

## **7-12-12 Elist Discussion on Submersible Wheelchairs**

### **On 7-11, General asks:**

Does anyone know a manufacturer of honest-to-goodness wheelchairs that can enter water via ramps? We currently use standard stainless steel wheelchairs that need replacement. We have one of the plastic pipe wheelchairs, but it floats away when the patient gets up and the rubber on the wheels deteriorated pretty quickly. Help! Thanks.

### **Molly replies:**

This is a tough area as all of the water wheelchairs on the market have issues. They use cheap materials, poor design and clearly don't include the end-users in their design process.

My husband and I had access to most all of the chairs available on the market as the Betty Wright Swim Center in Palo Alto, California had purchased some of every kind out there. We designed, "spec"ed and built 4 wheelchairs that have been working well almost four years. We used the PVC platform but all our materials and design features were premium.

We are in the prototype stage of a non-rusting metal chair that is easily self-propelled as well as assist-propelled. It's in mid-stage development at present.

I realize this does nothing for you now. But if you choose one of the chairs out there now, talk to me and I can tell you "a truth" about what you have chosen...

Have a lovely day... Molly

### **On 7-12, Laura writes:**

We were replacing chairs about every 6 months and have also tried almost everything on the market with little luck. Our rehab engineer finally got in touch with the engineering professor at a local university and he and his students built us a chair that we have been using for 10 years now. The seat and back are made out of fiberglass (like a boat would be) and all of the other parts are stainless steel including the bearings. The only thing we have had to do is replace brake parts and wheels every couple of years. They even put a brake bar up at the top that could be engaged while pushing the chair. Our chair has rigid seating but with a slight tilt for those whose postures or spasticity prevents them from sitting at 90°. It has saved us thousands of dollars through the years as we utilize the chair multiple times each day.

### **July 12, Kandra replies:**

We use shower chairs and toileting PVC pipe chairs with the plastic wheels. To keep the chairs from floating away we attach ankle weights to the bottom of the chair.

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### **July 13, Phyllis writes:**

We also use the PVC chairs and have used the weights on the bottom and on some of our chairs we've even drilled holes in them so that they fill with water and don't float away.

### **On Jul 13, 2012, at 12:50 AM, Ken Morgan wrote:**

Hi Molly,

I work at Timpany Center in San Jose. I would be very interested in seeing your prototype when it's finished. We have all the usual issues with chairs not holding up well in water. Please let me know when it's done & I'll do what I can to set up a meeting with you & the "powers that be" at Timpany.

THANK YOU very much for posting this.

### **Molly Replies:**

I will do that, Ken. Have a lovely day.

### **On July 13th, Ken writes:**

I forgot to mention something about the plastic chairs. We asked the manufacturer of the ones we own about drilling holes. They told us there needs to be a minimum of 12" between drilled holes (no larger than 1/4") or we will void the warranty. The chair will fill with water but it is a very slow process and of course the water drains when the chair is removed from the pool.

I did just the opposite [of their suggested procedure]: I plugged the holes in the caps on the end of the tubes at the bottom of the chair to prevent water from draining. The left armrest is made to be lifted & swung out of the way for patient transfer. This is where you can fill the chair with water and then put the armrest back in place.

### **On July 14th, General writes again:**

Thank you for all your input. I am also interested in Molly's prototype. There is an obvious need and market niche for these chairs. The PVC chair we bought had rubber wheels that deteriorated.

### **Molly writes:**

I will keep you posted about the prototype. We're working out any "bugs" so the end-users have a satisfying and successful experience with a product designed for long term use and will be recyclable when it needs to be retired. Meanwhile, using a regular low cost wheelchair with removable leg rests like you've been doing at Tympany is a reasonable solution until this one is in production. At least their materials are recyclable unlike the PVC ones whose materials are not recyclable. You just have to replace the metal ones a bit before your clients feel at risk and their eyes get a bit wild. LOL (Laugh Out Loud)

Have a lovely day... Molly

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**Sinclair writes:**

Wheel material is critical and there are specific functional choices that are rarely chosen. I'd rather be a satisfied user with long-term, dependable equipment. There may be appropriate replacement wheels if the rest of the chair is functional.

**On July 17, Brenda commented:**

We got our chair through a local medical supplier, who works with Anthros. You custom design the shower chair to your needs: lap belt, swing-away arm, bench seat, etc, etc, etc. If you need the catalog number, let me know I can get it for you. Our cost was approximately \$800