Alliance for Healthier Communities
Alliance pour des communautés en santé

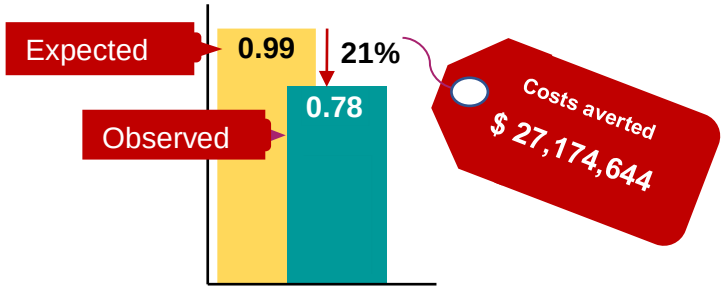
Emergency Department Costs Averted Attributed to Community Health Centres in Ontario

Community Health Centres (CHCs) provide comprehensive interprofessional primary health care to equity seeking populations who typically face barriers to accessing care. CHCs address their clients' needs by going beyond medical care to offer community-oriented social and health promotion services that focus on the social determinations of health. In 2017, the Auditor General concluded that there was "*not sufficient information to know whether CHCs' programs and services are cost-effective*."[1] However, several international studies have shown that when CHCs meet patients' health and social needs, they can reduce the use of other health care services, including avoidable hospitalizations and emergency department (ED) visits.[2-4]

Based on morbidity patterns, the CHC client base has primary care needs 67% greater than the average Ontario population, even without accounting for other factors affecting the health needs of the populations served.[5] Yet, an ICES study found a 21% lower-than-expected rate of ED visits for CHC clients when morbidity, age, sex, income quintile and rurality were taken into consideration. Compared to other primary care models, only one other primary care model had lower than expected ED visits and CHCs showed a greater difference.[6] In addition, CHC ED utilization rates have declined over the last decade or so and are now similar to other models, especially in terms of "less urgent" visits.[5]

Based on an average cost per ED visit of $323, the cost difference between the expected and observed ED utilization is estimated to be $27 million among the 407,000 clients served by CHCs in 2022. The costing methodology is described in Appendix A.

Annual Emergency Department Visits Per CHC Client (2022)



Annual observed and expected ED costs for Community Health Centre clients and estimated costs averted ($2022)

	Average cost per ED visit	Average # of observed ED visits per client	Average observed cost per client	Average # of expected ED visits per client	Average expected cost per client ($)	Average costs averted per client ($)	Total publication averted costs per year in millions ($)
Urgent (CTAS 1-3)	$351	0.56	$196	0.71	$249	$52	$21.2
Less urgent (CTAS 4-5)	$251	0.22	$55	0.20	69	15	5.9
Overall	$323	0.78	$251	0.99	$318	$67	$27.2
	($311-335)						($21-34)

* Numbers in brackets are the plausible range of the estimates.
** Total averted costs were calculated based on a client population of 407,000

Appendix A. Costing Methodology

The average cost for an ED visit in Ontario was estimated to be $323 () in 2022. The estimated average cost includes direct ED operating costs and physician fees, weighted by the level of urgency – the Canadian Triage Acuity Scale (CTAS). Direct operating costs per visit were calculated was based on Canadian Institute for Health Information (CIHI) cost data for Ontario, [7] [8] and then stratified by CTAS.[9] Physician fees were based on OHIP sessional fees,[10] and the average time spent on direct and indirect patient care by CTAS level.[11] Costs did not account for other physician fees which an ED visit may incur, such as consultations with specialists. All costs are reported in 2022 CDN, using the Bank of Canada inflation calculator based on Statistics Canada data.

The average cost per CTAS (ED costs + physician fees) was then calculated for 'urgent' (CTAS 1-3) and 'less urgent' (CTAS 4-5) visits weighted by reported ED utilization in Ontario.[5] [12] [13] (CHC ED utilization rates for 2020 were applied given their similarity to pre-pandemic years). The observed rate of ED visits per CHC client – stratified by urgent (0.56 visits per client) and less urgent (0.22 visits per client) – was used to estimate the total cost of ED visits by CHC clients in 2022, assuming rates similar to 2020. Using the ratio between observed and expected ED utilization (0.79)[6] – determined based on the morbidity patterns of CHC clients – the total annual cost of expected utilization and cost difference were calculated.

Plausible ranges for the estimates of the average cost per ED visit and the total annual cost averted were calculated using Monte-Carlo simulation by varying the ratio of observed to expected average number of ED visits per CHC client, the average cost per ED visit for each of the CTAS levels, and the proportion of ED visits for each of the five CTAS levels.

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