

Burden of *Clostridium difficile* Infections in Québec by Levy et al

TO THE EDITOR—We read with great interest the article on the incidence and cost of *Clostridium difficile* infections (CDIs) in Canada by Levy et al [1]. This study provides valuable information, because little data exist on the burden associated with CDI in Canada. However, we would like to draw attention to the fact that the number of cases that occur every year in the province of Quebec has been overestimated more than 2-fold.

In their study, Levy et al [1] estimated that 16 562 CDI cases occur in Quebec every year. This number is extrapolated from data of the Canadian Nosocomial Infection Surveillance Program (CNISP) [2]. Much more comprehensive data exist regarding CDI in Quebec that could have been used to draw a more accurate picture of the situation. Our province has implemented a mandatory CDI surveillance program in 2004 in the wake of the NAP1 epidemic [3]. Ninety-five acute-care institutions representing 99% of all patient admissions have the obligation to participate in this surveillance program conducted by the Institut National de Santé Publique du Québec. Results are published in yearly reports and are publicly available [4]. Hospitals are subjected to government-imposed targets that are risk stratified according to hospital size, patient population, and academic mission [5].

Based on these official surveillance data, approximately 3700 primary hospital-associated CDI cases occurred every year in Quebec between 2010 and 2013, for a global incidence of approximately 7.0 per 10 000 patient-days. Using the authors' assumptions and calculation methods to estimate the number of community-acquired cases and the number of recurrences (which are not part of our surveillance program), approximately 7400 CDI cases occurs in this province each year, less than half the number of cases estimated by the authors and less than the province of Ontario.

Their overestimation is probably due to sampling bias. Only 8 institutions in Quebec participate in the CNISP surveillance program, the source of data used by the authors to estimate the CDI burden in the province. Most of these hospitals are large academic institutions with intrinsically high CDI incidence. Inferring provincial data from these few hospitals has led to a sizeable overestimation of the true burden of CDI in the province. The impact of this overestimation on the conclusions of the study should be carefully addressed.

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Yves Longtin,¹ Christophe Garenc,^{2,3} Louis Valiquette,⁴ and the Quebec *Clostridium difficile* Infection Surveillance Program

¹Jewish General Hospital and McGill University Faculty of Medicine, Montreal, ²Institut National de Santé Publique du Québec, ³Centre Hospitalier Universitaire de Québec, Québec City, ⁴Department of Microbiology and Infectious Diseases, Université de Sherbrooke, Canada

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Correspondence: Y. Longtin, Chair of Infection Prevention and Control Unit, Jewish General Hospital – SMBD, 3755 Côte-Sainte-Catherine Road, Room E-0057, Montreal, QC H3T 1E2, Canada (yves.longtin@mcgill.ca).

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