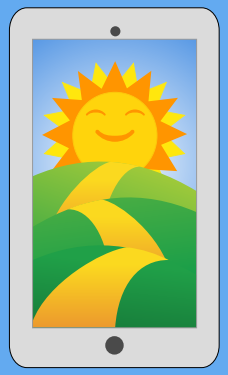

Development & Evaluation of an Evidence-Based Mobile Health Caregiver Intervention for FASD

Christie L. M. Petrenko, Ph.D. & Cristiano Tapparello, Ph.D.

CIFASD Report - 12/20/2017

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Families Moving Forward CONNECT

FMF Connect Team

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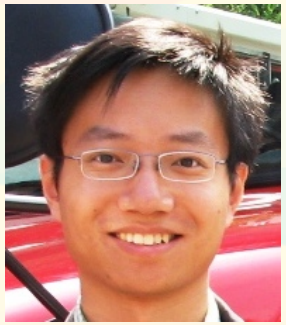

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FMF Connect Components

Learning Modules
- 12 core modules, 3 levels
- Educational text/audio
- Exercises to practice content
- Animation and video

Notebook
- User builds personalized section for later reference
- Exercises about child, selected content, tools, notes

Dashboard
- Summary of progress
- Badges earned, child behavior ratings, usage metrics

Family Forum
- Users share ideas, ask questions, get support
- Organized in sub-forums
- Moderated by trained peers

Library
- Lists of books, websites, other resources
- Optional fact sheets

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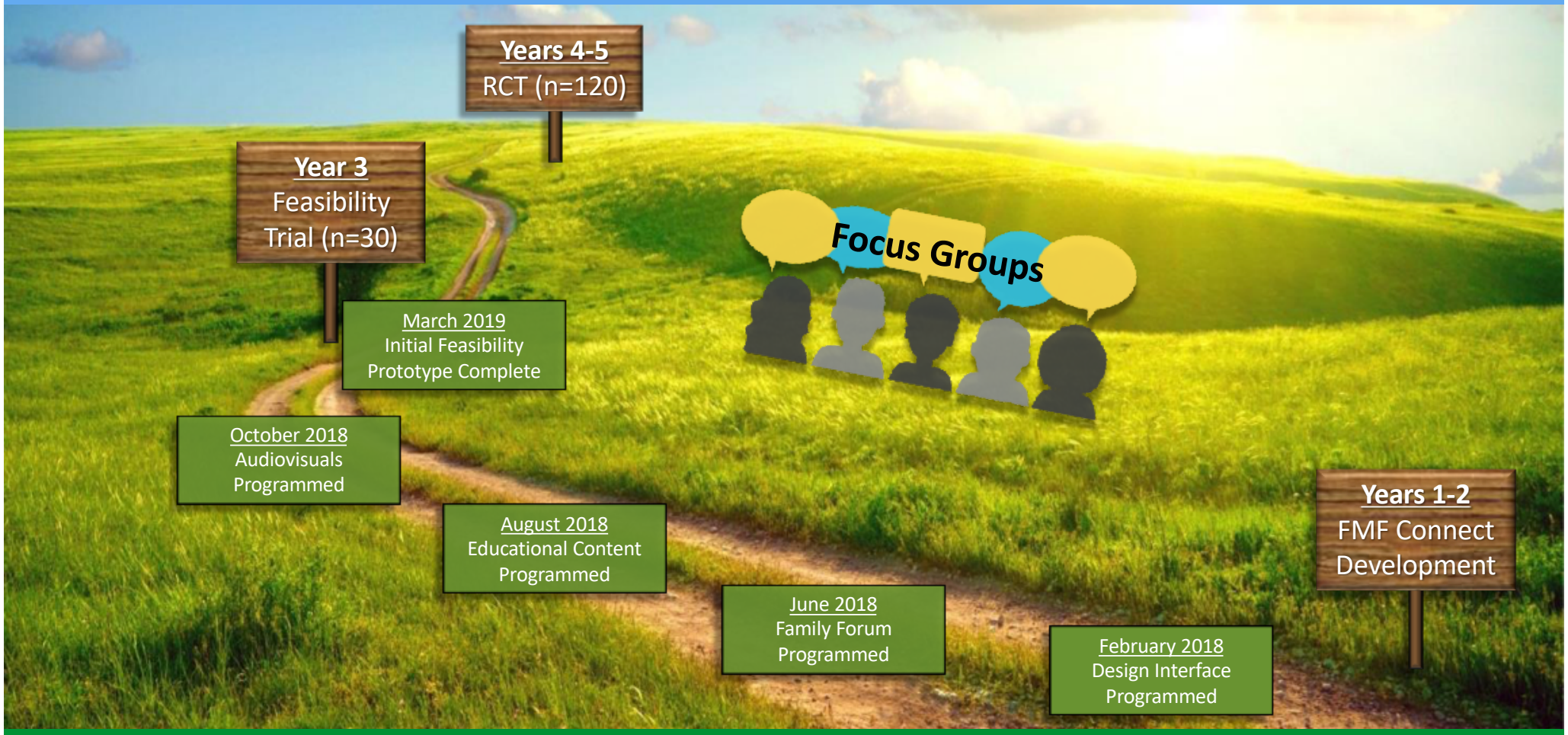
Project Timeline Overview



Content Development Process

- Families Moving Forward Program – content, principles, methods
  - FMF developed by Heather Carmichael Olson and team at UW/SCRI
  - Funded by CDC
- FMF Connect is a derivative product with unique features
- Informed by multiple fields:
  - Translating content and principles across methods of delivery
  - Education/online learning: Backward design process
  - Implementation science: Behavior change techniques
  - Ethical considerations

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Developing Content Progress

- Update on content development progress:
  - 12 core modules – all drafted (~ 100 pgs), 1st round intense editing complete (> 64 hrs), revisions in process
  - Drafting optional content, compiling materials for library
- What's next?
  - 2nd round editing review core content, 1st review of optional materials
  - Programming content and exercises in app
  - Elicit feedback on content in focus groups
  - Scripting and producing audiovisual content

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App Design Process

Idea → Functionalities → Interface Design → Interactive Prototype → Interface Refinement ⇄ Development

App Design Progress (1/5)

- App idea consolidated during grant writing/submission

App idea

App Design Progress (2/5)

Idea

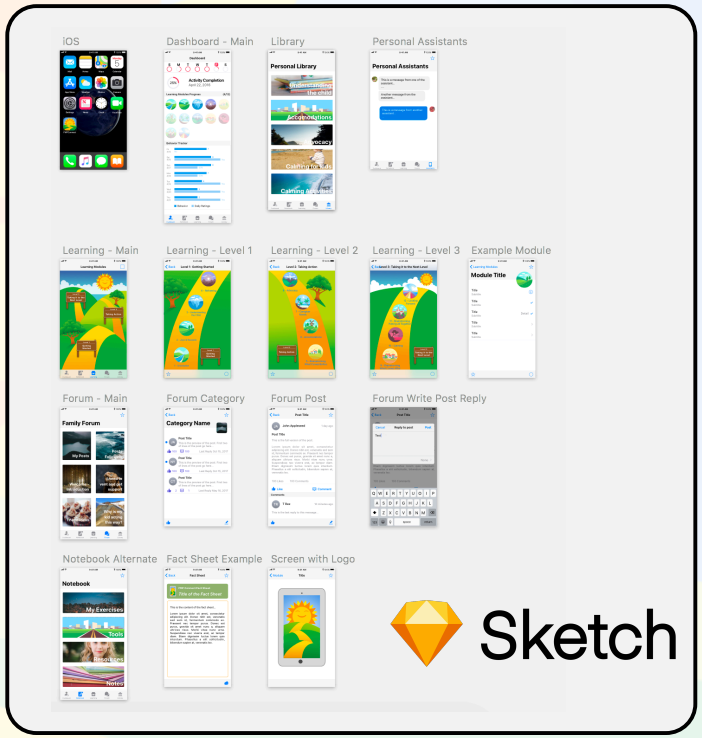
- App functionalities identified during grant writing
- Refined while working on the app content

Functionalities

App Design Progress (3/5)

Idea Functionalities

- Mockup app idea and functionalities into a set of screen images
- Facilitate feedback and discussion across team



Interface Design

App Design Progress (4/5)

- Combined the different screens into an interactive prototype
- Demonstration in focus groups

Interactive Prototype

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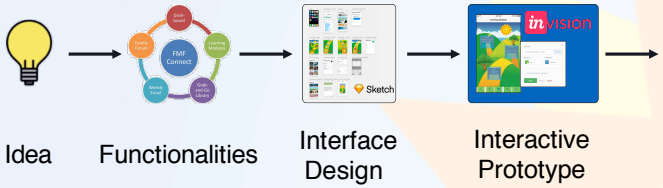
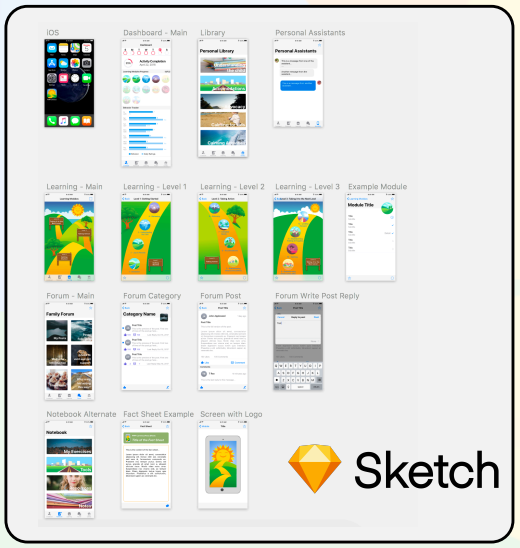
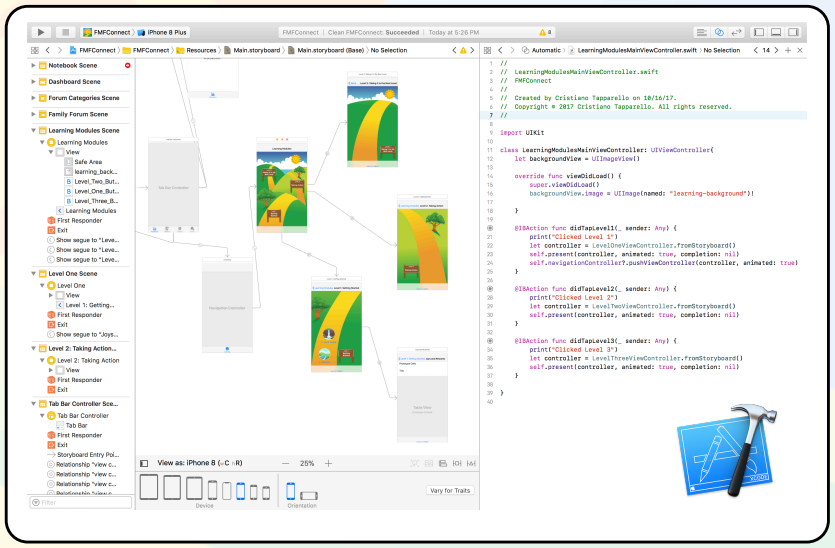
App Design Progress (5/5)







Interface Refinement

Programming

App Programming Progress

- App requirements:
  - Cross-platform (iOS, Android, web?)
  - Authentication, security, modular structure, cloud functionalities, real time synchronization, push notifications, analytics, etc.
- Open source products
  - Google Firebase
  - ResearchKit and Carekit
  - ResearchStack and ManageMyCondition

App Programming Progress

- Initial implementation of the InVision prototype on iOS
- Forum development:
  - Cloud database structure
  - Authentication
  - Read and write operations from app
  - Real time synchronization
- Current work in progress:
  - Interface to fully match prototype
  - Forum: messages organized in thread (replies), avatar

Focus Groups

- Diverse perspectives: family structure, comfort with technology, location, child age, etc.
- Initiated focus groups in Rochester 12/6 and 12/8
- Planning additional groups in:
  - Rochester (periodically) *including with and without prior FMF exposure
  - Washington DC (Mitchell) ? – emphasis on birth parent perspective
  - Atlanta (Coles) ~ March
  - Minnesota (Wozniak) ~ April
  - San Diego - coincide with RSA in June

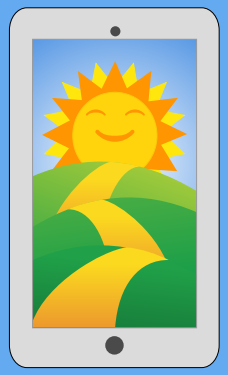
Preliminary Findings from Initial Focus Groups

- Components
  - Felt strongly users should be able to use app indefinitely to return to helpful content and engage with forum
    - Liked that app content of interest could be saved to Notebook for later reference
    - Positive about tools in Notebook; suggested additional tools
  - Trust, confidentiality, and protections were major themes for Family Forum
    - Suggested access to specific sub-forums be introduced as users complete relevant learning modules
    - Liked idea of having sub-forums available based on geographic location (sharing resources/advocacy tips)
    - Want easy way to aggregate and find tips/resources suggested by other users

Preliminary Findings from Initial Focus Groups

- App & Interface Design
  - Strong, positive reaction to learning module interface design
  - Less enthusiasm for logo/icon, but generally neutral to positive
  - Prefer graphics to photos
- Facilitators to use
  - Content/Features: When child is struggling; connecting to other users
  - Technology: Voice-to-text; transition across platforms (e.g., phone, computer)
- Barriers to use
  - Content/Features: poorly moderated Family Forum, concerns of trust/safety
  - Technology: difficulty to navigate; lots of scrolling; slow loading

Questions
Comments
Feedback



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