Valve for an Endotracheal Tube Cuff
Progress Report #7, October 25, 2006

Client: Dr. Lester Proctor
Team: Michael Alexander (Leader)
Claire Edlebeck (BWIG)
Samantha Bergh (Communicator)
Tyler Lark (BSAC)
Lucas Vitzthum (Graphics)

October 19 to October 25, 2006

Problem Statement
Develop a valve for an endotracheal tube cuff that will not allow inflation pressures to exceed 25 cm H2O pressure. Overinflation of the cuff that provides a tight seal between the endotracheal tube and the patient’s trachea is a common problem. The excess pressure can cause many complications, especially in children. Our task is to create a cuff that fails predictably at 25 cm H2O so the cuff can be safely utilized in pediatrics.

Last Weeks Goals
- Pursue Plastic Fabrication
- Midsemester Presentation
- Midsemester report

Summary of Accomplishments
We were hoping to get some prototype work done this week, but so far we are waiting for response from our client as well as our plastic experts before we proceed. In the mean time, we were hard at work this week completing the midsemester report, always a harrowing task. We met several times this week, either finishing our specific sections or doing group edits. I’m happy to say we are done and are now looking forward to prototyping.

This Weeks Goals
- Pursue Plastic Fabrication
- Finalize Prototype dimensions
- Machine shop logistics
- Find resistance component
Project Schedule

9/8  Form team, contact client, assign team roles, set up client meeting
9/15 Literature search, create problem statement, begin PDS
9/22 PDS, brainstorming, begin developing designs, fix prototype
9/29  Brainstorming
10/6 Decide on 3 design alternatives, prepare for mid-semester presentation
10/13 Mid-Semester Presentation
10/20 Hand in report and notebooks
10/25 Work on final design
10/27 Decide on final design
11/3  Work on final design
11/10 Work on final design
11/17 Work on final design, begin preparing poster and paper
11/24 Thanksgiving
12/1  Final Poster Presentation
12/8  Hand in final written report and notebooks
12/13 Final meeting with advisors

Activities

Michael:
  Team meeting (1 hr)
  Section Write (2 hrs)
  Editing (4 hrs)
  **Total: 7 hrs**

Claire:
  Team meeting (1 hr)
  Section Write (2 hrs)
  Editing (1.5 hrs)
  **Total: 4.5 hrs**

Tyler:
  Team meeting (1 hr)
  Section Write (2 hrs)
  Editing (1 hrs)
  **Total: 4 hrs**

Samantha:
  Team meeting (1 hr)
  Section Write (2 hrs)
  Editing (1 hrs)
  **Total: 4 hrs**

Lucas:
  Team meeting (1 hr)
  Section Write (2 hrs)
  Editing (1 hrs)
  **Total: 4 hrs**