

Appendix M: Prevention and Management of *Clostridium difficile* Infections in Long-term Care

Algorithms for Prevention and Management of *Clostridium difficile* Infections in Long-term Care Facilities

- A1 Early Recognition and Testing
- A2 Contact Precautions
- A3 Room Placement
- A3.1 Identifying Lower Risk Roommates
- A4 Environmental Cleaning and Disinfection
- A5 Social and Activity Precautions

Definitions and commonly used acronyms

ADL: activities of daily living

CDI: *Clostridium difficile* infection

HH: hand hygiene

PPE: personal protective equipment

PPIs: proton pump inhibitors

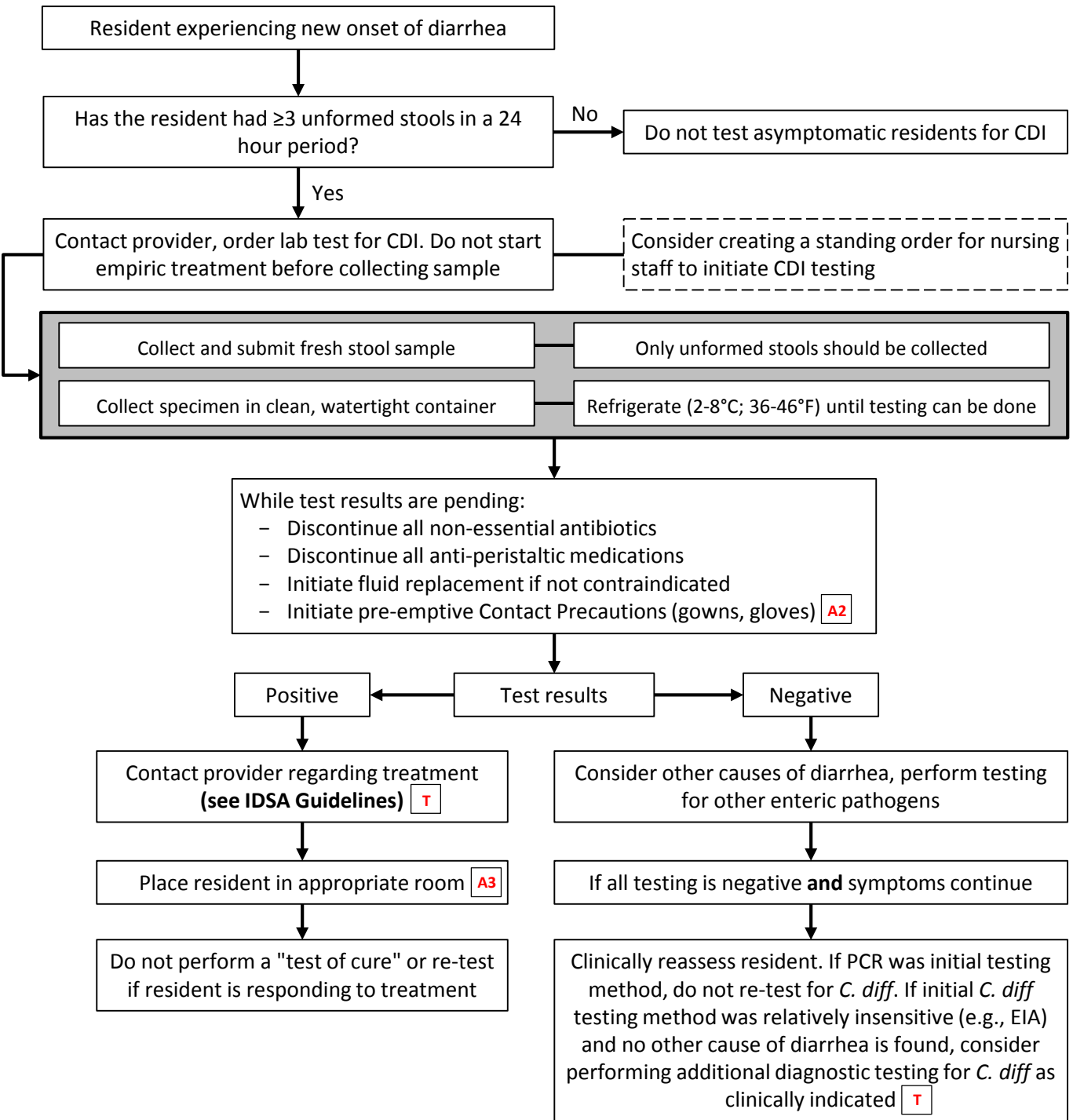
Standard Precautions (SP): for the care of all residents, all of the time

- Wear gloves, gown, mask or eye protection if you anticipate you may have any contact with body fluids (direct contact, spraying, or splashing) while performing care to the resident

Contact Precautions (CP): for the care of residents with CDI symptoms

- Always wear gloves and a gown to provide care to the resident
- Place resident in a private room, if available
- Dedicate equipment to individual residents who have CDI whenever possible (e.g., commodes, blood pressure cuffs, and stethoscopes)
- Clean and disinfect all shared equipment immediately after use and before use with any other resident

A1. Early Recognition and Testing



Action Items:

- Train staff to recognize CDI symptoms and to submit only unformed stools for CDI testing
- Establish policy with lab to reject formed and repeat stools for CDI testing
- Know what diagnostic testing method is used by your laboratory

Other considerations:

- Contact Precautions
- Room placement
- Social and activity precautions
- Environmental cleaning and disinfection

- A** Please see additional algorithm
- T** Please see toolkit for more information

A2. Contact Precautions

Always use Standard Precautions with every resident, every time

Resident experiencing new onset of diarrhea

Implement Contact Precautions for suspected infectious diarrhea

Does the diarrhea have an infectious cause? **A1**

No, confirmed non-infectious

Discontinue Contact Precautions if appropriate and continue Standard Precautions

Yes

Continue Contact Precautions

- Include Contact Precaution and cleaning symbol on door signs for residents with CDI to alert staff of Contact Precautions and sporicidal disinfection product requirements
- Gloves are always worn when entering resident's room
- Gowns are worn for direct care and any resident or environmental contact
- Change gloves after caring for one resident and before caring for another
- Use single-use, dedicated, or disposable patient care equipment **A4**
 - If not available, clean and disinfect reusable equipment immediately after each use

- Hand hygiene before donning gloves
- Hand hygiene after removing gloves and gown, before leaving room

- Soap and water is preferred
- Alcohol-based hand rubs can be used **except when:**
 - Hands are visibly soiled
 - There has been contact with bodily fluids
 - In an outbreak situation

When to discontinue Contact Precautions

Assess resident's diarrheal symptoms

True

No diarrhea for 48-72 hours?

False

Discontinue Contact Precautions, continue Standard Precautions

Continue Contact Precautions

- Consider continuing Contact Precautions until CDI treatment is complete, even if diarrhea has resolved
- Continue gown and glove use beyond 72 hours for residents who are incontinent or need significant assistance with ADLs, due to the risk of prolonged shedding of *C. difficile* bacteria and spore survival

Action Items:

- Provide gowns, gloves, and alcohol-based hand rubs outside resident's room
- Assure laundry bin, trash can, and alcohol-based hand rubs are readily accessible inside resident's room

Other Considerations:

- Early recognition and testing
- Room placement
- Social and activity precautions
- Environmental cleaning and disinfection

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A3. Room Placement

Rooming Residents with CDI

Private room, toilet, and shower/bath are recommended and preferred whenever possible

1st Choice

Private (single) room with **private** bathroom

- Move resident to private (single) room
- Resident should use only the private bathroom while on Contact Precautions

2nd Choice

Private (single) room with **shared** bathroom

- Move resident to private room
- Resident with active CDI should use a separate toilet (e.g., dedicated commode) while on Contact Precautions

3rd Choice

Shared room with **shared** bathroom

Cohort with resident with active *C. diff* diarrhea

No resident meets criteria

Move to room with another resident with active diarrhea

Move to room with a resident at **lower risk** for CDI **A3.1**

- Perform HH and change PPE between each resident
- Keep a minimum 3 foot barrier between living spaces
- Use privacy curtain or tape on floor to emphasize separation
- Resident(s) with active CDI should use a separate toilet (e.g., dedicated commode) while either resident in the room is on Contact Precautions

Use commode liners whenever possible. Immediately clean and disinfect commode/toilet and arm rests/grab bars after each use **A4**

Bathing residents with CDI

- Always have residents with active CDI use a shower and avoid use of bath tubs
 - Clean and disinfect shower/tub area immediately after every resident use
- Preferably, resident(s) with active CDI shower after residents without active CDI

Other Considerations:

- Early recognition and testing
- Contact Precautions
- Social and activity precautions
- Environmental cleaning and disinfection

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A3.1 Identifying Lower Risk Roommates

Primary considerations

Not currently taking antibiotics (1st choice)

or has not taken antibiotics in previous 4 weeks (2nd choice)

or has not taken antibiotics in previous 12 weeks (3rd choice)

No history of prior CDI (1st choice)

or has no CDI in previous 4 weeks (2nd choice)

or has no CDI in previous 12 weeks (3rd choice)

Secondary considerations

- Not currently on proton pump inhibitors (PPIs)
- No GI/bowel condition comorbidities (diverticular disease, inflammatory bowel disease, Crohn's, peptic ulcer disease)
- No PEG/PEJ tube (no tube feeds)
- Not severely immunocompromised (cancer, chemotherapy, or solid organ transplant)
- Not bedbound/heavily dependent on healthcare workers for ADLs

A4. Environmental Cleaning and Disinfection

Resident(s) with CDI

Select proper cleaning and disinfection products. Always follow manufacturer's instructions regarding proper storage, shelf life, contact time, dilution, application, and surface appropriateness

Clean first: Use a hospital-grade, EPA-registered cleaner to mechanically remove visible debris

Disinfect second: Must use a hospital-grade product with a sporicidal claim or a 10% bleach solution T

Every Shift

High-Touch Areas:

- Door handles
- Bed rails
- Chairs
- Call buttons
- Toilet seats
- Grab bars
- Light switches
- Telephones
- TV remotes
- Sink/faucet
- Toilet flush handle

Horizontal Surfaces:

- Bedside tables
- Tray tables
- Counters
- Floors

Dedicated Equipment:

- Thermometers
- Stethoscopes
- Blood pressure cuffs
- Oximeters
- Glucometers

Terminal

Target all areas of the room, including all daily areas, plus:

- Bed frames
- Curtains
- Walls
- Mattresses
- Pillows
- Other furniture

Bathroom

- Use commode liners whenever possible; if not using, empty commode in resident's toilet (never in the sink)
- Immediately clean and disinfect commode/toilet (including seat, flush handle, arm rests/grab handles) after each use and/or emptying
- Use a separate cloth for cleaning only the commode/toilet
- Always clean bathroom last, and clean from least contaminated (e.g., doorknobs, light switches, handrails) to most contaminated (e.g., sink handles, seat, flush handle)

- Always clean from clean to dirty and from high to low
- Microfiber cloths are preferred over cotton cloths
- Cloths should not be pre-soaked or re-dipped in an open bucket system
- Discard facility items that cannot be disinfected (bag personal items)
- Clean rooms of residents with active CDI last
- Change cleaning solution, mop, bucket, and cloths after cleaning each room

Action Items:

Train Environmental Service staff on importance of cleaning and disinfection and the transmission of disease

Establish responsibility for different elements of environmental cleaning and disinfection

Provide Environmental Service staff with high-touch cards for reference

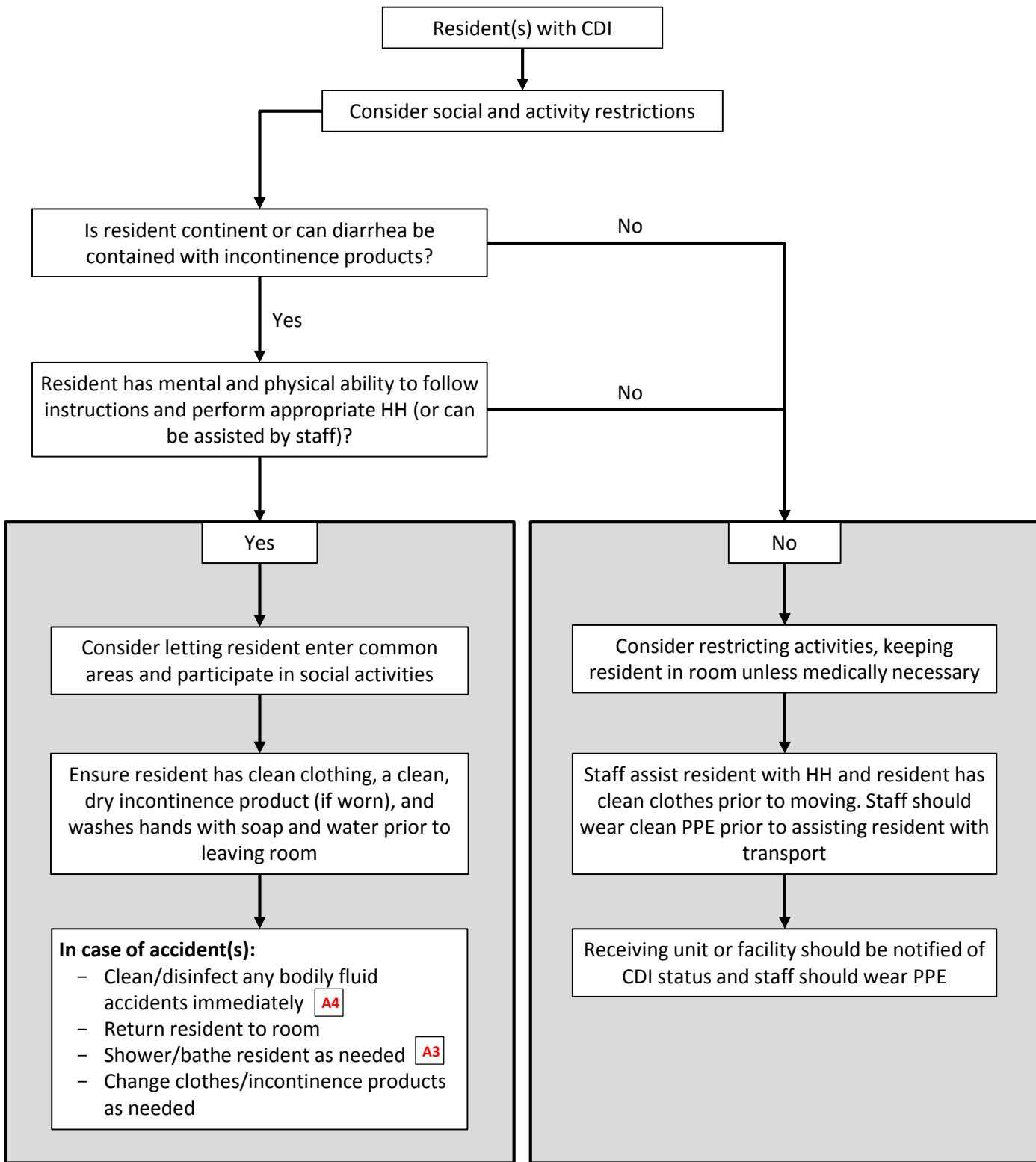
Include cleaning symbol on door signs for residents with CDI to alert Environmental Services staff of rooms requiring sporicidal disinfection products



A Please see additional algorithm

T Please see toolkit for more information

A5. Social and Activity Precautions



Action Items:

Ensure a facility transfer form exists for transferring residents between facilities

Other Considerations:

Early recognition and testing

Room placement

Environmental cleaning and disinfection

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Please see additional algorithm

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Please see toolkit for more information