



ADELIE HEALTH'S MOBILE APPLICATION

Proposal: Claire Zhou's Senior Thesis Project

TABLE OF CONTENTS

1. Summary:

- Overview of the context (problem, opportunity, situation or challenge.)
- My role
- Goal for the work (outcome, changes it will make in the world, criteria for success, also maybe what you want to avoid)

2. Work Plan:

- Key milestones (date & outputs)
- Timeline (tactical steps and delivery dates)
- Resources (people, tools, processes)

3. Appendix

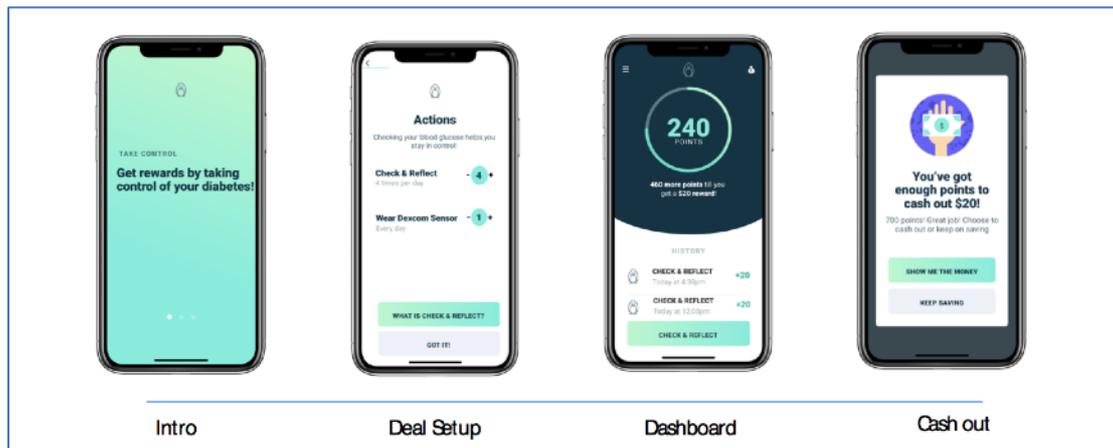
1. Summary

Overview of the context (problem, opportunities, situation or challenge)

[Overview]

Adelie Health uses insights from behavioral economics to help people with diabetes manage their condition. Adelie Health is developing an iOS mobile application to incentivise young people with diabetes to undertake actions that are associated with improved diabetes control.

Routine Ninja™ aims to motivate young people with diabetes to self-manage their condition by enabling the user to earn rewards.



- **User profile:** Teenager (aged 12-17) with type 1 diabetes in the USA using a Dexcom continuous glucose monitor to keep track of their blood glucose readings.

- **The app is based on the following principals:**

- **Non-judgemental**

Teenagers with type 1 diabetes have a hard time where they are constantly bombarded with blood glucose values which are instantly recognised as 'good' or 'bad'. We do not want to provide additional judgement. We want to reward teenagers for checking their blood glucose under the assumption that more checking will lead to more awareness and better diabetes self-management.

- **Teamwork**

Academic studies show that teenagers with type 1 diabetes who receive support from their family achieve better health outcomes. Through 'deal-making', we want to encourage teamwork between the teenager and parent where possible.

- **Sustainable**

It is not financially feasible to continue to give teenagers financial incentives. Upon app launch, the parent will be required to provide the financial incentive. User data will be

used to build a business case to present to health insurers who will pay a fee to make the app available to their clients.

- Objective

To ensure that all parties (users, parents, health insurers) can trust the app, the user will only be able to earn rewards for actions that can be objectively verified.

- **Value Proposition:** The app will incentivize users to check their blood glucose. This will improve health outcomes for the users, reduce anxiety for their parents, and reduce the risk of complications for health insurers.
- **Business Model:** Access to the platform will be sold to healthcare payers and providers on a fee per user/per month basis. The additional service to customers (compared to the free B2C versions) will enable them to provide the financial incentive via the platform. Better adherence to medications reduces risk of hospitalization and reduces costs.

[Problem]

Type 1 Diabetes management is really hard for teenagers. And some parents are worried about their kid's health.



[Opportunities]

Health outcomes for young people with type 1 diabetes are poor and once the concept is proved, it can be applied to a wide range of areas — After proving the concept of financial incentives in teenagers with type 1 diabetes, it will be applied to all people with type 1 diabetes in the USA (n=4m), people with insulin-dependent type 2 diabetes in the USA (n=4m), people with type 2 diabetes (n=30m) and pre diabetes (n=84m) in the USA. It may also be applied to other areas such as asthma (n=25m) with connected inhalers.

My role

Claire will lead on the design of Adelle Health's app.

Claire's main role will be to **undertake user research including interviews** (alongside Liam)¹, **collate and interpret user feedback, iterate the UX**, and liaise with the app developer to communicate **required iterations** to app build. With an anticipated app launch in January 2019 (TBD), this process will see the product build, launch, and growth.

Goal for the work (outcome, changes it will make in the world, criteria for success, also maybe what you want to avoid)

- Improve type 1 diabetes teenagers' life;
- Improve the relationship between parents and kids.

2. Work Plan

Key milestones and (tactical steps and delivery dates) - first semester

	09/19	10/15	10/23	10/30	11/8	11/15	11/29	12/13
Send out Surveys and start recruiting	█							
Primary research		█						
Market research		█						
Critique the current MVP & Ideation			█					
Propose design solutions				█				

Usability testing								
Iteration 1								
Usability testing								
Iteration 2								
Finalize report								

* Weekly meeting - every Saturday

Research

Sunday Sep 29th: Send out surveys

Tuesday Oct 1st: Collect survey responses and draft interview questions.

Thursday Oct 3rd-10th: Interview 5-8 parents and understand their pain points

Tuesday Oct 15th: Build persona and develop how might we

Resources (people and processes)

[Process]

- Collaborating with ADELIE HEALTH, Liam will help recruiting participants and provide incentives if required to ensure timely recruitment.
- Liam will review writing reports 12-24 hours ahead before it published.
- Claire will be provided guidance and support by [Matt Lenzi](#), Director and UX designer at [Hanno](#), a Digital Health Design Company. Alternatively, Claire will use this opportunity to reach out to people in her network, or outside her network, explain the lack of guidance and ask for mentorship.
- Claire will use PPPs structure to update progress every weekend.

[People]

Liam Mc Morrow, PhD is the founder of [Adelie Health](#) and has lived with diabetes for 16 years. His PhD in health economics used insights from behavioral economics to understand why people make unhealthy food choices and is now being applied to diabetes self-management. Liam also undertook a two-year postdoc at the University of Oxford researching the health economics of diabetes.

Fintan Corvan, MBChB (MD in USA) is an acute medicine clinician working part-time at Adelie Health. Fintan brings medical expertise to all aspects of the company.

Jeremy Wheeler, Peter Laitenberger and Scott Grubb are contributing to the development of the pen cap device used to track insulin injections.

Andy Hill, Prof Sean Dinneen and Albert Nicholl are advisors to Adelie Health. Jon Lay and Matt Lenzi are digital health app designers at [Hanno](#). Hanno facilitated the initial Sprint which designed the app wireframe.

The Team

special agent

HANNO

Liam Mc Morrow, PhD
CEO, Founder
Diabetic 16 years
Oxford postdoc

Fintan Corvan, MBChB
COO
Acute Medicine Clinician
>2% UK clinicians

Jeremy Wheeler,
Regulatory/Operations
COO at Aircraft Medical
Acquired by Medtronic \$110m

Peter Laitenberger, PhD
Inventor, physicist
Former SVP R&D, Sphere
Medical

Scott Grubb,
Electronics

Andy Hill,
Business
Former CEO of three
Medtech companies

Prof Sean Dinneen,
Medical
Diabetes Consultant,
National Lead for Diabetes

Albert Nichol,
Commercial
Sales & Marketing, Stryker Ortho.
Former CEO, MD at start-ups

Jon Lay,
App dev.

Matt Lenzi,
App design

3. Appendix

Table 1: MVP App

Version	Features
MVP V. 1.0	Intro screens Fixed deal Logic to calculate points Dashboard displays points and history User can 'check & reflect' API to Apple Health to verify blood glucose check Push notification to user Automated update notifications to Adelie Health Automated update notifications to parent
MVP V. 1.1	Iterations from user feedback User and parent set terms of deal
MVP V. 1.2	Iterations from user feedback Backend server (user account, parent account, define metrics important to Adelie Health, HIPAA) Parent web dashboard/notifications to monitor user
MVP V. 1.3	Iterations from user feedback Marketing and branding strategy

Table 2: App Launch

Version	Features
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V.2.1	Iterations from user feedback Backend server (ensure data consistent with potential partners' aims (e.g. health insurers))
V2.2	Iterations from user feedback Iterations to enable pilot study with Novo Nordisk

Table 3: Additional Features

	Features
	Process payments within the app
	Customer support features (e.g. chatbot)
	Build network effects (e.g. peer-to-peer support)
	Build gamification techniques (e.g. streaks)
	Psychometric profiling to determine best rewards
	Connect to other devices to reward wider set of actions
	Apply outside of diabetes (e.g. asthma, weight loss)