



Clostridium difficile infection in Tasmania:

A summary of an examination into
an increase in *Clostridium difficile*
infections in 2011

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WHAT IS CLOSTRIDIUM DIFFICILE?

The bacterium *Clostridium difficile* is a common cause of diarrhoea in hospitalised patients. It can be spread by spores that contaminate the environment and that are subsequently ingested.

Clostridium difficile infection (CDI) can also occur in the community.

WHY DID WE INVESTIGATE?

The Tasmanian Infection Prevention and Control Unit (TIPCU) identified a marked increase in cases of CDI across the state in the last quarter of 2011 using our normal surveillance program.

In response, the TIPCU issued an alert to hospitals and reinforced information on how to prevent and control the spread of CDI among patients, healthcare workers and hospital visitors.

The TIPCU also commenced an investigation into the nature and extent of the increase.

Investigations are occurring in other Australian states where there has also been similar increases in CDI.

WHAT DID WE INVESTIGATE?

We looked at all cases of CDI that were confirmed by laboratory diagnosis in 2010 and 2011. These cases were categorised as being either:

- hospital identified or
- non-hospital identified*.

(*Note the term 'hospital identified' does not necessarily mean the infection was acquired in a hospital. Rather, this was where the case of CDI was identified).

Further investigation was undertaken to determine if these hospital identified cases were acquired:

- in the hospital (healthcare associated CDI) or
- in the community prior to a hospital admission (community onset CDI).

WHAT DID WE FIND?

There were a total of 459 cases of CDI in 2010 and 2011. This equates to 45 cases for every 100,000 Tasmanians per year. There was a significant increase in CDI from 2010 to 2011, particularly in hospital identified cases of CDI.

The data suggest the main reason for this increase was a high rate of community onset CDI cases. That is, people who acquired CDI before they were hospitalised.

COMMUNITY ONSET CDI

Reasons for the increase in community onset CDI are unknown, and should be further investigated.

Possible explanations include:

- changes in the strains of *Clostridium difficile* circulating in the community
- changes in antimicrobial usage in the community.

Both of these scenarios are currently being explored by Australian experts.

HEALTHCARE ASSOCIATED CDI

Factors known to be associated with higher rates of CDI in hospitals include:

- poor hand hygiene compliance
- failure to appropriately isolate persons with CDI
- high rates of exposure to certain antibiotics.

Given that the rates of healthcare associated CDI **did not** increase significantly from 2010 to 2011, it is relevant to note that:

- hand hygiene compliance increased in public hospitals
- antimicrobial consumption did not increase significantly
- Tasmanian hospitals continued to isolate persons with CDI consistent with current guidelines.

CONCLUSION

There has been a real increase in the incidence of CDI in Tasmania in 2011. This is primarily a result of increased numbers of cases of community onset CDI.

Further work is required to investigate the factors behind this increase, which has been observed both locally and nationally.



Clostridium difficile

WANT MORE INFORMATION?

Public hospitals in Tasmania routinely report the number of CDI cases to TIPCU. This is published quarterly on the TIPCU website.

More information on CDI including symptoms, transmission, diagnosis and treatment are detailed in a CDI leaflet on the TIPCU website.

For more information, go to: www.dhhs.tas.gov.au/tipcu