

Justification for the Need & Funding of an *Astor-Bannerman ABW4/SP* or *Southern Care Systems Spectra Electrical* **Height-Adjustable Washbasin** for boys with Duchenne muscular dystrophy (DMD) & for children with other types of muscular dystrophy & allied neuromuscular conditions

One of the greatest problems for anyone with muscular dystrophy or an allied neuromuscular condition is not only that they cannot walk but also that they have severe muscle weakness in their arms, although usually they retain reasonable hand function. As a result, they cannot lift their arms and have to rely on either creeping with their fingers or sliding their forearms along a surface, often aided by forward and backward movement of the trunk. If an arm falls off the wheelchair armpad, they are often dependent upon asking someone to lift the arm back up again, and this lack of arm function is very debilitating.

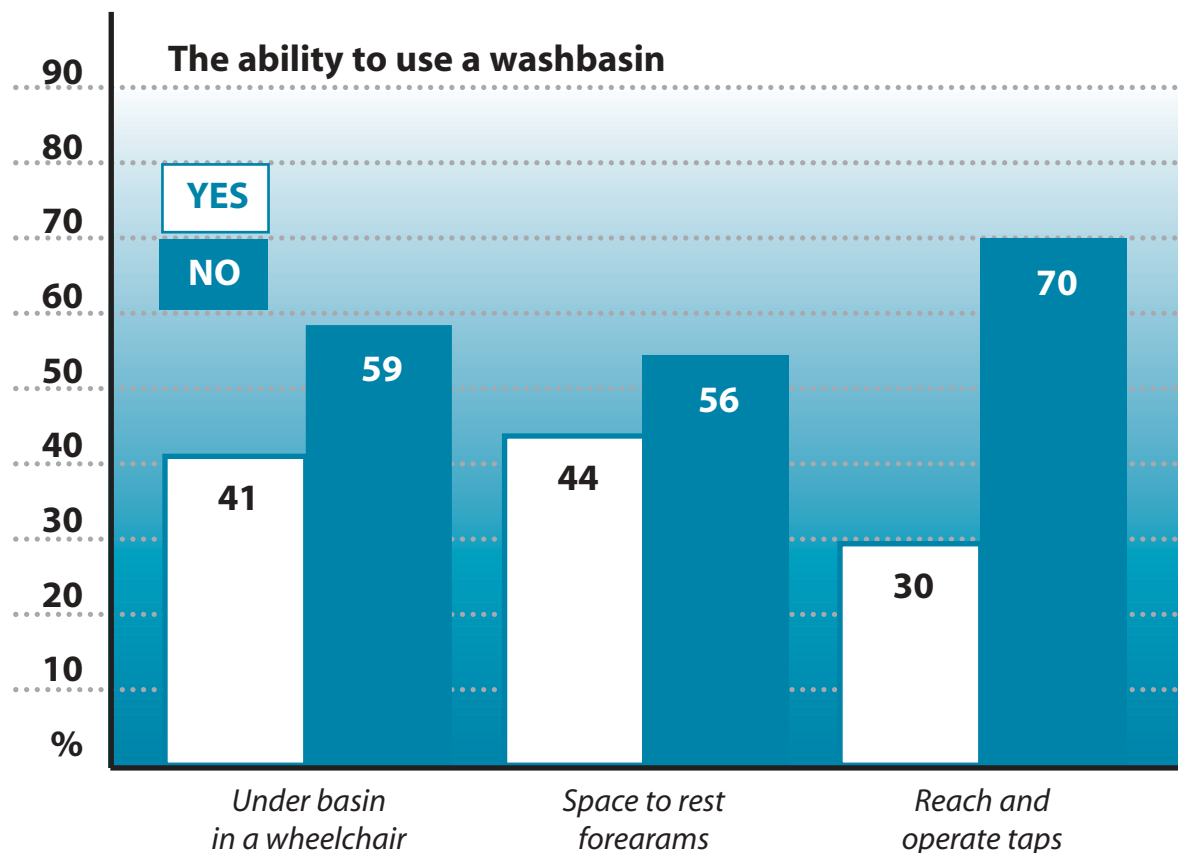
For several years the only solution was a fixed-height washbasin. This was often set into a melamine surface and used with ordinary lever taps. Although detailed notes were provided, builders found it difficult to install correctly, with the result that the work often had to be carried out twice. This was expensive, time consuming and very unsatisfactory. Finally this type of basin was withdrawn, although initially there was no satisfactory alternative.

Modern inset basins are not successful as they are raised up from the melamine surface and impede the sliding process. A fixed-height basin is not satisfactory because it is impossible to find one single height that is suitable on every occasion for both short- and long-term use.

There is the need for height adjustment because:

- more than one wheelchair will be used and the wheelchair models will change over the years;
- cushions of different depths will be used;
- the wheelchair armrests will need to be raised after a more erect posture is achieved following spinal surgery;
- the optimum height for sliding arms on to the surface and into the water is too low for face washing and teeth cleaning. For a boy with DMD this will mean that, when he leans forward to rinse his mouth after brushing his teeth, he will have to ask someone to push on his shoulders to get him back into his wheelchair.

In a recent research project looking at the quality of adaptations for children and adults with neuromuscular conditions, some of the statistics were unacceptable, as the graph on the next page illustrates. This reflects the difficulties that were experienced in relation to conventional fixed-height washbasins. The fact that almost **60%** of disabled users did not have a wheelchair-accessible basin and **70%** could not reach the taps was a clear indication that a better solution was needed.



The aim was to produce the following:

- a basin of the correct profile with the bottle trap against the wall – both of which will allow knee access when in a wheelchair;
- a basin which is large enough front-to-back to allow the user to get close up to the front edge without the wheelchair footrests hitting the wall below the basin and preventing this close access;
- a front edge without a fascia, which would obstruct the wheelchair armrests and/or the joystick control of a powered wheelchair;
- a surface less than **15mm** thick, which allows the user to 'creep' with their fingers, to raise their hands and forearms to the front or side of the basin;
- an area at the side of the basin which is large enough to provide forearm support, and the storage of toiletries and a towel within reach;
- a surround to the basin that is shiny and smooth to help users to slide their arms to reach forward;
- a basin set below the surface, without a raised edge, so that sliding arms into the water is not impeded;
- the shape of the basin ensures that the water is close to the user and it is not necessary to lean forwards, which may then make it difficult to sit back upright against the wheelchair backrest;
- tap controls which require no hand strength or pressure to operate and do not involve the need to reach;
- a basin low enough to enable the user to reach into it to wash, but at the same time set into a surface which can be raised high enough to allow their hands to be at the same level as their mouth for cleaning teeth, or their head for combing hair;
- a surface that behaves as a mobile arm support;
- flexible waste and water pipes to allow electric height-adjustability, if needed;
- the option of a mirror (with light) which rises with the basin.

The ability to achieve independence while washing is a very basic and essential need. The design criteria necessitated expensive materials, electronic taps and electric height-adjustability with a safety cut-out to ensure that the surface senses an obstruction below.

There are two models that meet the necessary criteria, as follows:

ABW4/ABW4SP from *Astor-Bannerman (Medical) Ltd*;

Spectra from *Southern Care Systems Ltd*.

A comparative chart to help with the choice is available in Chapter 8a of the Muscular Dystrophy Adaptation Manual. This is a valuable opportunity to try to redress the unacceptable statistics relating to washbasins and independence for a group of severely disabled children.

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