
HEATHER HAMNER

CENTERS FOR DISEASE CONTROL
AND PREVENTION

Required Skills:

(List skills needed) - Mobile App, Web Development, Stand Alone App Development, Responsive Web Design, Human Centered Design, Workflow/Process Optimization, Project Management, Communications

Preferred Team Communications:

WEBEX, Skype or Conference call

Data Sources:

Georgia Tech/CDC synthetic data will be sufficient for the project.

Other Items:

Project has timezone flexibility. Mentors and students will determine a good time for virtual meeting

HELPING PARENTS FEED THEIR BABIES

Developing and establishing healthy dietary and eating patterns early in life can have long-lasting impacts. This begins with ensuring babies get the nutrition they need whether that is through supporting a mother's decision to breastfeed or through infant formula. It continues as children begin to transition to the family diet. Finally, it is maintained as children enter early care and education settings or the school settings.

The Centers for Disease Control and Prevention's (CDC) Division of Nutrition, Physical Activity, and Obesity (DNPAO) strives to help give every baby a healthy start. CDC's work in breastfeeding has focused on providing evidence-based maternity care practices that support mothers who chose to breastfeed. As babies transition from breastfeeding or formula feeding to complementary foods and beverages, it is a critical point to establish good eating habits and ensure diverse diets with adequate intakes of key nutrients. Healthy and diverse diets are important to ensure children have optimal growth, including healthy weight, and cognitive development.

Parents of young children, from birth to two years, interact with the health care system on a regular basis – either through well-child visits or sick child visits. Pediatricians are often cited as a valued and trusted source of information. Electronic Health Records (EHRs) and other Health Information Technology (HIT) offer opportunities to more fully connect patients, health care providers, and other public health programs or resources designed to support health and wellness and prevent chronic disease or other adverse outcomes. Specifically, leveraging EHRs and other HIT systems could enhance population level data exchange data that will yield improvements in care coordination, clinical decision support, patient engagement, community referrals, and support clinical care to public health connections.

CDC'S DNPAO has worked on several FHIR related projects, including the Healthy Weight App, in an effort to support clinicians and their patients to prevent childhood obesity. The Healthy Weight App has shown the proof of concept that three independent apps (patient-facing, provider-facing, and recommendations) can interrelate based on data provided with a specific healthy habits questionnaire (collected from the patient). This project seeks to expand the Healthy Weight App work and add a secondary screener questionnaire that can be administered to a patient and then elicit appropriate data/actions for all three independent apps (patient, provider, and recommendations). As an example, timing of food introduction is an important milestone in a child's life. Clinicians have the opportunity to provide appropriate guidance and support for families during the transition to solid foods which can lead to the development of healthy eating behaviors. If a child's age can trigger the activation of a secondary screener questionnaire, this could allow the patient facing app to collect appropriate information which could then be provided to the clinician to help them address and guide early feeding.

PROJECT OBJECTIVES

Intellectual Property: Project involves a government agency so the resulting project is made available to the public. Students do not own IP. Students will be recognized as contributors

1. Define a secondary screener questionnaire and integrate within the existing Healthy Weight Project caregiver-facing app.
2. Identify and define the key data elements within the secondary screener questionnaire and map to FHIR resources.
3. Develop the infrastructure to support the administration (or activation of) clinical decision support tools or recommendations based on data provided in a secondary screener questionnaire.

SUCCESSFUL PROJECT

At the conclusion of this project, a successful project would include the infrastructure to utilize the existing Healthy Weight App and add secondary screener questionnaire(s). This secondary screener questionnaire would be able to interface with the provider-facing app to collect and display the captured information, in a visually pleasing and useful way for the provider. Lastly, the recommendations app would be triggered to provide appropriate clinical decision support tools and recommendations (e.g., highlighting concerning responses, suggesting referrals to food bank or other nutrition support programs, etc).
