

# Impact of an online education program for ostomy management on nursing knowledge and confidence in providing ostomy care

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## INTRODUCTION

The Gastroenterology & General Surgery unit at St. Michael's Hospital has 40 beds with approximately 50 nursing staff and 10 allied health professionals; on average, 150-175 ostomy related surgeries are done each year. The non-specialized nursing staff serves an adjunct role in ostomy care helping the ET nurse with patient teaching, pouch changes and routine patient assessment. The ET nurse is involved in more complex cases for product assessment, management of complications and patient counseling.

Providing ongoing education on ostomy management is a challenge in an acute setting. A multitude of factors compete for the time and interest of nurses and health care professionals, making attendance at inservices problematic. Currently, the educational opportunities include a 2-day preceptorship, shadowing an ET and periodic educational sessions. Given that these are offered during select time periods, alternative forms of education may provide the opportunity for flexible and comprehensive ostomy education.

## OBJECTIVES

To increase knowledge and competency related to ostomy management, we implemented the **COAG 360** (Canadian Ostomy Assessment Guidelines) Ostomy Education Program, an on-line program developed by ConvaTec Canada Ltd.

The goals of the current evaluation are to assess:

- The effectiveness of this ostomy education program at increasing the basic ostomy knowledge of non-specialized nurses
- The overall impact of this ostomy education program on the knowledge level and confidence of the non-specialized nurse.

## METHODS

### The COAG 360 program:

This online, self-learning program includes 10 educational modules, 2 summary modules and 2 algorithms which aid in product selection. Educational modules cover ostomy management issues throughout the patient care continuum in a generic and interactive format.

**Module 1:** Anatomy and Physiology Basics

**Module 2:** The Basics of Ostomy Surgery

**Module 3:** The Preoperative Phase

**Module 4:** The Surgical Phase

**Module 5:** Ostomy Pouching Systems

**Module 6:** The Recovery Phase

**Module 7:** Management of Stomal Complications

**Module 8:** Management of Peristomal Complications

**Module 9:** The Recovery Phase in the Community

**Module 10:** Continuing Lifestyle

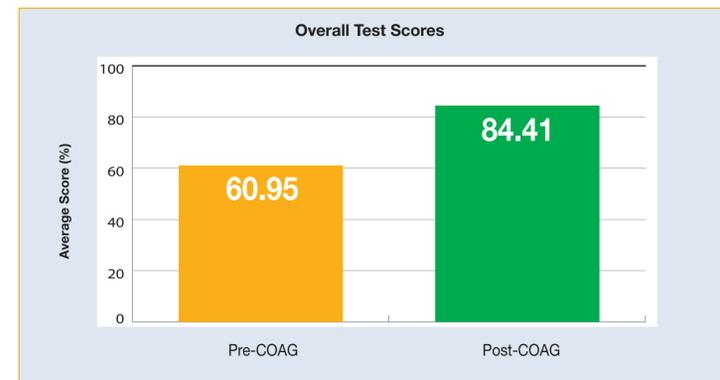
### Implementation of the program:

Prior to the launch of **COAG-360**, the program and its benefits were marketed to staff through a variety of posters. Management required that the staff complete the entire program. A small incentive was given to staff members who completed the pre- and post-surveys.

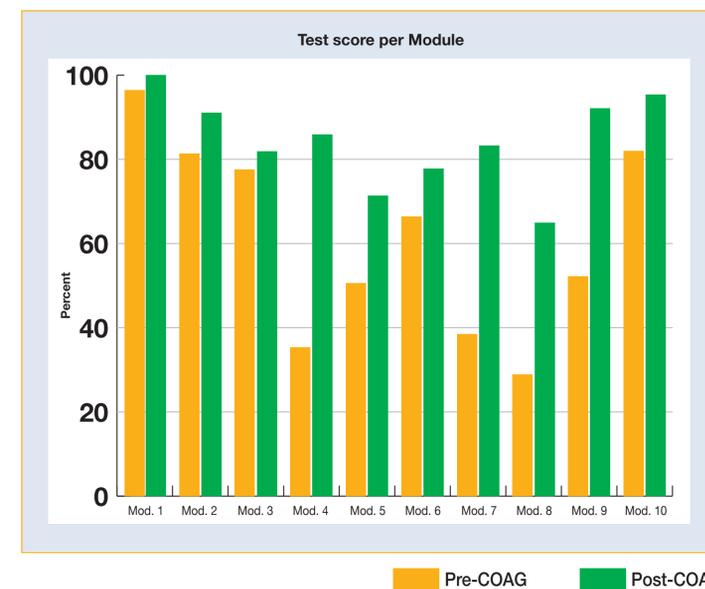
## Data collection:

- To assess the impact of the program, a pre-test survey on ostomy management was sent to each nonspecialized nurse. This was done using Survey Monkey, which provided an anonymous method of administering the test and collecting the data. The pre-test survey consisted of 40 basic ostomy knowledge questions from 10 modules of the **COAG 360** program.
- As each learner went through the **COAG 360** program, the same questions were asked and their answers collected. The data was then analyzed to assess the percentage of correct responses before and after completing the education. The data allowed us to assess overall scores as well as specific questions and modules to assess if there were topics that were of concern.
- In addition, a post-**COAG** questionnaire queried the overall satisfaction with the program and confidence with providing ostomy care in clinical practice. This was also administered using Survey Monkey so was anonymous.

## RESULTS

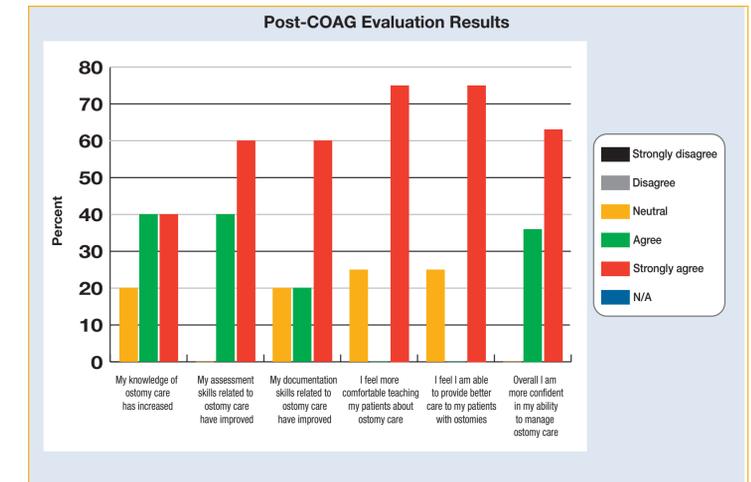


Between 25-30 participants finished each module. The overall test scores (all modules combined) improved from 61% to 84% following completion of the education program. When the test score data was broken down per module, it was found that there were improved scores in each module. Scores pre-COAG ranged from 29%-97% depending on the module. Scores following completion of the education program ranged from 65% to 100% depending on the module. The modules with particularly low scores (29% to 51%) included Modules 4, 5, 7, 8 (Surgical phase, Ostomy pouching systems, Management of stoma complications, Management of peristomal complications).



### Sample questions and percentage correct pre- and post-COAG

Question	Correct answer	Percentage with correct answers	
		Pre-COAG	Post-COAG
The most common indication for ostomy surgery is: (ulcerative colitis; Crohn's disease; toxic megacolon; cancer)	Cancer	48.3	90
The stomal edema will continue to markedly decrease until about weeks: (6-8; 4-6; 10-12; 1-3)	6-8	34.5	75
Complications seen most often within a few days of surgery include: (Ischemia, necrosis, peristomal skin irritation; Necrosis, peristomal hernia; Necrosis, ischemia and mucocutaneous separation; Peristomal skin irritation, peristomal hernia)	Necrosis, ischemia and mucocutaneous separation	31	88
True or False, you can pouch either over or under a support rod depending on whether it is sutured in place and the level of tension on it	True	41.4	88
A review of the literature found that the rate of early and late complications ranges between: (10-50%; 10-67%; 25-50%; 52-85%)	10-67%	8.3	100
Which of the following nursing interventions is recommended for a prolapsed stoma: (Apply cold compresses to reduce edema then attempt manual reduction of the prolapse with the patient in the supine position; Apply a convex pouching system; Increase the frequency of pouching system changes; Have the patient use an ostomy support belt)	Apply cold compresses to reduce edema then attempt manual reduction of the prolapse with the patient in the supine position	24	79
Which common peristomal skin irritation presents with wart-like papules or nodules with a white-gray, reddish-brown or purplish discoloration at the mucocutaneous border? (Pseudoverrucous lesions; Mucocutaneous lesions; Folliculitis; Pyoderma gangrenosum)	Pseudoverrucous lesions	4.3	100
Sexual dysfunction after ostomy surgery has been reported in up to ___ of patients. (30%; 40%; 50%; 10%)	30%	16.7	100



Following the preliminary data collection 11 people had completed the post-COAG survey. The results of the survey following completion of the COAG program found that the majority of users strongly agreed or agreed that the program improved their knowledge, assessment and documentation skills and overall confidence with respect to management of ostomy care.

## DISCUSSION

Thus far we have analyzed the preliminary results of the implementation of an ostomy education program. The results following the completion by all staff are pending. Preliminary results demonstrated the potential benefits of **COAG** for providing ostomy education.

- Baseline results indicated a need for further education on ostomy management in several areas including surgery, pouching systems and potential complications.
- Following completion of the program, results demonstrated that the scores increased in all modules.
- Those who have completed the post-**COAG** survey reported improved levels of knowledge and skills related to ostomy care.

Limitations of the study included that not all people completed all the modules. Furthermore, the **COAG** is set up in such a way that as you move through the program tests were optional, so some accessed the program but did not complete the tests. In addition, some technical difficulties arose with the use of the online program (eg, using incorrect passwords, not correctly activating the user account, problems with account number expiry). These problems involved both the users and the administrator, suggesting the importance of having training and resources supplied by the provider prior to implementation.

Overall, the results suggest an increase in knowledge associated with the program, based on assessments directly after completion. Further follow-up is needed to assess the knowledge retention, long term benefits of the program and implications to clinical practice.

With ongoing access, **COAG** may further demonstrate value through timely reinforcement of ostomy related information as educational needs arise. Also it would be interesting to further assess the implications for teaching, as it can be used before live sessions or to reinforce other education programs. In addition, it can be used a resource tool to refer back to when needed.

## OVERALL CONCLUSIONS

**COAG-360** education program is a valuable option to add to the training of non-specialized nurses in the area of ostomy care. Time and resources are recommended during the initial implementation process. Further study is needed to assess the sustainability of the education.

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