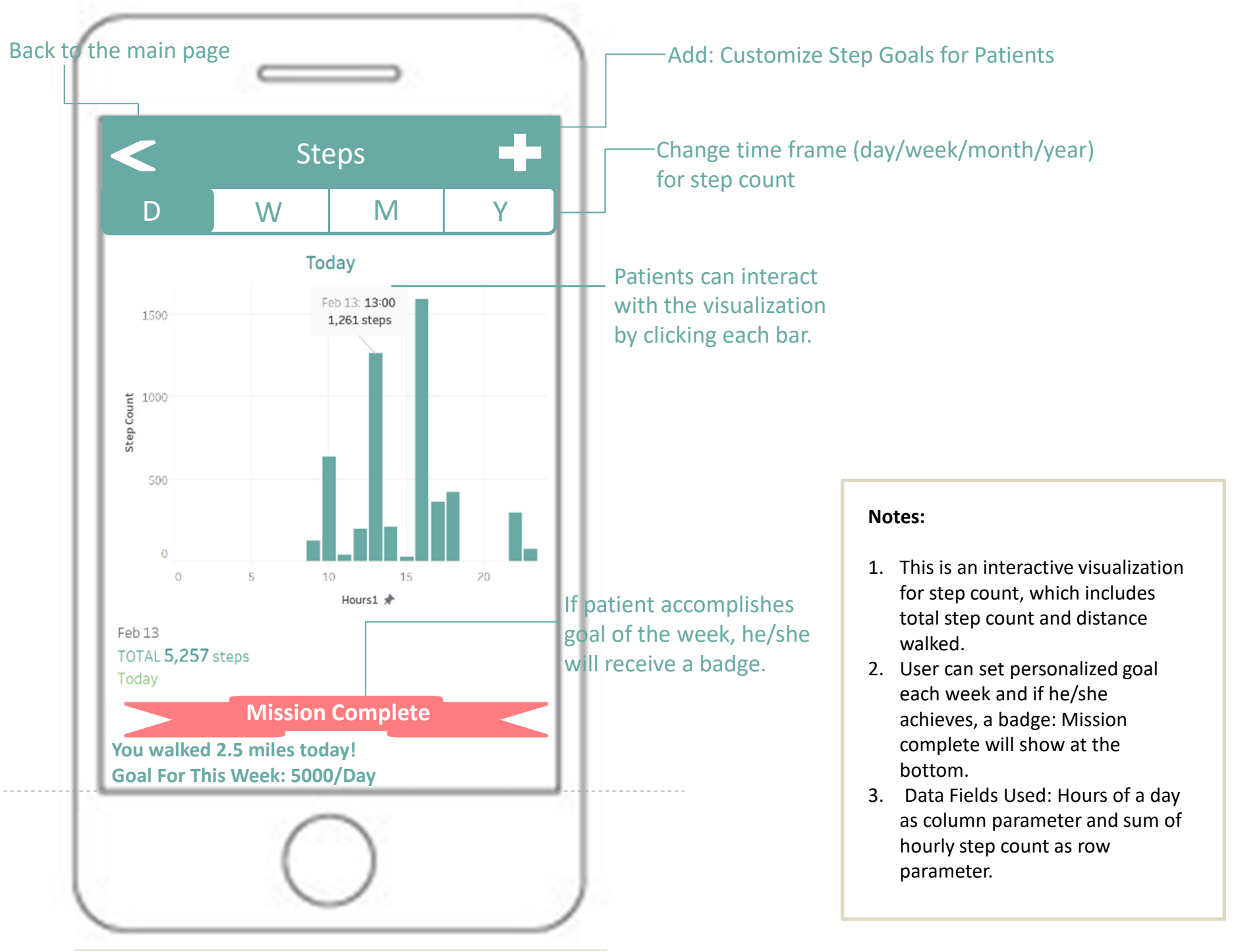
Weight data of a week is plotted as a line chart. The X axis is time and the Y axis is the REAL WEIGHT. The upper line is the real weight when the goal was set and the bottom line is the goal weight. We are plotting these to help the patient get an idea of how far the goal is and hopefully could cheer them up.

Notes: This page displays the weight data of the patient. Patient could choose the time frame to be covered and choose how they like the weight data to be presented.



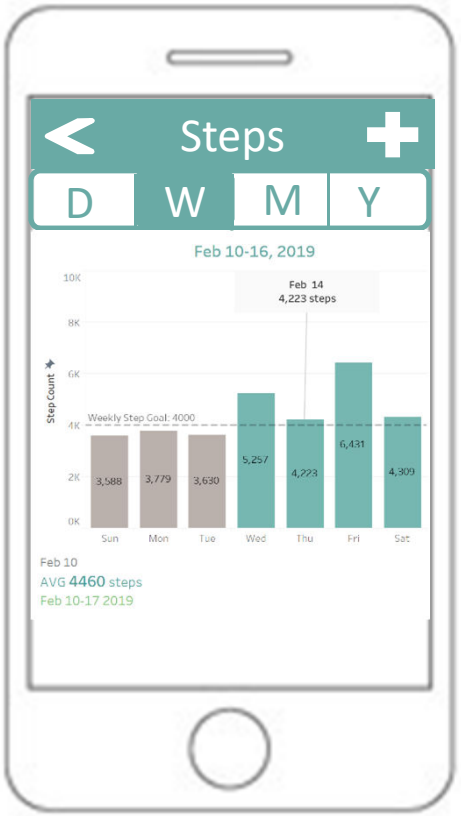
Weight data of a year is plotted in a line chart. The X axis is time(month) and the Y axis is the weight lost. Each dot represents the weight at the beginning of the month(NOT THE AVERAGE). The calculation of the weight lost is to deduct today's weight from original weight. The upper line is the weight when the goal was set and the bottom line is the goal weight of the year. We are plotting these to help the patient get an idea of how far the goal is and hopefully could cheer them up.

Notes: This page displays the weight data of the patient. Patient could choose the time frame to be covered and choose how they like the weight data to be presented.



Notes:

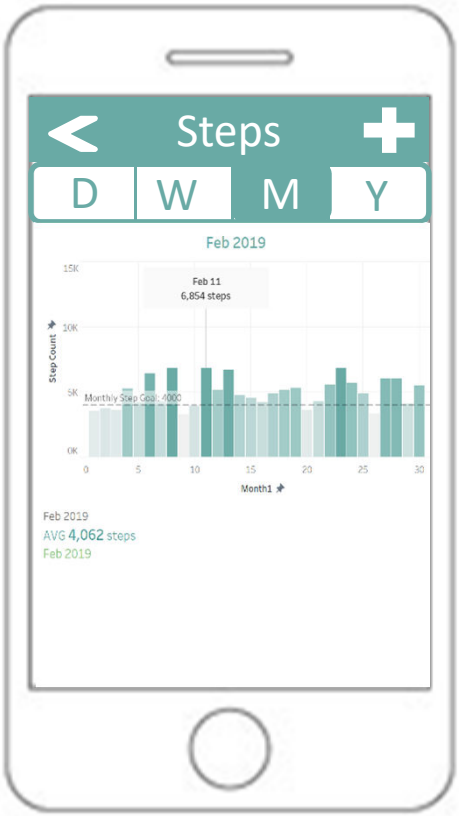
1. This is an interactive visualization for step count, which includes total step count and distance walked.
2. User can set personalized goal each week and if he/she achieves, a badge: Mission complete will show at the bottom.
3. Data Fields Used: Hours of a day as column parameter and sum of hourly step count as row parameter.



Notes:

Weekly step count

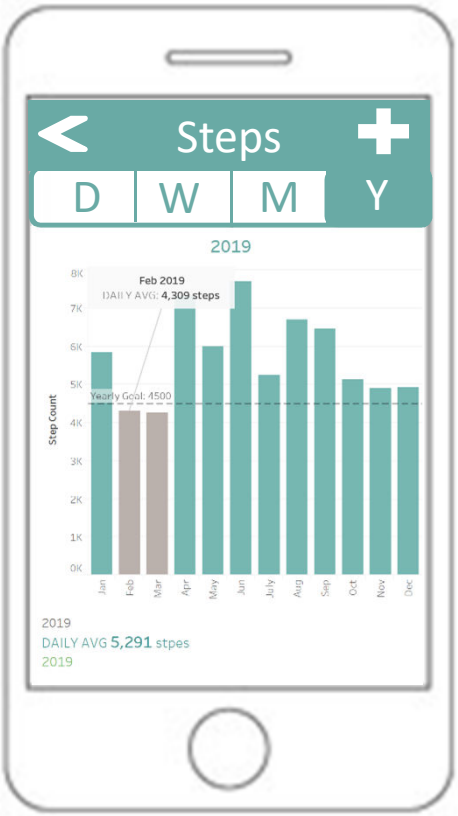
1. Calculations: sum an entire day's step count and create a new measure called daily step count 2019. Create a parameter called: step goal and create another calculated field called: met step goal which can color the bar chart differently when goal is met (green) or isn't (grey). Add a constant line for goal requirement.
2. Data Fields Used: Use Monday-Sunday as column parameter and daily step count 2019 as row parameter.



Notes:

Monthly step count

1. Data Fields Used: Date of a month as column parameter and daily step count as row parameter. Create a parameter called: step goal and create another calculated field called: met step goal which can color the bar chart differently (in gradience) when goal is met (green) or isn't (grey). Add a constant line for goal requirement.



Notes:

Yearly step count

1. Calculations: sum an entire month's step count and create a new measure called monthly step count 2019.
2. Data Fields Used: Use Jan-Dec as column parameter and monthly step count 2019 as row parameter.