

Graduate student wins design contest for mobile health app for those considering elective mastectomy

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HFES congratulates Marisa Grayson, a master's student in the Integrated Systems Engineering Department at Ohio State University, on taking first place in the 2018 "Mobile Health Applications for Consumers" Student Design Competition. The results of the competition were announced on March 26 during HFES's International Symposium on Human Factors and Ergonomics in Health Care in Boston.

Grayson's app, *RecorDr. - Facilitating Patient Self-Advocacy and Enabling Large-Scale Human Factors Research*, is used by patients to record conversations with physicians to aid in deciding whether to undergo contralateral prophylactic mastectomy (CPM) after receiving a diagnosis of breast cancer when CPM is not indicated. It serves as both an aid to the patient and a research tool to gather data about decision-making in such cases.

Grayson employed user-centered design techniques with a multidisciplinary team. Development began with contextual inquiry to learn about users' needs, followed by development of a patient persona (Judith) for the purposes of prototyping and usability testing.

"Our initial observations and interviews that led to the creation of Judith were invaluable to our design process," said Michael F. Rayo, adviser on the project. "We needed to know how to help her as a patient so that she would continue to help us as a researcher. She's not the kind of 'person' who would annotate and send audio recordings just for fun."

The app goes beyond those already available because it records patient-physician conversations and also enables bookmarking and transcription for easy recollection. Privacy concerns were addressed in its development. *RecorDr* is available

now in the [Google Play store](#), with plans to be in the App Store by the end of April.

"The most rewarding aspect of this project was seeing people interact with the app during rounds of usability testing and explain how they would really use it in their own health care visits," reported Grayson. "I look forward to our app making a positive impact for both [patients](#) and the HF/E research community."

The developers of two competition finalists were also recognized at the symposium:

- *Care Connect - Coordinating Wound Care*, by Kristen Webster, Johns Hopkins University. This app addresses coordinating care team members and provides consistent and reliable instructions for wound care at home. Webster interviewed [health care](#) professionals, examined apps on the market, and created prototypes to meet the needs not addressed in existing apps.
- *EasyHealth - An Integrated Health Monitoring and Management App for Seniors*, by Sommayah Soliman, Harshada Tupe, Mai Chee Vang, and Javy Wang, San Jose State University; Adviser: Anthony D. Andre. The team conducted interviews with older adults to discover needs and challenges such as impaired physical and cognitive capabilities, as well as success criteria to develop a high-fidelity prototype. The app aims to make medication and appointment reminders easier for this population, for whom apps of this type are lacking.

Provided by Human Factors and Ergonomics

Society

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