

# An Algorithm to Prevent Spread of Infectious Fecal Material and Improve Perineal Skin Outcomes in the Fecally Incontinent Institutionalized Geriatric Patient with *C. Difficile* Associated Diarrhea (CDAD)

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## BACKGROUND

Geriatric nurse practitioners are often asked to evaluate and treat perineal skin of fecally incontinent patients with *Clostridium difficile* associated diarrhea (CDAD). *C. difficile* is a well known spore-forming, gram positive anaerobic bacillus that predominantly affects institutionalized geriatric patients resulting in profound diarrhea.<sup>1</sup> Mortality rates during outbreaks have been reported as high as 16.7%.<sup>1</sup> Spread by fecal-oral routes via spore ingestion, spores can remain on inanimate surfaces for up to 70 days and have been cultured on the hands of healthcare personnel.<sup>2</sup> Skin breakdown related to the caustic nature of the effluent can result in pressure ulcers and irritant dermatitis often adding costs, length of stay and discomfort to the patient.<sup>3,4</sup> Environmental control of spore spread does not elucidate the role of fecal containment in the control of CDAD or its impact on perineal skin outcomes.

## PURPOSE

To determine if standard of care environmental controls with fecal containment using an algorithmic approach based on patient continence and skin integrity status would reduce CDAD rates and skin alterations.

## METHODS

After a retrospective review of 50 institutionalized geriatric patients with CDAD, an algorithm was developed and implemented with 49 patients. Post-implementation review was performed.

## RESULTS

There were no significant differences between the two groups in regards to average age (84 years), gender (82.4% female, 17.6% male) or length of fecal incontinence with diarrhea associated with CDAD (10.4 days). The use of an algorithm to contain fecal material in the incontinent patient along with standard environmental control measures reduced the prevalence of CDAD by 80%. Adverse events occurred with external fecal pouching including skin denudations and pouch leakage. No adverse events were observed with the fecal management system\*. Patients with containment devices experienced significant reduction in perineal skin alterations ( $p > 0.05$ ).

## CONCLUSIONS

Environmental controls should be expanded to include fecal containment using external fecal collectors or fecal management systems to maintain skin integrity and reduce both pressure ulcer rates and the spread of potentially infectious material. More study is warranted.

## APPLICABILITY TO PRACTICE

The use of fecal containment devices are a cost-effective method that can easily be implemented in institutionalized settings in geriatric patients with suspected or known CDAD.

## REFERENCES

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3. Bliss D et al. Fecal Incontinence in Hospitalized Patients Who Are Acutely Ill. *Nurs Res* March/April 2000; 49(2):101.
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## CASE STUDIES

### Patient 1



Developed CDAD related incontinence associated dermatitis and pressure ulcers. Did not meet criteria for external pouch. FMS\* inserted.



*C. Difficile* resolved in two weeks. FMS\* discontinued. Patient managed with external fecal collection device.

### Patient 2



Day 1 of consultation. Perineal dermatitis managed with fecal management system.

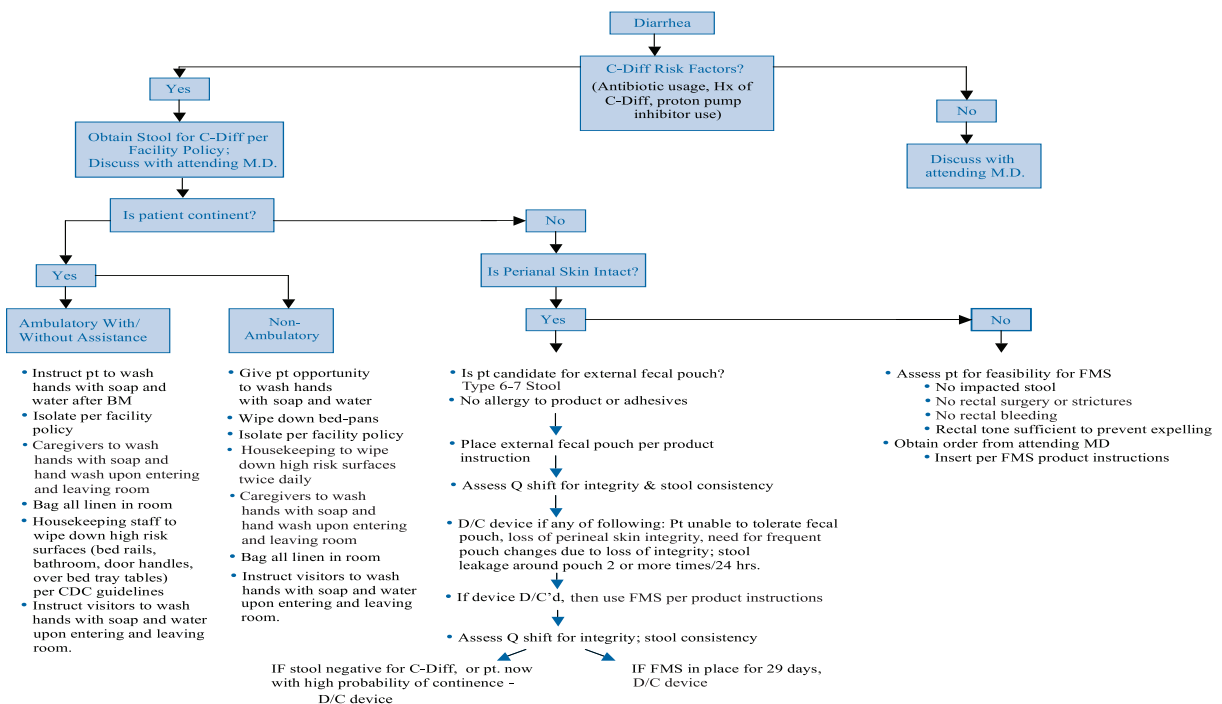


Day 10



Day 22 - healed.

## ALGORITHM



### PRODUCT NOTATIONS

\*Flexi-Seal® Fecal Management System

Flexi-Seal is a registered trademark of ConvaTec Inc.