This week we accomplished a lot, and at the end of lab on Friday our project appears to be very near to completion. Before Friday’s lab Bhavin disassembled all of the leg stabilizer components and took the 80/20 extrusions over to the machine shop. At the machine shop he cut about 1.5 inches off of each extrusion so that they would fit better (in height) in MRI and CT scanners. Also before lab on Friday and then during lab, Ashley glued foam padding to the arm and leg stabilizers. The choice of foam turned out to be a very good investment for it is very soft and pliable, which will add greatly to the comfort of patients. Also before Friday’s lab Christen finished tapping the arm stabilizer PVC. I had been having trouble with the salespeople from www.HandlesUnlimited.com so in lab on Friday I found other handles from McMasterCarr and filled out a purchase order request form for them – the handles are expected to come in by the end of this week.

During lab we all worked together at finishing the glueing of the foam and swapping out the stainless bolts and replacing them with the aluminum ones. This took a lot of work because we had to cut down and file many of the aluminum bolts. The following figures are digital images of me filing the aluminum bolts and reassembling the leg stabilizer with the aluminum bolts:
Also during lab on Friday I tested out the positioning of the arm stabilizers, and the following is a digital image of me doing so:

By the end of lab on Friday our project looked to be nearly completed. Everything is attached on the top of the board with the exception of the handles which are on order, and the only thing else left to attach of the flexion supports to the bottom of the board. The following is a digital image of how our project looked at the end of lab:
On Monday Christen and I spent a lot of time in the machine shop drilling the holes for the pieces of aluminum that are going to be attached to the bottom of the border for flexion support. The following is a digital image of me at the machine shop at the milling machine:

Future Work:

Tomorrow Christen and I are going to return to the machine shop to drill and tap the pieces of aluminum, and we will then attach them to the underside of the board. Upon
completion of this we will then be able to test the flexion support and will add PVC crossmembers if needed. Once the handles come in these will be very easy to bolt onto the board seeing as how the handles are going to come in pre-tapped. Besides these the only other things to do are to sand down the rough edges and attach the handbar to the board. Once all of this is completed we can then begin to fully test the apparatus.

Project Review:

We are currently right on schedule to complete the project on time. All of the major components are put together and are working correctly, and within a few days the few minor components will be finished and we can begin testing.

Hours Worked:
Out of Lab – 2 hours
In lab – 6 hours
Machine Shop – 2 hours
Total – 10 hours