

<b>C M H C</b> <b>INFECTION CONTROL</b> <b>MANUAL</b>	Effective Date:04/14/2016	<b>NUMBER: B-14.18</b>
	Replaces: 04/09/2015	
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<b>CLOSTRIDIUM DIFFICILE</b>		

**POLICY:**

To provide guidelines for preventing the transmission of *Clostridium difficile* infections in TDCJ facilities.

**INTRODUCTION:**

*Clostridium difficile* (*C.difficile*) is an anaerobic, gram positive, spore forming organism that has been associated with disease ranging from uncomplicated diarrhea to pseudomembranous colitis, toxic megacolon, sepsis and death. Historically it has been primarily a nosocomial infection, but recent experience suggests that a new strain is emerging (BI/NAP1) that can be community acquired and produces more severe disease, in part because of much greater production of toxin A and toxin B compared with traditional strains.

*C. difficile* is most common infectious cause of acute diarrhea in long term care facilities. Risk factors for health care associated *C. difficile* associated disease (CDAD) include:

- Previous antibiotic use (any antibiotic, but especially cephalosprins, penicillins, clindamycin and fluoroquinolones; multiple antibiotics and longer duration increase risk). Antibiotic administration may precede CDAD by several weeks.
- Age >65
- Severe underlying illness
- NG intubation
- Gastric acid inhibitors (proton pump inhibitors may be higher risk than H2 blockers)
- Longer hospital stay

CDAD is caused by toxin producing strains of *C. difficile*. Disease is also dependent on the organism being ingested and on disruption of the normal flora of the colon. Colonization with *C. difficile* is relatively common, ranging from 3% of the healthy free-world adult population up to 20% in long-term care residents. There are no data on prevalence of colonization in offender populations. Colonization may occur with toxin-producing or non-toxin-producing strains. There is no advantage to identifying or treating asymptomatic carriers in TDCJ.

Transmission of *C. difficile* is from person to person and by the fecal-oral route and through contamination of the health care environment. Because it is a spore forming organism, alcohol is ineffective as a disinfectant against *C.difficile*. While there are no EPA registered disinfectants that claim *C.difficile* spore inactivation, a disinfectant containing hypochlorite should be effective, either as a commercially available hypochlorite disinfectant or as a 1:10 dilution of ordinary household bleach.

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When *C.difficile* is a concern, handwashing should be done with a disinfectant soap (such as chlorhexadine gluconate) and water, rather than depending on alcohol based hand rubs.

The most important measures for preventing the spread of CDAD are good handwashing, identifying and isolating patients with CDAD, and control of the contaminated environment.

## **PROCEDURES:**

### **I. Applicability**

- A. This policy applies to offenders in inpatient facilities including skilled nursing, skilled rehabilitation, hospice, assisted living and total care facilities. Other facilities should also be included if the offenders are residents and receive care from a health care provider.
- B. The policy also applies to offenders released from an inpatient facility (free world or TDCJ) with a diagnosis of CDAD or suspected CDAD.
- C. Except as covered in this policy, no special precautions are required for *C difficile* in the general offender population.

### **II. Identification**

- A. CDAD should be suspected in an offender with acute onset of diarrhea who is in an inpatient facility and:
  - 1. Has been treated with antibiotics within the previous several weeks or was recently released from a hospital, or
  - 2. Has been a confirmed case of CDAD within the previous 2 months.
- B. If returning to an inpatient facility from another facility and has a diagnosis of CDAD, even if they do not currently have symptoms.
- C. CDAD can be confirmed by *C difficile* toxin assay. Although anaerobic culture of feces will detect *C difficile*, it does not distinguish toxin-producing strains. Ordinarily, the toxin test is done only on diarrheal stool specimens. If the patient has an ileus and only a swab or formed stool is available, contact the lab before submitting the specimen for testing.

### **III. Extended Contact Isolation**

- A. Inpatients in TDCJ infirmaries or extended care facilities who have diarrhea and are known or suspected to have *Clostridium difficile* infection must be placed in a single room or in a room under **extended contact isolation**. Extended contact isolation includes the procedures

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outlined in Infection Control Manual Policy B-14.21 for contact isolation, as well as the following:

1. Always wear clean nonsterile gloves whenever entering the room.
2. Always wear a gown whenever entering the room even if you will not have contact with the patient.
3. Whenever a patient on a ward is on extended contact isolation, all caregivers on the ward must use an antiseptic containing soap for handwashing instead of waterless hand rubs, even if they are not directly involved in the care of the isolated patient.

B. Dedicate the use of non-critical items (stethoscope, sphygmomanometer or thermometer) to a single patient in extended contact isolation. Before such devices are to be used on other patients, adequately clean and disinfect these devices with a 1:10 dilution of household bleach. Contact time with the bleach solution must be at least 10 minutes to assure inactivation of spores.

C. Housekeeping

1. Daily, routine cleaning must be done in all patient areas to reduce bacterial load and kill spores, using a 1:10 dilution of household bleach. Special attention must be given to disinfecting areas with frequent hand contact such as light switches, door knobs, faucet handles, etc.
2. Linen should be handled using standard precautions and include the following:
  - a. Wear gloves and gown when handling linens.
  - b. Remove linen carefully from the bed. Hold away from clothing. Do not sort.
  - c. Place the linen in a bag at the site of collection. If the linen is placed in a plastic-lined hamper, the hamper must have a tight-fitting lid.
3. Contaminated linen and clothing should be handled as contaminated laundry.

D. Offenders may be released from extended contact isolation if they have completed their course of treatment and have been free of diarrhea for 24 hours.

#### **IV. Housing**

A. Offenders may be released to general population even if they are still on extended contact isolation for suspected or confirmed CDAD, if their clinical condition no longer requires inpatient care. However, they must be single celled until they have completed their course of treatment for CDAD (if any) and have been free of diarrhea for at least 24 hours. This requirement also applies to offenders with confirmed or suspected CDAD who are returning from a hospital.

B. When the offender no longer requires a single cell, the cell must be cleaned and disinfected with a hypochlorite disinfectant solution before it is occupied by any other offender.

#### **V. Transportation**

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- A. Offenders with acute diarrhea may not be transported by chain bus. If they are transported by van or MPV, they must not share a bench with another offender. If possible they should be transported individually.
- B. If an offender with acute diarrhea is being transported to a hospital, the hospital must be notified in advance that they are receiving a potentially infectious patient. If the offender is being sent to the emergency room, the notification should go to the emergency room. If it is a direct admit, the information should be given to the receiving physician.
- C. After transporting an offender with acute diarrhea, the seat/bench used by the offender and all normal hand contact areas such as hand rails must be cleaned and disinfected with a hypochlorite disinfectant before the van is used for transporting other offenders.
- D. If an offender with suspected or confirmed CDAD that has not been completely treated is being transported from an inpatient facility (including Hospital Galveston), the diagnosis of CDAD and the need for single cell housing at his destination unit and all transient units along the way must be noted in section 1 of the HSN-1, Nurses Chain Review.

## **VI. Education**

Healthcare providers should be educated about the transmission of *C difficile* and reminded of strict handwashing procedures and the ineffectiveness of alcohol in inactivation of spores.

## **VII. Reporting**

Confirmed cases of CDAD must be reported to the Office of Public Health within 7 days. The case may be reported using the EPI-1 form found in Attachment C of Infection Control Manual Policy B-14.19, Disease Reporting.

## **References**

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