Project: A Child Passenger Safety Seat (Child Seat)

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Date of Progress Report: 10/20/05

Problem Statement:

The goal of our project is to develop or improve the current method of transporting a child or infant in an ambulance on a stretcher. The method or device developed must be better than the current methods. A new method or device must be collapsible, and compatible with current ambulatory stretchers. Most importantly, the final device must meet all federal safety child seat guidelines.

Restatement of Team Goals from Last Week:

The goals for this week will be to have a successful presentation, start work on the prototype, and look at ordering materials.

Summary of Accomplishments This Week:

This week was a fairly busy week for all involved in the project, but we still managed to make progress on the project. This week we started researching materials to use for our prototype. We also setup a meeting to discuss the manufacturing of our prototype with Professor Fronzak and
plan on meeting with a student employee in the shop early next week. We have decided to try to manufacturer as many pieces of the product by ourselves to reduce costs and reduce ordering. We also sent the presentation and movie to our client for feedback.

**Individual Goals for this week:**

1. Ross: Meet with Fronczak and discuss design, get feedback from client  
2. Aman: Make contact with metal shop worker at hospital and show design  
3. Erik: Look for materials to make sliding back rest track  
4. Karim: Determine what materials to use for base of seat and how to incorporate leg rest  
5. Miguel: Determine how to make sliding shoulder straps

**Statement of Team Goals for this week:**

This week we are going to focus on laying out our exact design and finding materials to produce it. We will also meet with experts if different areas to get our questions about manufacturing answered.

**Tentative Project Schedule:**

- 09/02/05: Formed teams and assigned roles  
- 09/08/05: Met our client  
- 09/16/05: Develop PDS; Brainstorm possible designs  
- 09/23/05: Start writing mid-semester reports  
- 10/01/05: Evaluate Ideas and work on power point; Peer review mid-semester reports  
- 10/08/05: Mid-Semester Presentation; Design notebooks, PDS, mid-semester reports due  
- 10/15/05: Choose a final design  
- 10/15/05 – 11/26/05: Work on the final design; Testing; Modifications  
- 11/26/05: Work on the final power point, paper and PDS  
- 12/15/05: Poster Presentation; Final paper, PDS, evaluations and design notebooks due

**Difficulties:** Fronczak was out of town

**Activities/Accomplishments:**

<table>
<thead>
<tr>
<th>Names</th>
<th>Activities</th>
<th>Time (hrs)</th>
<th>Running Total (hrs)</th>
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<td>Ross</td>
<td>Presentation Progress report, client contact, Fronczak contact</td>
<td>3</td>
<td>28</td>
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<tr>
<td>Aman</td>
<td>Presentation</td>
<td>1</td>
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<td>Erik</td>
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<td>Karim</td>
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<td><strong>Total</strong></td>
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<td>7</td>
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Weekly Goals for Fall 2005:

- Week 1 (9/2/05-9/4/05)
  - Form Teams, Assign Roles, Make an appointment with client
- Week 2 (9/5/05-9/11/05)
  - Meet Client, Do background research, Set up team website, Begin working on PDS,
- Week 3 (9/12/05-9/18/05)
  - Finish rough draft of PDS, Meet client for demonstrations, Discuss PDS with advisor, Finish up any remaining research, Email researchers Levine and Bull
- Week 4 (9/19/05-9/25/05)
  - Discuss PDS with client, Begin brainstorming design ideas, Collect estimates for designs brainstormed (i.e. cost, dimensions, safety tests to be used, pros and cons)
- Week 5 (9/26/05-10/2/05)
  - Finish brainstorming, Finalize a Design as a group, Show designs to Client, Get consent from client and decide on one Design, Order pertinent supplies (i.e. materials), Research materials and companies if needed, Look for various prototype tests and facilities
- Week 6 (10/3/05-10/9/05)
  - Begin constructing prototype, Prepare for Mid-semester presentations and begin writing the Mid-semester reports
- Week 7 (10/10/05-10/16/05)
  - Mid-semester Presentation, Invite Client, Keep building prototype
- Week 8 (10/17/05-10/24/05)
  - Work on the prototype
- Week 9 (10/25/05-10/30/05)
  - Finish the prototype, Test prototype, gather data, make observations
- Week 10 (10/31/05-11/6/05)
  - Modify prototype based on testing
- Week 11 (11/7/05-11/13/05)
  - Finish Building the prototype
- Week 12 (11/14/05-11/20/05)
  - Collect data and retest the prototype
- Week 13 (11/21/05-11/27/05)
  - Make last minute adjustments to the prototype, Begin preparing for poster presentation and Final Paper
- Week 14 (11/28/05-12/4/05)
  - Final Presentation, Invite Client for poster session
- Week 15 (12/5/05-12/10/05)
  - Turn in notebooks, final report and evaluation form, Give the Prototype to client, Meet Client