Time-Use Surveys and the Potential Use of Ubiquitous Computing Solutions in a Pharmacy Environment

Kevin Lo and Minh Huynh
The Problem

Pharmacy is a highly stressful career that requires constant communication, alertness and great attention to detail.

Our goal is to utilize time-use surveys in order to identify daily pharmacy activities that can potentially be improved through ubiquitous computing solutions.
The Big Picture

• Compare the activities between commercial pharmacists and hospital pharmacists.
  – a possible significant variance in the type of activities performed by these two types of pharmacy doctors?
  – Hypothesis: commercial pharmacist perform activities that require more interaction with patients than hospital pharmacists.

• Possibly interview patients to gain a different perspective

• Analyze our results and break down general activities (Tier 1) into more specific activities (Tier 2).

• Discuss and recommend possible improvements to some of the Tier 2 activities using ubiquitous computing solutions.
## Project Update

We have created the classifier for commercial pharmacists

### Tier 1 Activities
- Time w. Patients
- Time w. Doctors
- Drug Prescriptions
- Data Entry
- Prepare IV's
- Training
- Eating & Drinking
- Socializing

### Tier 2 Activities
- OTC Consultations
- Telephone Consultations
- Vaccine Administration Duties
- Answer Insurance Related Questions
- Ring up the patient
- Verifying New Prescriptions
- Verifying Refill Prescriptions
- Physically Filling Prescriptions
- Taking Prescription Orders
Project Update (cont)

What still needs to be done:

• Finish gathering all the survey data & conduct additional surveys if needed

• Analysis of the data collected

• Design an ubiquitous mobile solution
  – The application will at least improve prescription order time by allowing patients to take a picture of the prescription and send it to the pharmacist.
  – Will also support location-based search of nearest pharmacies.
  – Additional features based on data analysis results