Progress Report 5

Project Title: Auto-Suture Device
Team Members: Jennifer Wager, Joe Cabelka, Therese Rollmann, and Mark Yarmarkovich
Client: Dr. Marcus, UW Hospital
Advisor: Prof. Tyler
Date: 2/23/07-3/2/07

Problem Statement: Our goal is to develop a device that will apply an intra-nasal purse-string suture in a single step for use in nasal surgery.

Restatement of Team Goals: Develop design concepts.

Individual Goals:
Jenny Wager:
1. Develop designs
2. Research sutures

Joe Cabelka:
1. Research magnetism
2. Develop designs

Therese Rollmann:
1. Develop designs
2. Schedule surgery viewing

Mark Yarmarkovich:
1. Develop designs

Summary of Accomplishments:
1. Developed several design concepts

Difficulties:
Therese has found that it may no longer be possible for undergraduate students to observe on surgeries. She will explore other options for the surgery, otherwise we will be able to use the online video of the rhinoplasty as a reference.

Summary of Team Goals:
1. Develop design ideas
2. Narrow down selection of designs
3. Develop mechanisms

Project Schedule:
1/29/07-2/7/07 Meet with client, research
2/7/07 - 2/26/07 Research, brainstorm, and develop PDS
2/26/07 – 3/09/07 Prepare oral presentation and Preliminary Design Report
3/09/07 Mid-semester oral presentation
3/16/07 Preliminary Design Report due
3/16/07 – 3/23/07 Decide on final design
3/23/07 – 4/23/07 Work on design and build prototype
4/23/07 – 5/03/07 Prepare final oral presentation and final report
5/04/07 Final oral presentation
5/04/07 – 5/08/07 Prepare final report, PDS, and design drawings
5/09/07 Final report due

Activities:

Team:
15 min client meeting
30 min group meeting 2/23/07
30 min group meeting 3/1/07

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<tr>
<th>Activities</th>
<th>Description</th>
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| Jenny Wager | -0.5 updating notebook  
-1 hour researching sutures and needle  
-0.75 hour developing design | This week I researched sutures and needles used in common surgeries. There are many kinds of sutures and needles. Nasal surgery typically uses absorbable sutures. I also spent time developing a needle passing device that uses springs to lock the needle into place. |
| Joe Cabelka | -2 hr on design/research | I worked on a design involving a magnetic device. I researched the electronic and magnetic fields that would be involved and the forces that we could generate in our device. |
| Therese Rollman | -1 hour updating the website  
-2 hours on design and research  
-15 min talking to people at the hospital about watching a rhinoplasty | I updated the website with all the PR's and the timeline and uploaded the picture. I worked on a design concept similar to the Endo Stitch made by Tyco. This is a device similar to what we want, but it is too big to be used in the nose. I also spent some time talking with the UW hospital and trying to figure out what needed to be done before we could sit in on a surgery. However, I don't think they are going to allow us to watch one. |
| Mark Yarmarkovich | -2 hr developing design | This week I drew sketches for three design ideas. One involves |
a magnet that passes the needle back and forth between the two sides of the device. Another device involves a mechanical clamp that holds the needle by a notch on each side. The third design involves a retractable needle tip in which the suture can be held.

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<thead>
<tr>
<th>Total Team Hours (x 4 people) for Week</th>
<th>3 hours</th>
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<tbody>
<tr>
<td>Total Individual Hours for Week</td>
<td>9.5 hours</td>
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<tr>
<td>Cumulative Team Hours to Date</td>
<td>48.75 hours</td>
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