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ASTHMA CONTROL – CLINICAL DECISION SUPPORT APP FOR CARE PROVIDER AT THE POINT OF CARE

1) Based on the patient age (0–4 years old, 5–11 years old or ≥12 years old), the app would provide a specific asthma control assessment form to the patient, caregiver, or care provider at the point of care.

2) The patient, caregiver, or the care provider would complete the asthma control assessment form and submit.

3) The app would automatically assess and classify the patient's level of asthma control based on the age and the answers to the questions related to the components of control (and definitions from the EPR-3). A level of asthma control will be assigned to the patient asthma control: "Well Controlled", "Not well Controlled", or "Very Poorly Controlled ".

4) The app will use the EPR-3 asthma guidelines to find the appropriate recommended actions for treatment based on the patient's asthma control level and will send the result of the assessment with the appropriate recommendations to the care provider screen.

5) The care provider would use the app-provided recommendations to assist him/her in the decision to maintain or adjust patient therapy.

6) After selecting the appropriate recommended treatment for the patient and/or editing the recommendations if needed, the care provider would use a button to send automatically to the EHR along with the asthma control level of the patient.

PROJECT OBJECTIVES

Develop a web or mobile app that would:

- Assess asthma control (as defined by the National Asthma Education and Prevention Program's Expert Panel Report-3: Guidelines for the Diagnosis and Management of Asthma [EPR-3]) using patient-reported data entered either by the patient or by the care provider at the point of care.

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

-Ability to convert asthma program need into application solutions

-Interest in improving the health of asthma populations

-Interest in SMART-on-FHIR

Preferred Team Communications:

Skype or Conference call

In person at Georgia Tech when needed and when possible

Data Sources:

Georgia Tech synthetic data will be sufficient for the project.

Other Items:

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

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

- Provide recommended actions for treatment to the care provider based on the patient's asthma control level and the EPR-3.
- Send the results of the asthma control assessed and the recommended actions for the patient into the EHR.

SUCCESSFUL PROJECT

- Clear understanding of the project goals by the students

- Shared common vision of the project

- Mentors involvement in decision regarding the project

- Detailed planning with milestones and list of deliverables to return by the students to the mentors,

- High Fidelity prototype