Mobile Applications for Health Monitoring
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ABSTRACT

- Childhood asthma has effectively doubled since 1980 and currently affects about 8% of the U.S. childhood population.
- Efficiently analyze quality of air data, which would ultimately improve the information available to parents with children suffering from asthma.
- Crucial to reduce the likelihood of a serious attack. In order to accomplish this task, the use of low-cost, wearable, environmental sensors contribute to construct a live “air-care” pollution map.
- Ensure that data is processed and relayed in an easy to understand manner using graphs, charts, etc.

MOTIVATION

- Identification of factors, such as ozone and particulates in certain areas that would cause distress among children with asthma.
- Estimated 7.1 million children under 18 have asthma.
- Provide users with the tools to have a better understanding of asthma, which would help improve quality of life.

METHOD

- Become familiar with various causes of asthma.
- Research greatest method of depicting health results to patients.
- Construct alpha prototypes of application and conduct “wizard of us” test to verify user functionality.
- Administer experiment to at least 10 participants.

RESULT

- Best data display methods to convey combined environmental and health data to users.
- Creating most functional interface to run an optimal experiment.
- Locating participants for ensure greatest amount of data acquisition.

CONCLUSION

- There was no ambiguity to correctly identify the hazard level of particulates when the “arrow map” was utilized: 10/10 users selected “very low” for the risk level.
- Although participant’s education level ranged from high school to graduate degrees, this unanimous response could indicate that an “arrow” feature would work very well with children interfacing with a mobile application.
- Further testing with a broader range of applicants is needed to test findings, which would include Children and parents that may use the AirCare system in the future.

REFERENCES