A PORTAL IN A STORM

GEORGE BROWN SCHOOL OF DESIGN STUDENTS CREATE A PATIENT-INTERFACE PORTAL FOR DIABETES EDUCATION.

GAME DEVELOPMENT

PROJECT ESSENTIALS

Principal Investigator:
Jean Paul Amore
Years Active: 2010
Campus: St. James

Support from:
Natural Sciences and Engineering Research Council (NSERC)

Industry Partners:
St. Michael's Hospital

When St. Michael's Hospital received funding from the Ministry of Health and Long-Term Care (MOHLTC) to pilot an education project in diabetes self-management, they turned to George Brown's School of Design to work with the hospital on developing the prototype, a patient-interface portal for diabetes education.

The hospital, with its commitment to innovative primary care for a diverse population in downtown Toronto, is equally committed to comprehensive, accessible care and prevention of diabetes, a virtually epidemic chronic disease in Canada, affecting approximately 1 in 17 Canadians, and growing by about 200,000 new cases a year.

For its part, the school and its new Game Development program led by Professor Jean-Paul Amore were eager to take on the challenge of technical and design components to meet the client's needs. The college project team was supported in part through George Brown's Community and College Innovation Program (CCIP) health sciences and health ICT grant, managed by NSERC.

The project partners at St. Michael's were Dr. Michael Evans, Director of the hospital's Health Design Lab and Associate Professor and Director of Patient Self-Management in the Department of Family and Community Medicine at the University of Toronto (U of T); and Dr. Lori MacCallum, Assistant Professor in the Division of Pharmacy Practice at the Leslie Dan Faculty of Pharmacy at U of T. Both are associated

with the Li Ka Shing Knowledge Institute at St. Michael's.

"This was an excellent cross-disciplinary experience for our students," says Amore. "We involved three students from the Graphic Design program and three from Game Development." Through the summer and early fall of

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> -DR. MICHAEL EVANS

2009, the students met on a bi-weekly basis with Evans and MacCallum as the medical/technical experts on the project. They established the first target population, for pilot purposes, as those aged 55 or older who have just been diagnosed with Type 2 diabetes [associated with lifestyle and genetic factors]. The client group also wanted to focus on patients in this age group at risk for diabetes, who would

benefit from prevention education.

"Right now," says Amore, "the hospital tells us that patients generally walk out of the doctor's office with only a pamphlet, and they wanted to provide more support to the patients they see, while helping patients take care of their health over the long-term."

The resulting sample interface, with prevention and self-care modules, was triggered by five patient profiles that the St. Michael's team provided, anonymous and loosely based on real-life scenarios at the hospital. The students designed with these situations in mind. The interface's core feature is animated content, the vehicle for delivering information on diabetes symptoms, treatment and self-care either passively, or actively if the user chooses to interact with the animated characters and features. Also included in the portal is a package of simple, interactive games to present key diabetes information; for example, a matching card game, and crossword/wordplay-type games. Audio features are included. Says Evans, "The truly innovative solutions for health won't come just from doctors, or from business people, researchers, nurses, technologists, journalists, or creatives. They will come from all of the above."

George Brown is currently hosting the pilot portal as a demo on its site. "By bringing together health and design, this prototype demonstrates a new way to teach patients that is fun, interactive and educational.," MacCallum adds.