Patient Positioning Aid

Week 10
Date: April 4, 2006
Bhavin Patel

Work Completed:

We are basically finished with the building part of our design besides a few small things. This week we were able to even start preliminary testing. Ashley and I were able to glue the handbar together and let it dry overnight. We drilled and tapped the handbar after which we made corresponding holes on the transfer board. Figure 1 shows Drew and me holding the transfer board while Christen used the drill press to make the holes.

Figure 1: Drilling the Board

After which we attached the handbar to the board. Figure 2 shows us attaching it.
Then we attached the sidemembers and the cross members. Figure 3 shows the attachment of the cross members.
Once we had all the components attached we had Drew get on it to do preliminary testing. We were able to test out each of the components and see how effective they were. We noticed that the arm stabilizers did not work as we had hoped, so we turned them around to face up inside of down. This way they are able to support the weight of the arm and allow the patient to rest without having to do any work. Figure 4 shows Drew on the device.

![Figure 4: Drew Testing the Positioning Aid](image)

We also noticed a hazard that existed due to the arm stabilizer’s location. If the patient turns their head left or right they could possibly hit their head on the arm stabilizer. As a solution we decided to put some polyfoam onto the sides of the stabilizer to prevent any injuries from occurring. Figure 5 shows the hazard and figure 6 shows the attachment of the new polyfoam.
Figure 5: Hazard of Turning Head

Figure 6: Attachment of New Polyfoam Strip
Future Work:

For this week we will completely finish our design by attaching the new cushion to the board. We will also be doing a lot of testing this week to make sure everything is working properly. We also will be gluing foam on the bottom of the transfer board so that if extra people need to lift it, it isn’t so hard on their hands. We will also be adding a caution sign by the handbar so no one lifts the board using it. In addition we plan to attach clear rulers to the sides of the track system so that the arm and leg stabilizer can be secured at the same location on both sides.

Project Review:

We are almost complete with our project and have a week to make any necessary alterations. There is no need for any type of last minute action since we are on track and almost finished.

Hours Completed:

BME lab: 6 hours
Machine Shop: 2 hour
Outside lab: 1 hour
Total : 9 hours