PRODUCT NAME	CLASS	YEAR
MedPliance: Medication Compliance Assistance Program	**HCI 1: Medical Device Design**	**2005-06**

STUDENT PROJECT PRODUCT SPEC SHEET
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PROBLEM SPACE

Extensive research has shown that elderly people often find it difficult to comply with their rigorous schedule of medications; an estimated 8-11% of hospitalizations among the elderly are due to non-compliance with medications and a recent study showed that in Canada, with a much smaller population than the USA, the additional health care cost due to medication non-compliance among the elderly is $3.5 billion annually. In 1998 there were 34 million people aged 65 years or older in the USA; this number is expected to increase to 70 million by 2030.

GOAL

The goal of MedPliance is to improve the quality of life of the elderly while decreasing health care costs through a reminder system.

THE PRODUCT

We have designed two devices, referred to as MedPliance, which are part of an overall medication compliance program to support the elderly and temporary medication compliance patients (TCP). In the case of TCP, they may have a significant temporary increase in their medication regimen (e.g., following surgery). MedPliance includes a two-part device: 1) the Bracelet and 2) the Handheld unit. The bracelet, which will be in contact with the handheld device via wireless technology, will alert the user when it is time to take a medication. The handheld device will simultaneously emit a beep and display on-screen information as to which medication to take in what dose, as well as such facts as whether to take it with food and/or water. MedPliance will also inform the user of the purpose of the medication and when the next dose is scheduled. MedPliance also allows the user to review the list of “as needed” medications he/she has been prescribed (e.g., medications for pain or nausea) and informs the user if it is safe to take such a medication at the current time and, if so, how to take it. In addition to storing patient information on all medications prescribed and a record of their last ingested doses. MedPliance also stores basic demographic information about the user, e.g., information on whom to contact in an emergency, the user's allergies, and his/her significant past medical/surgical history. This information would be extremely useful to health care providers providing emergency assistance when the user is either confused or unconscious. Simple access to this information will be provided through a pull-down USB port on the side of the device. **Note**: MedPliance is currently in the full prototyping stage, being set for patent in the near future.

PROTOTYPES

Product model with hand and bracelet units