In April 2010, an activity-based funding (ABF) program was launched in BC, under the direction of the Health Services Purchasing Organization (HSPO). One motivation for the initiative was to create incentives for hospitals to operate more efficiently by reducing the incentive to restrict services in order to meet budget targets.

It has been argued that the financial incentives created by ABF could potentially motivate some hospitals to skimp on services such that the quality of care is negatively affected. Currently, evidence does not support this argument, though quality of hospital care should be carefully monitored (1–3). One measure of hospital quality is rates of *Clostridium difficile* (*C. difficile*) infection. *C. difficile* is a bacterium that causes intestinal disease such as enterocolitis, an inflammation of the digestive tract.

While ABF does not provide any direct incentives for improving quality of care, any noticeable decline in quality (such as increased *C. difficile* infection rates) would be cause for concern. Research from the US estimates that the 2008 burden of *C. difficile* infections on acute-care facilities was $4.8 billion, with excess costs also being seen in long-term care facilities (7). A review of the impact of *C. difficile* in Europe noted that 30-day mortality rates for *C. difficile* ranged from 2.8% to 29.8% with a length of stay between 16 and 37 days (8).

*C. difficile* is a particular concern in BC, where local and national media attention routinely highlight hospitals with outbreaks and associated deaths (4–6). Both Vancouver Island Health Authority (VIHA) and Fraser Health Authority (FH) report current outbreaks online as a result of concerns. VIHA publishes an active outbreak list, while FH publishes a map with active outbreak descriptions.
Conclusion
In BC, the data does not support an association between *C. difficile* infections and the introduction of ABF. However, *C. difficile* infection rates have been increasing over the longer term across the system and pose a significant burden to the healthcare system.

This project will continue to calculate and report on changes in *C. difficile* rates on a periodic basis.

Technical Notes
The data source is the Discharge Abstract Database (DAD). The study population covers BC residents as well as non BC residents who received health care services in BC. The volume of cases includes both medical cases and surgical cases for inpatients.

Only hospitals that were included in the activity-based funding program are included in the study. All hospitals that began activity-based funding in 2010 are included except the sole hospital in Northern Health Authority.

The volume of cases includes both medical cases and surgical cases for inpatients.

The three largest hospitals in Fraser Health were selected according to the total inpatient cases in 2011/2012.

The rate of *C. difficile* infection = total number of enterocolitis cases due to *C. difficile* in hospital in a period / total number of inpatient cases in the same period x 1000.
References


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