



To flush or not to flush; disposable vs. basin bath?

by Steve Brown

"Suppliers used to go through the back door to play physicians off hospitals. But more physicians and hospitals are holding hands and offering a united front even as some suppliers try to come up with ways to throw a wrench into the process."

-Chris Charland,
Director of cardiology contracting,
Novation

No matter how the hospital runs the warehouse it won't be able to generate income from it. It might be able to control expenses but I don't know that the hospital can run it as well as a distributor does."

-Jorge de Cespedes, co-founder,
President and chief operating officer,
Pharmed Group Corp.

"There are some organizations that have a great handle on where their costs are through internal technology systems and metrics. And then there's the other end of the spectrum."

Eric Timm,
Vice president of marketing /distribution,
Cardinal Health Inc.'s medical products
and services division.

"When a true quality assurance program is in place, every step from decontamination through sterility maintenance is audited and/or monitored for quality outcomes to effectively support patient care."

Sandra Lee
Senior manager, professional education,
STERIS Corp.

"A very important part of AAMI guidelines is to look at the protection capability of the total gown not just at the fabric itself. This includes the construction of the gown, the sleeve seams, and areas where ties attach to the product."

Jeff Schneider
Global Surgical Products,
Kimberly-Clark Health Care



If you've ever had to deal with a clogged plumbing system, whether at home or your facility, you know how frustrating, time consuming, expensive and not to mention unsanitary, it can be. Unfortunately the problem is becoming more commonplace in hospitals with the advent of new products that claim to be flushable, or with un-flushable products that are being flushed anyway.

Edward A. Morton, CEO, Naples Community Hospital, Naples, FL, is one such person who has experienced the issue first hand. The Naples hospital was having problems in one of its older facilities, partly due to an outdated plumbing system design, but also in part due to the number of "foreign objects" that were being flushed down the pipes: including paper towels, reusable towels and linens.

Flushable vs. dispersible

To better understand the problem, you should first understand the difference between the terms "flushable" and "dispersible". Though sometimes used interchangeably, these two terms are significantly different. Flushable means the product goes down the toilet and doesn't clog on its way. Dispersible signifies that the product dissolves into a cloud of fibers so it becomes part of the water flow.

The only product that is dispersible is toilet paper. Manufacturers of "flushable" cloths and scrubbers make claims that their products are flushable and are somewhat dispersible - their products don't fall apart immediately on contact with water. They are counting on the product not clogging until it finally falls apart somewhere on its way to the treatment plant.

There are some manufacturers of non-woven cloths who are working on the issue, but have not succeeded in making a dispersible fabric. The challenge is that no company has found a way to have a fabric hold up to water long enough to do its job and

then disperse completely. There are examples of fibers made to fall apart on contact of water (toilet paper) and examples of fibers that hold together on contact of water (tissue paper, paper towels). What manufacturers of "flushable" products are doing is making a product that fits between toilet paper and paper towels and doesn't clog pipes. Sage Products conducted a flushable fabric project a few years ago that found the biggest challenge for manufacturers is developing a product that doesn't clog.

The other factor in "flushability" is the texture of the pipes that the product goes through. The inside of iron pipes are often like sandpaper because of the rough and often jagged texture that develops as the iron pipes rust. As you can imagine, longer fiber cloths could catch on a rough surface and cause a clog. While there is more and more PVC pipe being used for drain pipes, there is still a lot of iron pipe out there, especially in hospitals.

Sage Products' Comfort Bath wash cloth does not come apart in water. Sage uses a nonwoven process called "dry laid" and this process typically uses longer fibers than a wet laid process (i.e., tissue or toilet paper) which uses very short fibers. These longer fibers are unable to fall apart and disperse readily, like the tissue. They can however biodegrade at a later time, but not before having been flushed and delivered to a treatment facility.

Bottom line is that there are no truly flushable washcloths. The ones that you see on the market are claiming flushability because of their size. As far as we know, there are no alternatives.

Of course, at the root of the problem, we know that in all actuality healthcare workers are flushing disposable washcloths and



National Average Costs for Traditional Basin Bathing By U.S. Region



REGION	AVERAGE NURSING LABOR COST	AVERAGE SUPPLIES COST	AVERAGE LAUNDRY COST	TOTAL AVERAGE COST
Northwest	\$7.98	\$0.81	\$1.07	\$9.86
Mid-Atlantic	\$6.53	\$0.81	\$1.07	\$8.41
Central	\$6.16	\$0.79	\$1.18	\$8.13
Western	\$5.91	\$0.84	\$1.15	\$7.90
Midwest	\$3.76	\$0.72	\$1.06	\$7.54
Southern	\$5.17	\$0.90	\$0.92	\$6.99
Eastern	\$5.04	\$0.68	\$1.02	\$6.74
Southwest	\$4.87	\$1.06	\$0.80	\$6.73

Cost calculations: all costs were obtained from a sample of 225 geographically dispersed hospitals throughout the U.S. in 2002.

Nursing Labor: Based on geographic wage rates among nursing caregivers who administer patient baths (aides, techs, RN's).

Supplies: Determined by the actual prices and quantities and allocated to account for multi-use products to reflect an accurate cost per procedure. (Items consisted of basins, soaps, moisturizers..)

Laundry: Cost included the actual lines used during procedure, the cost to preprocess and the replacement costs (based on hospital actual costs for replenishment).

Source: McNees, D. Claymore Consulting, St. Louis, MO 2002

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National Average Costs:

Labor, supplies & laundry: **\$7.56** per bath

Supplies & laundry only: **\$1.84** per bath

the like down the drain. One factor could be the lack of education on the part of the hcw as to the flushability of the product. Another factor could be a concern with infection control issues, i.e., the worker has used the product on an incontinent or otherwise contaminated patient and has concerns with throwing the used product in the trash. Actually, disposable washcloths can be thrown in the trash or (if it's from incontinence or bloody) in a red bag.

Another problem that can complicate the issue is the fact that products that are flushable due to their small size, in reality may require multiple wipes to be used in order to complete the job. It goes without saying, that even if you flush too much toilet paper, which is in fact dispersible, the drains can become clogged. And to look at it another way, the product may in fact be flushable if the wipes are flushed one at a time. But if a nurse uses eight wipes for a job, it is inconceivable that he/she would flush one wipe at a time. Not only is it inconvenient and a waste of time, but it also is a costly waste of water and energy.

The best way to eliminate the problem is through proper training and proper

labeling to instruct the end-user how to use the product. Sage Products goes to great lengths to make sure that our packaging reflects that we do not produce a flushable product. It's also a considerable part of our inservicing with customers, to train them on what they can and cannot do with our cloths.

Sage Comfort Bath wipes are made of a non woven construction, similar to that of terry cloth towels, but using discontinuous stable fibers. The way in which Comfort Bath Cloths differ from tissue, paper towels, or some other disposable bath wipes that are also non woven, is that they incorporate longer fibers and fibers of greater diameter, or denier, mimicking a cloth-like feel. Our intentions in designing Comfort Cloths was to come as close as possible to the look and feel of a terry-cloth towel, but build into it a disposability for convenience.

One of the advantages of a thicker cloth is that you can put more medication or cleansing solution into the product, as well as use less wipes.

We've done a lot of studies at Sage to determine that using our Comfort Bath system is a substantial dollar savings for the hospital over traditional basin bathing. Not only

are reduced laundry costs a consideration, but probably the biggest factor is the reduction in the amount of time required by the nurse to cleanse the patient. The May 2004 issue of the "American Journal of Critical Care" features an article comparing traditional and disposable bed baths in critically ill patients. The conclusion states, "The disposable bath is a desirable form of bathing for patients who are unable to bathe themselves in critical care and long-term care settings, and it may even be preferable to the traditional basin bath." Reasons cited for the conclusion, include, "significantly fewer products and less time were used, cost was lower, and nurses' ratings were significantly better than the disposable bath."

Morton states that his facility does use Sage Products, and that while initially it was easy to blame the Comfort Bath product when the flushing issues began, he said, "when we stopped using it, the clogging issue still persisted. We have great experiences with Sage's bath product, especially in our ICU. My nurses are very happy to have the Comfort Bath product back." **HPN**

Steve Brown is director, non-wovens business development for Sage Products.