Title: Drainage Valve for Body Fluids for use by Paralyzed Individuals

Team Members:

Angela Heppner
Shannon Kane
Jeff Phillips
Sarah Schram

Client:
Dan Egan

Date: 2/12101-2/28/01

Problem Statement : In order to better suit the needs of individuals that are paralyzed, handicap, or make use of a wheelchair on a daily basis, our goal is to design a waste fluid drainage system for the well-controlled, accurate and dependable disposal of stored liquid wastes. The device must incorporate a secure valve system that stops the flow of urine that is stored in a 1000 cubic centimeter bag attached to the client's leg. The opening and closing of the valve must operate solely at the discretion of the user, without failure in any conditions, via a switch located within accessibility of the client. The urine that passes through the tubes or the device must not sediment over time, and the valve must remain unobtrusive throughout the life of the device.

The main goal of the project is to construct the valve so that a 1000 cubic centimeter fluid bag is able to drain as quickly as possible upon opening of the valve. We hold comfort, ease of use and safety of the client as paramount aspects of the device, while offering the product at a reasonable cost to the customer.

Restatement of Team Goals:

1) Continue Research

2) Select a few ideas from our brainstorming session to focus on

3) Write midsemester report

4) Continue Refining PDS

Summary of Accomplishments:

1) Midsemester report rough draft was written and peer reviewed. Some revisions have been made.

2) Midsemester presentation is almost complete

3) We have eliminated some design alternatives through the use of a design matrix that will be presented in both our paper and presentation.

4) Sketches of all design alternatives were made. These will also be in both the paper and presentation

Statement of Team Goals:

1) Finish paper and presentation

2) Do more research so that we can decide which of our designs to focus on

Project Schedule:

Week 1: Choose Project and Obtain Contact Information

Week 2: Meet with Client and Redefine problem

Week 3: Start PDS and Continue Refining Throughout Semester

Week 4: Background Research

Week 5: Brainstorm, continue Background Research, and begin Midsemester Paper and Presentation

Week 6: Finish and Give Midsemester Presentation while continuing to Brainstorm and Research

Difficulties:

1) Finding meeting times

2) We have many design alternatives that we feel are promising and are having difficulty selecting just one or two to focus on

Activities:

1) Met as a team to write rough draft of paper~ 3.5 hours

2) Met as team in class on Friday to peer review papers ~ 1.5 hours

3) Shannon, Jeff, and Sarah edited and added on to paper ~ 3.5 hours

4) Shannon finished formatting the paper ~ 0.5 hours

5) Angie created the power point presentation and did some more patent research ~ 5.5 hours

6) Sarah wrote progress report ~ 0.50 hour

Running Total ~ 38.75 hours