

Backing Up Our Practice With a Simple Study

In November 2001, my coworkers (Shelly Monkman, RDN; Catherine Morley, PhD, RDN, FDC) and I (Principal Investigator) learned that we had been awarded an interdisciplinary research project grant in a competition offered by the Academic Advisory Committee at the Fraser Valley Cancer Centre of the British Columbia Cancer Agency (BCCA). With colleagues from Microbiology and Infection Control, we had proposed a study of the efficacy of three methods of cleaning gastrostomy feeding bags in home settings.

While tube feeding equipment manufacturers recommend changing bags and feeding sets daily, FVCC Nutrition Services had been advising patients to change feeding bags every month and feeding sets (tubing) every week owing to the expense and waste of using new equipment daily. These recommendations were based on the nutritionists' "best guess" of what was bacteriologically safe. While we believed that recommendations for gastrostomy equipment cleaning were bacteriologically safe, we did not know this for certain. There were no published reports of acceptable bacterial growth limits and cleaning practices for gastrostomy tube feeding equipment in outpatient settings upon which to base standards for care. Existing reports focussed on feeding equipment care in acute care and long-term care settings. Other concerns from our practice were that patients/families reported that recommended cleaning procedures were time-consuming and frequent equipment changes were costly. Not following manufacturers' recommendations worries some individuals and families. Patients and families also experienced some frustration at the inconsistent advice they received from different sources about equipment maintenance.

We reasoned that research-derived cleaning standards would provide consistent advice to be given by BCCA staff, home care nursing and community hospitals. By designing a simple study to assess three cleaning methods, we were able to determine the most efficacious and cost-effective

method of cleaning gastrostomy feeding equipment. Three cleaning methods (outlined below) were tested in the research assistants' home setting for four weeks each, using the same bags and tubes for the full four weeks.

Cleaning Method 1

Rinse bag and tube with lukewarm water until no residue is visible. Wash bag with soapy warm water; drip soapy water through tubing. Rinse. Air dry for 30 minutes. Wrap in clean tea towel; store in refrigerator. After the last cleaning of the day, rinse bag and tubing with a 1:1 vinegar/water solution. Rinse. Wrap in a clean tea towel. Store overnight in the refrigerator.

Cleaning Method 2

Wash bag and tubing with warm soapy water. Rinse. Air dry bag. "Whirl" feeding set to remove as much water as possible (make lasso-like circular motions with the tubing for water to be pulled out by centrifugal force). Hang to dry. Rinse bag/tube prior to every use.

Cleaning Method 3

Rinse bag and tubing with lukewarm water until free of visible residue. Air dry bag. "Whirl" feeding set (as above). Hang to dry. Rinse bag and feeding set with water before each use. After the last use of the day, wash bag and set as per cleaning method 2.

The results showed no bacteriological difference between the three methods for the first two weeks of testing. After two weeks, all three methods had growth above acceptable levels (using criteria used for pasteurized milk). We have changed our recommendations to reflect our findings. We now recommend patients use the third method and replace bags and tubes every two weeks.

I have been fortunate in this, my first experience with practice-based research, to partner with experienced researchers and microbiology content experts, and to have the funds to hire a research assistant (Natalie Walshaw, RD). This experience has boosted my

confidence in taking on research. We are preparing a manuscript for publication.

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Writing for Practice: Rewarding!

After writing a short article for the last issue of *Practice*, I received numerous e-mails, comments and compliments from dietitians across Canada. Before my copy of *Practice* had arrived, I received two e-mails thanking me for the piece. Both expressed that they had enjoyed the article and that they agreed with the basic premise. When I walked into work the following morning my boss commended me for my contribution. I received a number of e-mails asking for references and questions about my content. By far the most memorable response was from a dietitian who related her own story in response to my article. She wrote about her daughter who had been diagnosed with diabetes as a teenager. Shortly after learning about the daily treatment of her chronic condition, this young woman mastered the day-to-day practical aspects of diabetes. Today, her daughter is living away from home, attending university and managing her diabetes successfully.

As a less-than-confident, inexperienced writer, I highly recommend sharing some aspect of your professional practice. You too may be rewarded with encouraging feedback, positive comments from your colleagues and most importantly, the success stories from the people we work with.

Contributing was rewarding but most rewarding was the feedback I received. Thank you!

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