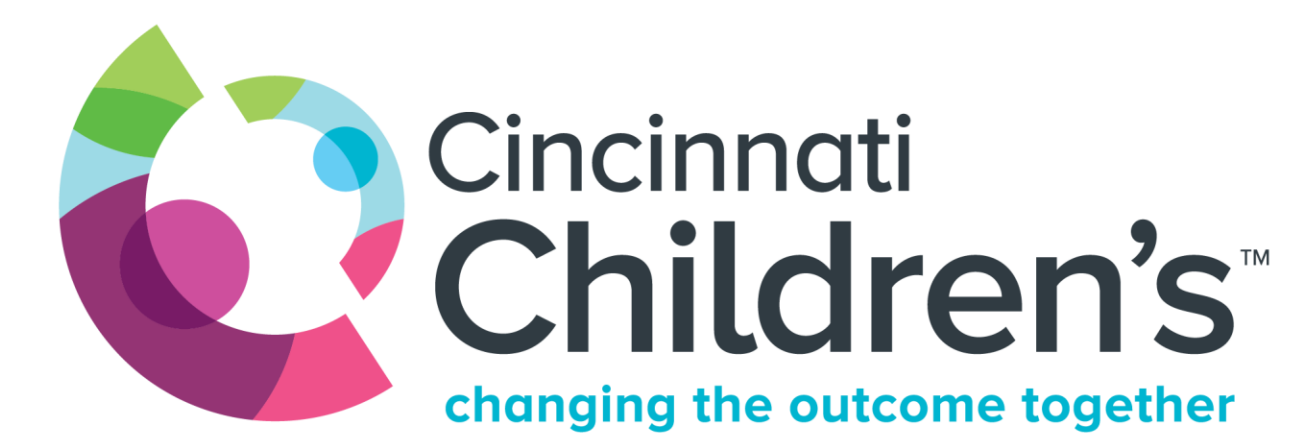




# Washing Away C.diff: Improving Compliance Through Education and Hand Hygiene in a Pediatric BMT Unit



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## BACKGROUND

Pediatric bone marrow transplant (BMT) patients are at substantial risk for *Clostridium difficile* (*C.diff*) infection due to profound immunosuppression, frequent antibiotic exposure, and prolonged hospitalizations. *C.diff* spores can persist on environmental surfaces and spread easily in healthcare settings if not properly contained. Strict infection prevention measures are essential to protect vulnerable patient populations. Collaborative rounds with BMT's leadership and Infection Control revealed a concerning rise in *C.diff* infections, which prompted further review of clinical practices and this QI project.

## METHOD

Weekly audits were conducted by BMT's Professional Governance Council members. Results were tracked in a table monitoring the following metrics:

- Sign posted in room
- Bleach wipes in room
- Hand sanitizer bottles removed from room
- Documented patient/family education in EPIC

## INTERVENTION

### Standardized Education:

- Developed an Elsevier module for staff education with all BMT staff completing the education in Sept. 2024
- Developed a "Knowing Note" for patient/family education. It is available in English, Spanish, and Arabic on the CCHMC's website

### Visual Reminders:

- Created signage for patient rooms promoting soap-and-water hand hygiene upon exiting rooms of *C.diff* + patients utilizing a familiar face (our facility dog)

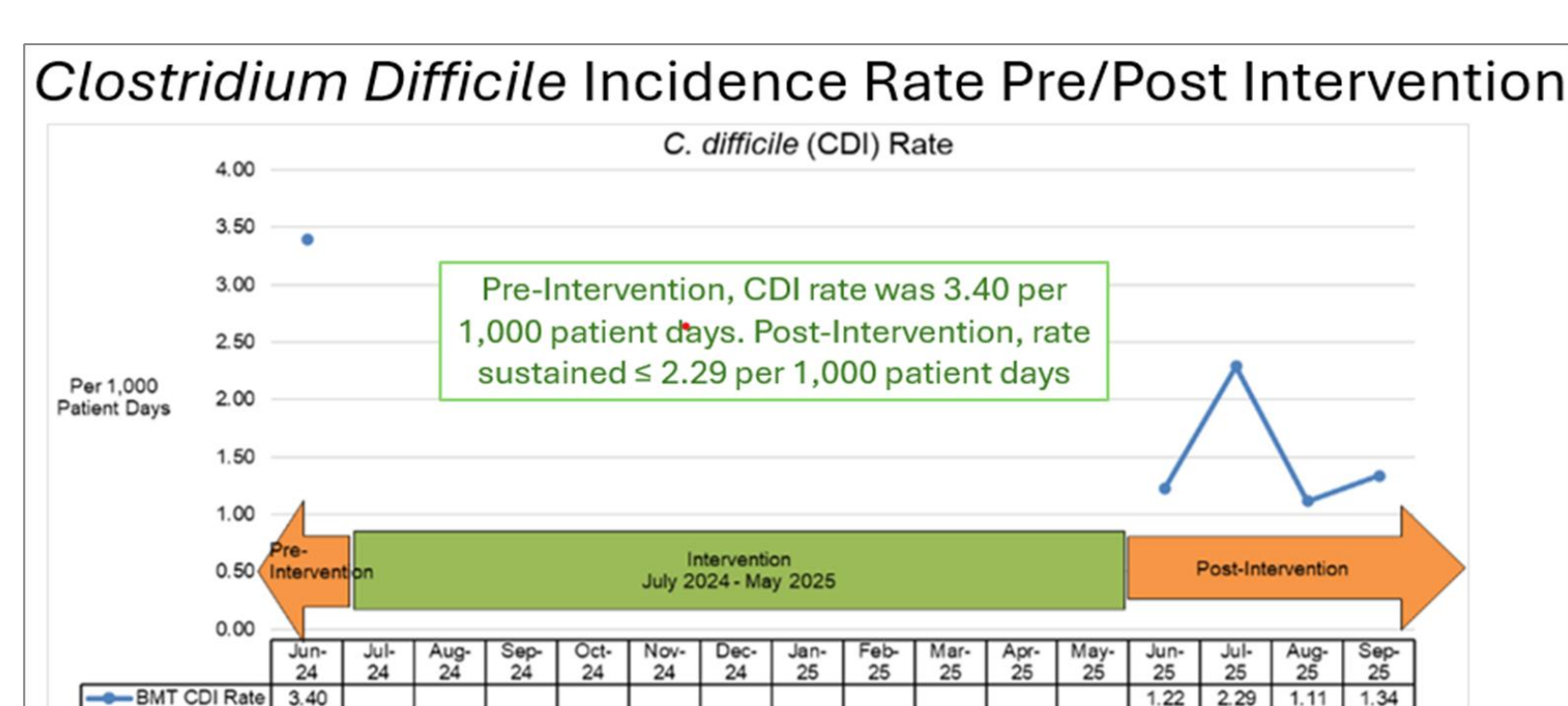


### Nursing Practice Enhancements:

- Implemented Contact Enteric isolation for suspected or confirmed *C.diff* cases
- Reinforced the need for validating comprehension of patient/family education and documenting it
- Posted handwashing signage near room exit
- Removed alcohol-based hand sanitizer from *C.diff* + patient rooms to reinforce soap-and-water use
- Added bleach wipes in patient rooms for environmental disinfection
- Real-time coaching by auditors and correction of deviations from established interventions

## CONCLUSION

Implementation of structured QI methods and standardized protocols improved adherence to key infection-prevention practices. Active engagement of bedside staff, visual cues, and real-time education strengthened efforts of prevention and stewardship which supported safer care for immunocompromised pediatric patients.



## REFERENCES

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2. Di Bella S, et al. *Clin Microbiol Rev*. 2024;37:e0013523.
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## OBJECTIVE

Overall aim was to reduce risk of *C.diff* on an inpatient bone marrow transplant unit

- Increase hand hygiene compliance from 80% → 90%
- Increase awareness through use of a sign in rooms of *C.diff*+ patients. Presence of sign from 0% → 100%
- Develop staff education to reinforce prevention practices and improve adherence

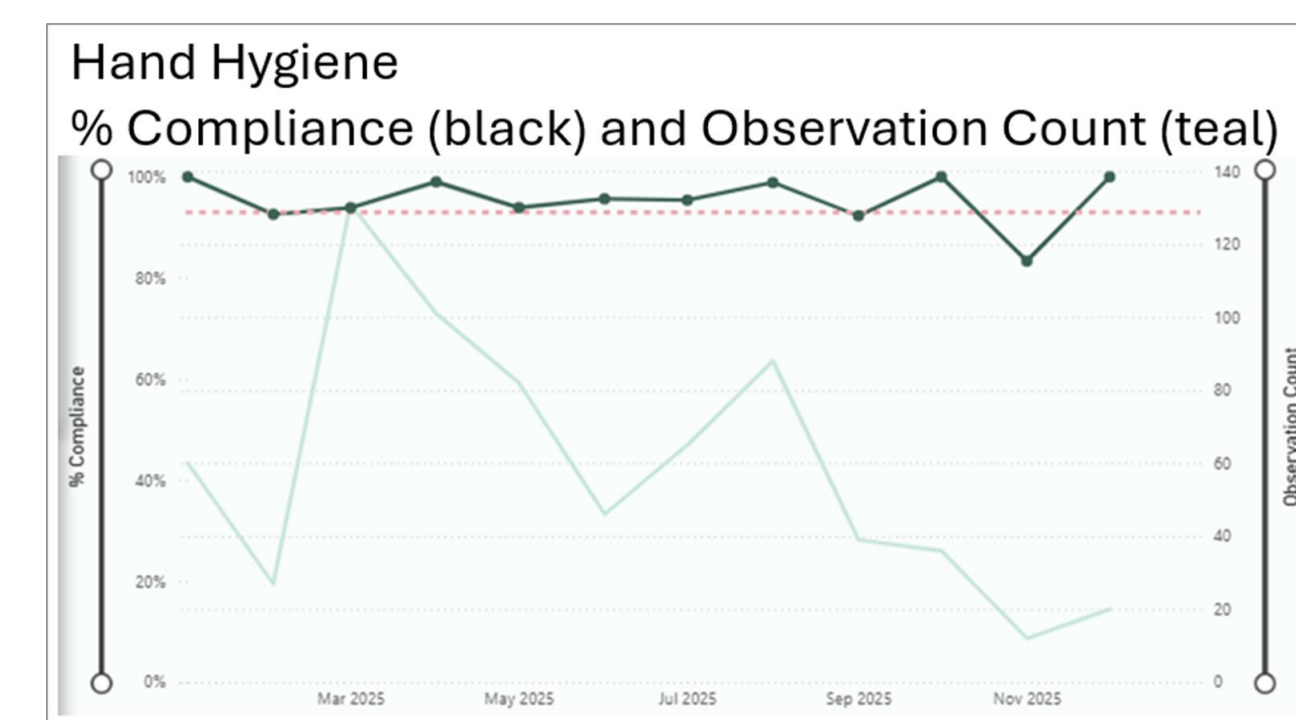
## PURPOSE

Internal audits identified inconsistent adherence to evidence-based *C.diff* prevention practices and gaps with staff competency and education. This highlighted the need for targeted interventions to strengthen prevention efforts, improve staff knowledge, and reduce *C.diff* risk for inpatient pediatric bone marrow transplant patients.

## RESULTS

The initiative improved adherence to several key *C. diff* infection-prevention practices identified through post-education audits.

- Posted in-rooms signs adherence: **0% → 93%**
- Hand hygiene compliance (with soap & water) upon room exit: **80% → 92%**
- Bleach wipes were present **89% of the time**
- Hand sanitizer was removed and pt/family education documented **77% of the time**



## Hand Hygiene By Moment

FY25	July	Aug	Sept	Oct	Nov	Dec	Moment of HH
92.9	96.4	98.4	92.3	100	85.7	100	Upon entering room/before patient contact
100	100	100	100	100	100	100	Before aseptic task/procedure
87.5	93	100	91.7	100	75	100	After contact w/ patient surroundings or before leaving room

## NEXT STEPS

BMT's Professional Governance Council and Infection Control members continue to collaborate to develop and implement strategies to reduce the incidence of *Clostridium difficile* in the inpatient setting. A multidisciplinary team completed a retrospective review of *C.diff* testing practices among providers for Q1 and Q2 of FY25. Interventions focused on appropriate indication and timing for testing were tested during Q1 and Q2 of FY26. Goal is to develop a reliable algorithm to guide testing.

C.diff Testing	FY25: July-Dec	FY26: July-Dec
Total Cdiff tests ordered	64	88
Tests ordered <30days from previous positive	6	17
Positive	15	11
Negative	49	77
Positivity Rate	23%	12.5%

## CONTACTS

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