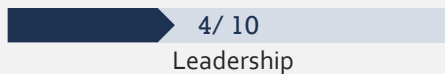
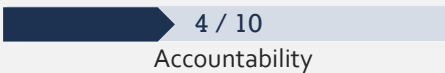
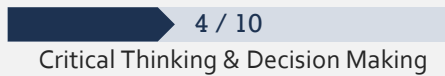
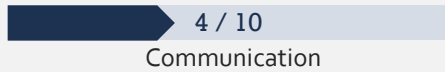


## COMPETENCIES



## DISCLAIMER

*This guideline is provided to help guide best practice in the disability, aged care and community support industry. This information does not in any way replace legislative, regulatory, or contractual requirements. Users of this document should seek appropriate expert advice in relation to their circumstances. ACIA does not accept any liability on the use of this guideline.*

## BACKGROUND

### Epidemiology

- Clostridium difficile was first described in 1935, however not recognised until the 1970s after deaths of a few clients, predominantly elderly citizens (McFarlane & Hajkovicz, 2013). Clostridium difficile is a spore-forming, gram-positive bacillus typically associated with diseases of the gastrointestinal system (Australian Commission on Safety and Quality in HealthCare, 2020; Department of Health, 2016). The bacterium is comfortable to multiple in the natural environment, as well as in the built environment where it is typically spread by human to human contact and ingestion from environmental surfaces (Australian Commission on Safety and Quality in HealthCare, 2020).

### Causes

Risk factors for CDI include (Cheng et al., 2011; McFarlane & Hajkovicz, 2013):

- Current or recent antimicrobial exposure;
- Use of protein ump inhibitor;
- Current or recent hospitalization;
- Chemotherapy;
- Older age;
- Medical commodities;
- Post gastrointestinal surgery;

## PURPOSE

This guideline is to assist:

- Providers to minimise the spread and effects of Clostridium Difficile in the Community.
- Minimise the effect of outbreaks as a result of this through improve practices and awareness

## DESIRED OUTCOME

- To maintain a quality and safe standard of service delivery support
- Optimise health outcomes to clients

## SCOPE

This guideline applies to the provision of paid support services in the community. They are relevant Australia-wide or when a participant is travelling overseas with their Australian team of support worker/s.

- Kidney impairment;
- Previous Clostridium difficile;
- Use of diclofenac.

## Pathophysiology

- Symptoms of CDI do range in severity from loose stools, few in volume through too severe diarrhea, fever and systemic toxicity (Department of Health, 2016). Colitis is also very common in Clostridium difficile (Cheng et al., 2011; McFarlane & Hajkovicz, 2013). CDI is commonly known to occur within 5-10 days after commencing antibiotic therapy but can have onset as late as ten weeks after commencement (Cheng et al., 2011). Following ingestion, spores survive in the acidic stomach environment and colonise through to infect the colon where favorable conditions persist.

## Mode of Transmission

- Clostridium difficile is spread via the fecal – oral route by ingesting of the spores which are persistent in the environment (McFarlane & Hajkovicz, 2013). At last one third of cases are community acquired and often spreading from asymptomatic carriers including infants (McFarlane & Hajkovicz, 2013). The remaining are thought to be transmitted through poor hand hygiene practices of health care workers (McFarlane & Hajkovicz, 2013).

# DEFINITIONS & SUPPORTING INFORMATION

**Community Supports and/or Services** is defined as the provision of paid supports and services in a service user's home or community. It includes but is not limited to, the following activities of daily living:

- personal care or support
- housework or domestic assistance
- transport assistance
- community access
- social support
- nursing services
- clinical supports
- gardening and home maintenance
- palliative care
- respite care

**Support Worker** - A paid person who assists people to perform tasks of daily living so as to participate in social, family and community activities in the person's home and their community. Support Workers have been commonly known in the past as attendant care worker, disability worker, aged care worker, community worker, homecare worker, care worker or paid carer.

**Service Provider** - Organisation or person accountable for the delivery of supports to Clients.

**Carer** - a person that provides supports to the Client at no cost (generally family or friend).

**Client** means the service user, participant, user, care recipient, consumer or person receiving the nursing or support services.

**Plan** means a Service Plan, Support Plan or Individual Plan (however titled – the plan) is a document developed in response to a request for service. It is developed by a Registered Nurse or a person deemed competent by the provider from the service provider, prior to the commencement of service delivery. It outlines the expected outcomes of the requested care/services and the tasks, duties and interventions required to meet the care and service needs of the client (within the parameters of the funding program). The plan guides and directs the individual support worker or Registered Nurse in their day-to- day delivery of the services.

**Registered Nurse** means a person who has completed the prescribed educational preparation, demonstrated competence for practice, and is registered and licensed with the Australian Health Practitioner Regulation Agency (AHPRA) as a Registered Nurse.

**Competent** means having been trained and assessed by a registered nurse or enrolled nurse or approved assessor as competent to safely and appropriately perform a specified task.

# GUIDELINE

A number of strategies for reducing *Clostridium difficile* exists including effective hand hygiene practices, alcohol-based hand sanitiser, and environmental cleaning (Cheng et al., 2011; Queensland Government, 2019). Hand hygiene practices should be used working with all clients suspected or confirmed with CDI. Whilst soap and water are reported to be one of the most effective methods to reduce transmission, alcohol based sanitiser remains a suitable option especially where gloves are additionally used during client care (ACSOHC, 2018).

Regular environmental cleaning is critical as spores can remain viable on some surfaces for weeks or months, especially on heavily contaminated client equipment and surfaces (Queensland Government, 2019). Full cleans on discharging of clients is essential to ensure adequate disinfecting is undertaken, which includes curtains and consumables should be discarded (Queensland Government, 2019).

Effective antimicrobial stewardship measures are important in managing this (ACSOHC, 2018; Cheng et al., 2011). *Clostridium difficile* is almost always linked to use of antibiotics especially where these have been used excessively or for prolonged periods (Queensland Government, 2019). There have even been cases linked to single prophylaxis utilisation. Prudent antimicrobial stewardship is essential to support correct and appropriate antibiotic prescribing (Queensland Government, 2019).

## Client Education

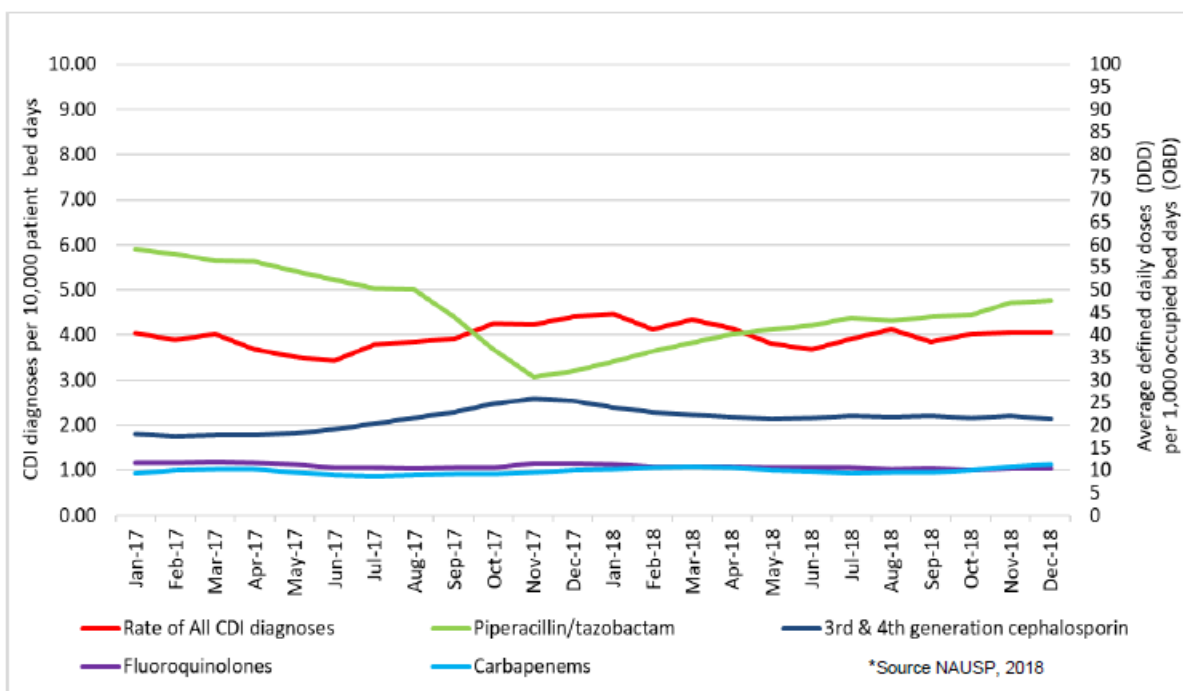
Client education includes;

- Hand hygiene education (Queensland Government, 2019);
- Avoiding or stopping anti-peristaltic drugs (McFarlane & Hajkowitz, 2013);
- Cease antibiotic therapy where possible (Cheng et al., 2011; McFarlane & Hajkowitz, 2013);
- Monitoring for dehydration (Department of Health, 2016);
- Comprehensive clinical assessment (McFarlane & Hajkowitz, 2013);
- Observation for severe symptoms is important especially when you consider symptoms such as acute abdomen, fever hypotension, ileus and tachycardia (Cheng et al., 2011; McFarlane & Hajkowitz, 2013);
- Symptoms should start to reduce after about three days of treatment therefore monitoring after this period is critical (Cheng et al., 2011; McFarlane & Hajkowitz, 2013).

## Surveillance

Healthcare facilities should have in place adequate and well controlled surveillance programs to detect clients with *Clostridium difficile* infections (ACSOHC, 2018; Queensland Government, 2019). This includes monitoring events, trends and evaluating interventions in order to reduce incidence. The Australian Commission on Safety and Quality in Health Care has been monitoring hospital acquired CDI in public hospitals since 2016, where CDI has been diagnosed as a primary or secondary diagnosis (Australian Commission on Safety and Quality in HealthCare, 2020). Surveillance has shows that in 2018, CDI accounted for 4.46 diagnosis's per 10,000 bed days which has been steadily rising since 2016 by 6.5% (Figure 1; (Australian Commission on Safety and Quality in HealthCare, 2020). However, so too has the utilisation of antibiotic usage as indicated in Figure 1 (Australian Commission on Safety and Quality in HealthCare, 2020). This is a correlation of data that doesn't speak to the improvements in antimicrobial stewardship and associated intervention programs that have been implemented.

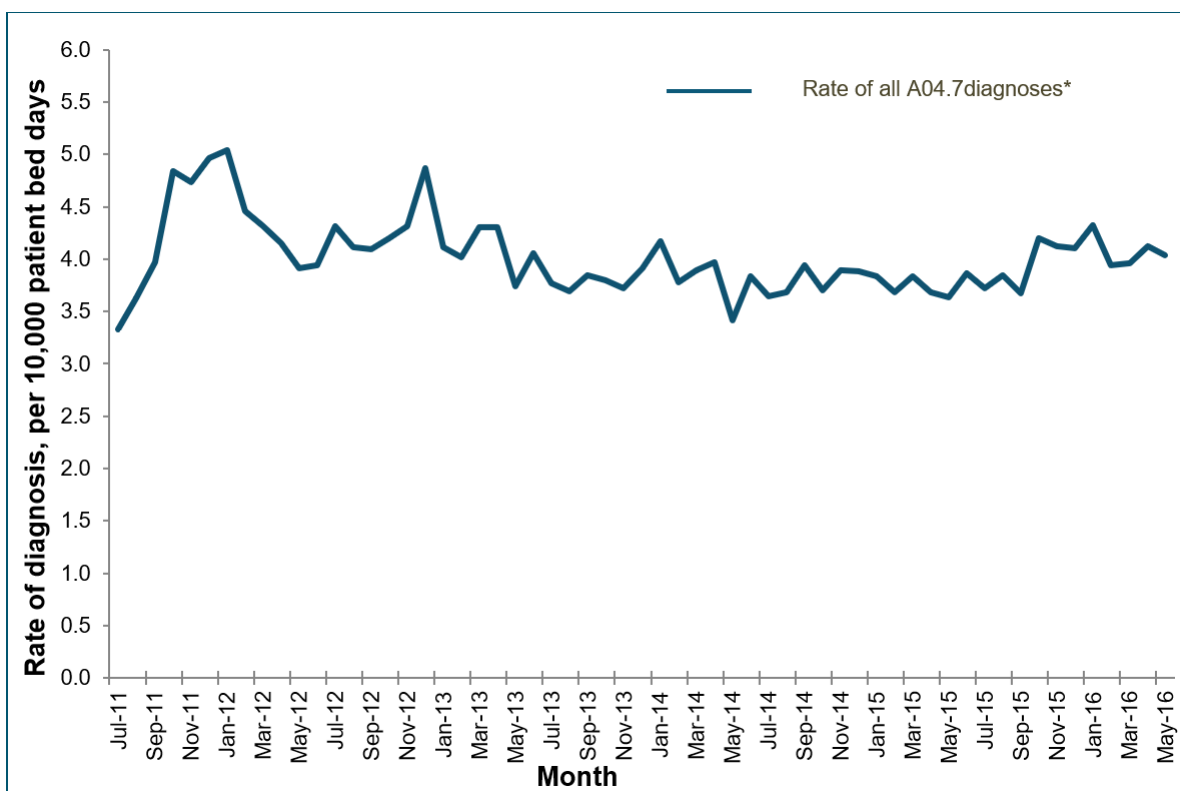
Figure 1: CDI diagnosis in Australian public hospitals (n=689) as compared with Antibiotic usage in 2017 and 2018



(Australian Commission on Safety and Quality in HealthCare, 2020)

Figure 2 demonstrates this trend over a five-year trend. This is comparable to that of the United Kingdom as indicated by ACOSH (2018). The United Kingdom has led the endeavors with mandatory reporting and enhanced surveillance since 2004 which saw a massive decline in prevalence from 14.9 cases per 10,000 client bed days to 3.67 over a ten year period (ACSQHC, 2018). The challenge in Australia is that there are inconsistent guidelines between states and all healthcare facilities which compromise the integrity of maximum improvements.

Figure 2: Monthly rate of Gastroenterocolitis caused by *Clostridium difficile* in Australia 2011-2016



(ACSQHC, 2018)

## Outbreak Management

Over the last decade or so, *Clostridium difficile* has been the cause of hospital outbreaks and peaked in 2008 which have slowed after nationwide infection control programs were implemented and outbreaks dramatically slowed (Department of Health, 2016).

Community acquired transmission outbreaks have since been more common in infant populations (Department of Health, 2016). In general, there has been very little outbreak concern in Australia however it has been detected and national surveillance program is in place to ensure visibility over the disease (Cheng et al., 2011; Department of Health, 2016).

To assist in outbreak prevention, as soon as clients have diarrhea, stool samples should be sent off as soon as onset is present (ACSQHC, 2018; Queensland Government, 2019). Specimens should be refrigerated until testing can be undertaken. When surfaces have become contaminated or clients with suspected or confirmed CDI are treated, transmission-based contact precautions should be implemented until at least 48 hours after symptoms have ceased (Queensland Government, 2019). These include;

- Single room with ensuite, or cohorting with other CDI clients (ACSQHC, 2018; Queensland Government, 2019);
- Dedicated client care and / or single use equipment should be used (ACSQHC, 2018; Queensland Government, 2019);
- Personal protective equipment including gloves, gowns and aprons should be used (ACSQHC, 2018; Queensland Government, 2019);
- Increased environmental cleaning should be implemented (ACSQHC, 2018; Queensland Government, 2019);
- Reduce unnecessary movement of affected clients (ACSQHC, 2018);
- Signage should be implemented (Queensland Government, 2019).

## Notification to Appropriate Bodies (If required)

Currently, notification requirements only exist in Australian public hospital settings where diagnosis is a primary or secondary function of the disease presenting. However, a national surveillance program should be implemented and it is expected all healthcare facilities are monitoring and trending these incidences (ACSQHC, 2018).

## Impact on Community Healthcare Provision

Residential aged care offers a complexity of challenges in order to mitigate the CDI risks and undertake adequate surveillance, monitoring and plan for outbreaks effectively. The first core issue that residential aged care faces is that there is limited understanding of the risk factors in the community, despite good evidence in the public hospital sector (ACSQHC, 2018). Community acquired CDI lacks research and evidenced based knowledge for the risk factors in this sector. One can assume by the nature of the previously established risk factors that the elderly and frail who reside in residential aged care offer increased vulnerability for CDI, as too is the previously established overuse of antibiotics leading to increased susceptibility (Feazel et al., 2014; Talpaert et al., 2011).

Antimicrobial stewardship provides for an increasing risk in the prevention and overall control of CDI in residential aged care. Antibiotic prescribing and its overuse has been well documented as leads to increased susceptibility in this cohort of clients (Lim et al., 2014; Lim et al., 2015; Rogers et al., 2018; Stuart et al., 2012). In a study by Stuart et al. (2012), it was found that one quarter of residents were administered antibiotics for prophylactic reasons and of the antibiotics that were administered overall, 40% didn't meet the criteria for a bacterial infection. Lim et al. (2014) identified factors influencing prescribing practices of antibiotics, these included the logistical implications of getting medical practitioners into the facilities, a lack of pharmacy support to guide practices, infection control which lacked trained staff (Rogers et al., 2018) and wash primarily nurse driven, variations in policies and procedures and lack of diagnostic services that were readily available to the residential aged care facilities. There are additional pressures from families and the community at large to prescribe and support antibiotic prescription where alternative solutions may have been preferred in line with improved prescribing practice guidelines (Lim et al., 2014). This has led to the introduction of mandated antimicrobial stewardship practices in residential aged care through the review of clinical governance standards in the sector (Commonwealth of Australia, 2021).

The next issue for residential aged care is the lack of national and consistent practice guidelines to specifically guide the surveillance and management of CDI in the community (ACSQHC, 2018). While improvements have been made in the area of antimicrobial stewardship (Commonwealth of Australia, 2021), there is a lack of standardization around the practices and surveillance of such. Operational practices where the community infection surveillance programs are primarily nurse lead, with frequently untrained staff leading such initiatives provide for challenging milieu (Lim et al., 2015; Sluggett et al., 2020). Further works should be resourced to establish national guidelines on the best practice approach for CDI in the community within residential aged care.

The residential aged care sector is compromised by the very nature of how it is structured and governed in this area to ensure that improvements are taken up by the sector to improve client outcomes. Improvements in training, supervision, surveillance and overall management of CDI in the community should be prioritized to optimise consistent practices

# RESOURCE DOCUMENTS

- External ACIA Guidelines 002 – Care and Service Provision in the Community
- Australian Community Industry Standards ACIS
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