

A Descriptive Analysis of Hospitalization Due to Acute Gastrointestinal Illness in Canada, 1995-2004

Manon D. Fleury, MSc¹

Julie Stratton, MHSc²

Carol Tinga, MSc¹

Dominique F. Charron, PhD³

Jeff Aramini, PhD¹

ABSTRACT

Background: Gastrointestinal illness (GI) remains a leading cause of morbidity and mortality worldwide. In Canada, research has already demonstrated a rate in excess of one episode per person-year. National passive surveillance programs may be enhanced by information from hospitalizations for acute gastrointestinal disease. The objective of this report is to explore the incidence of acute GI in hospital administrative data collected by the Canadian Institute for Health Information (CIHI) – specifically the hospital morbidity database (HMDB).

Methods: Data from acute care facilities and select chronic care and rehabilitation facilities across Canada were analyzed using standardized rates, and age- and sex-adjusted rates for the years 1995-2004.

Results: The results indicate that GI causes at least 92,765 hospital admissions per year in Canada. In the majority (78.3%) of gastrointestinal hospitalizations, no specific etiology was recorded. Of the remaining diagnoses, 11.6% were due to viruses, 9.7% to bacteria and 0.3% to parasites. Age-standardized rates of hospitalizations for acute GI appear to have declined over the 10-year period.

Conclusion: Gastrointestinal illness is still present in the Canadian population and presents a significant burden to the health care system. Whereas the HMDB likely underestimates the true rate of GI, it does capture cases that are serious enough to require hospitalization. This is a unique source of data and highlights other pathogen-specific disease data not currently collected through national surveillance tools (e.g., viruses).

Key words: Gastrointestinal illness; diarrhea; hospitalization; Canada

La traduction du résumé se trouve à la fin de l'article.

1. Foodborne, Waterborne and Zoonotic Infections Division, Public Health Agency of Canada, Guelph, ON

2. Region of Peel, Toronto, ON

3. International Development Research Centre, Ottawa, ON

Correspondence and reprint requests: Manon Fleury, 255 Woodlawn Road West, Unit 120, Guelph, ON N1H 8J1, Tel: 519-826-2185, Fax: 519-826-2244, E-mail: Manon_D_Fleury@phac-aspc.gc.ca

Acknowledgements: We acknowledge the contributions of Jeff Wilson, Public Health Agency of Canada. We thank the people at the Canadian Institute for Health Information for the data used in this study.

The World Health Organization (WHO) estimated that in 2005 approximately 2 million deaths worldwide were due to gastrointestinal illness (GI) acquired specifically from food and water. GI can also be transmitted through person-to-person contact, recreational water and food contaminated with water. Globally GI remains one of the leading causes of morbidity and mortality, particularly in children, despite ongoing progress in our basic understanding of its epidemiology, pathogenesis, and treatment.¹ In industrialized countries such as the United States, 30% of the population still suffers from foodborne diseases, with approximately 76 million illnesses, 325,000 hospitalizations and 5,000 deaths reported annually.^{2,3}

In Canada, there are an estimated 1.3 episodes per person-year of enteric disease.⁴ The incidence of specific GI infections is calculated from data reported to the National Notifiable Disease Reporting Systems (NDRS) database at the Public Health Agency of Canada. Data in the NDRS database include those collected on a mandatory basis by the local public health units/authorities. Data are submitted in case-level or aggregate form and include “confirmed” (laboratory identification of pathogen) and “closed” (investigation completed) reports. In addition, laboratory surveillance data are collected on a weekly basis from 11 provincial laboratories representing all provinces and territories through the National Enteric Surveillance Program (NESP). The NESP receives weekly aggregate totals of new identifications based on a group of selected enteric organisms provided by the Public Health Laboratories. For each of these national surveillance systems, reports are prepared and disseminated regularly. To date, there have been no estimates of hospitalizations due to GI for the general population in Canada. In previously published reports, investigations of hospitalizations for GI have generally focused on specific risk groups such as children, adults, or the elderly.⁵⁻⁷

The objective of this report is to explore the incidence of acute GI in hospital administrative data collected by the Canadian Institute for Health Information (CIHI) – specifically the hospital morbidity database (HMDB) – and how the data can enhance the passive surveillance pro-

TABLE I
Categorization of ICD-9 and ICD-10 Codes and Associated Conditions

Condition	ICD-9 Code	ICD-10 Codes	Condition Group
Cholera	001.0, 001.1, 001.9	A000, A001, A009	Bacterial
Typhoid and paratyphoid	002.0, 002.1, 002.2, 002.3, 002.9	A010, A011, A012, A013, A014	Bacterial
Salmonella	003.0, 003.1, 003.2, 003.8, 003.9	A020, A021, A022, A028, A029	Bacterial
Shigella	004.0, 004.1, 004.2, 004.3, 004.8, 004.9	A030, A031, A032, A033, A038, A039	Bacterial
Other bacterial food poisoning			Bacterial
• Staphylococcal food poisoning	005.0	A050	
• Botulism	005.1	A051	
• Clostridium perfringens and other Clostridia	005.2, 005.3	A052	
• Vibrio parahaemolyticus	005.4	A053	
• Bacillus cereus	005.8	A054	
• Unspecified bacterial food poisoning	005.9	A058, A059	
Intestinal infections due to other organisms			Bacterial
• Escherichia coli	008.0	A040-A044	
• Campylobacter	Not specified	A045	
• Yersinia enterocolitica	Not specified	A046	
• Clostridium difficile	Not specified	A047	
• Other	008.1, 008.2, 008.3, 008.4, 008.5	A048, A049	
Gastrointestinal anthrax	022.2	A222	Bacterial
Listeriosis	027.0	A32	Bacterial
Amebiasis	006.0, 006.1, 006.2, 006.3, 006.4, 006.5, 006.6, 006.8, 006.9, 007.8	A060-A069	Parasitic
Other protozoal intestinal diseases			Parasitic
• Giardiasis	007.1	A071	
• Cryptosporidium	Not specified	A072	
• Other	007.0, 007.2, 007.3, 007.9	A078, A079	
Viral Infections	008.6, 008.8	A080-A085	Viral
Hepatitis A	070.0, 070.1	B15	Viral
Ill-defined intestinal infections	009.0, 009.1, 009.2, 009.3	A09	Unknown Etiology
Other non-infectious gastroenteritis and colitis	558, 558.9	K52	Unknown Etiology
Gastritis and duodenitis	535.0, 535.4, 535.5, 535.6	K290, K296, K298, K299	Other GI symptom
Nausea and vomiting	787.0	R11	Other GI symptom

gram in Canada. We describe the population hospitalized in Canada for GI by age, sex, year and province/territory; we estimate hospitalization rates for specific pathogens; and we discuss the usefulness of the HMDB as a surveillance tool for GI.

METHODS

The CIHI HMDB data were used for this retrospective study as they were readily available and included all provinces. The HMDB data include clinical, demographic and administrative data on patients discharged from acute hospital and select chronic care and rehabilitation in-patients for all provinces/territories from 1995-2004.⁸ Key variables include diagnostic codes for the most significant issue related to the hospital stay, patient sex, patient age, date of admission, date of discharge, province and length of stay. Nunavut data were merged with Northwest Territories data because Nunavut was not created until 1999 and was part of the Northwest Territories prior to this date.

Cases of GI were defined as individuals whose hospitalization record listed acute GI among the first three diagnostic codes (using the International Classification of Diseases, 9th edition and 10th edition – see Table I). This was done to ensure that the

TABLE II
Number and Proportion of All Hospitalizations for Gastrointestinal Disease by Age Group and Cause of Enteritis, Canada, 1995-2004

Age Group (years)	Number of Hospitalizations	Percent Cause of Enteritis				
		Bacterial (B)	Parasitic (P)	Viral (V)	Combination of B, P or V	Non-specific Etiology
<1	61,421	3.2	0.1	27.6	0.2	68.9
1-4	128,824	3.5	0.5	28.8	0.3	67.0
5-9	51,430	5.5	0.5	20.5	0.2	73.3
10-19	51,837	8.6	0.5	12.2	0.2	78.5
20-49	214,936	9.1	0.5	7.0	0.1	83.3
50-69	170,811	11.5	0.2	4.8	0.0	83.5
70-79	129,428	14.5	0.1	5.0	0.0	80.3
≥80	118,982	15.4	0.1	6.0	0.0	78.5
Total	927,669	9.7	0.3	11.6	0.1	78.3

cases represented individuals hospitalized for treatment of acute GI and not some other primary problem. If data on patient age, sex or province of residence were missing, the record was excluded from the analysis (total of 24 cases were removed). Repeat visits within 40 days with related conditions were excluded (total of 84,050 admissions) as they were presumed to be associated with the same episode.⁹

Average annual and annual direct standardized rates were calculated for Canada within each subset grouping as defined in Table I. The 2001 Canadian census population from Statistics Canada was used as the reference population for the calculation of the adjusted age- and sex-standardized rates (<http://www12.statcan.ca/english/census01/home/index.cfm>; accessed

October 2008). The average annual number of patients was calculated using the total number of hospital discharges divided by 10 years. Data analyses were conducted by calendar year using SAS statistical software version 9.1. Means and medians were used to describe the data; medians were used when the range or standard deviation was large. A Chi square and t-test were used to test for significance.

RESULTS

There were a total of 927,645 independent episodes of hospitalizations (each episode being one individual) for GI between 1995 and 2004 with an average of 92,765 hospitalizations per year in Canada. The median initial visit length of stay was 3 days with a

TABLE III

Age-standardized Hospitalization Rates of Gastrointestinal Illness per 100,000 Population by Province, Canada, 1995-2004

Province	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Avg. Annual Rate
Alberta	416.6	384.1	387.4	385.1	375.2	371.8	352.7	319.7	279.9	298.3	357.1
British Columbia	326.2	309.0	304.3	285.2	296.4	266.4	232.6	202.9	194.2	220.6	263.8
Manitoba	364.7	315.6	306.2	311.8	311.4	307.6	305.6	273.0	275.2	237.4	300.8
New Brunswick	785.9	676.4	698.6	648.5	698.8	652.6	586.8	567.8	470.7	428.5	621.5
Nova Scotia	444.3	404.5	369.8	361.9	348.6	303.5	274.4	250.2	261.0	236.0	325.4
Northwest Territories†	360.3	380.6	354.1	363.5	400.9	316.7	280.8	227.8	202.8	201.2	308.9
Newfoundland and Labrador	433.8	381.5	368.5	374.7	371.2	304.1	274.9	256.4	309.8	253.8	332.9
Ontario	311.8	310.5	277.5	273.5	271.7	267.2	286.0	266.0	227.8	233.9	272.6
Prince Edward Island	711.1	537.4	742.8	640.1	583.2	589.8	430.9	439.8	456.8	399.1	553.1
Québec	308.8	302.7	295.6	316.2	300.5	293.2	278.4	270.4	301.7	334.4	300.2
Saskatchewan	641.2	621.0	602.6	634.7	579.3	597.5	507.1	471.7	437.1	445.1	553.7
Yukon	181.3	272.0	265.0	327.8	247.6	303.4	265.0	299.9	191.8	265.0	261.9
Canada	355.5	340.1	324.8	325.0	319.7	308.7	299.2	278.6	264.2	275.7	309.1

† NWT includes Nunavut

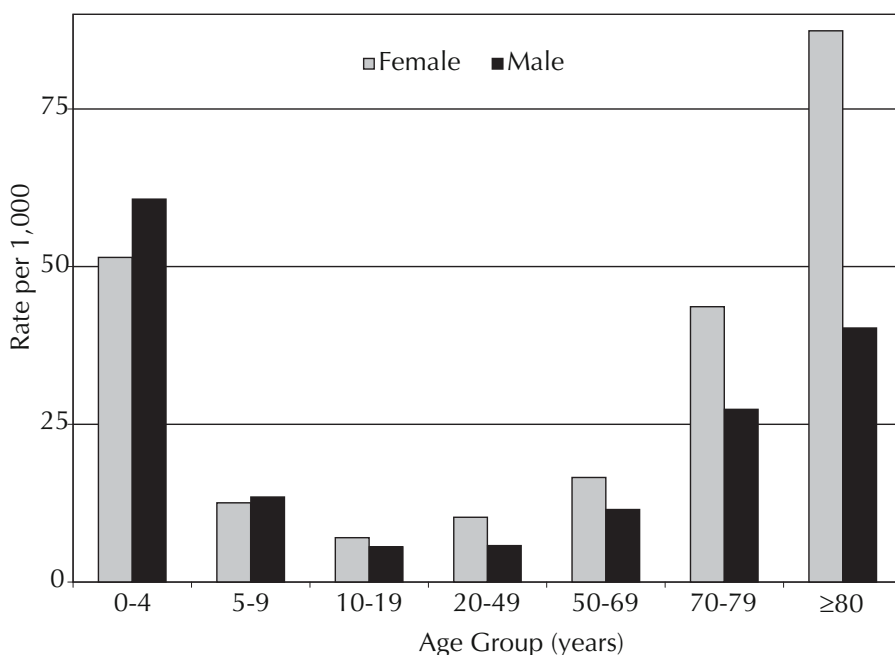


Figure 1. Rates of hospitalization, per 1,000, by age group and sex

range of 1 to 1615 days. Table II shows the number and proportion of hospitalizations in Canada by age group and cause of GI. Overall, the majority (78.3%) of gastrointestinal hospitalizations were coded as non-specific or unknown. Of the remaining diagnoses, 11.6% were due to viral gastrointestinal infections, 9.7% to bacterial infections and 0.3% to parasitic infections. Concurrent diagnoses of bacterial, viral and parasitic infections were reported in 0.1% of patients. The proportion of hospitalizations with a clear viral diagnosis was highest in the younger age groups, while bacterial agents were responsible for a higher proportion of hospitalizations in the older age groups.

The mean age of hospitalized cases was 42.0 years (median 44.0 years). Age-specific rates of hospitalization (Figure 1) showed a

“U” shaped distribution and were highest in the younger and older age groups. Overall, 42% of hospitalizations were male and 58% were female. A greater proportion of males were hospitalized for GI in the 0-4 and 5-9 year age category whereas females had higher rates in all other age groups. Males hospitalized for GI illness were significantly ($p < 0.001$) younger (mean=37.5 years, median=37.0 years) than females (mean=45.2 years, median=48.0 years).

Age-standardized rates of hospitalization of GI declined over the 10-year period from 355 per 100,000 in 1995 to 276 per 100,000 in 2004. Rates of illness for females ranged from 304-401 per 100,000 from 1995 to 2004 compared to 224-308 per 100,000 for males. Females had consistently higher rates of hospital-

ization for GI ($p < 0.001$) than males across all years.

Age-adjusted hospitalization rates of GI differed by provinces and territories (Table III). New Brunswick had the highest average annual rate per 100,000 population (622) followed by Saskatchewan (554) and Prince Edward Island (553) (see Table III). Over the 10-year period, hospitalization rates for GI declined in all provinces except for Quebec and Yukon where increases were observed in 2004 ($p < 0.001$).

Characteristics of patients hospitalized for specific pathogens are shown in Table IV. The largest average annual rate was found for the diagnostics code of “other gastrointestinal symptoms” (238.99), “enteritis due to specified virus” (35.13), and “intestinal infections due to other organisms” (22.11).

The median age of those hospitalized for “shigellosis”, “enteritis due to specified virus”, and “other protozoal intestinal diseases” were 12, 4 and 17 years, respectively. The median age of persons hospitalized for “listeriosis” was 59 years and older. The median ages of cases with the remaining patient diagnoses were between 20 and 60 years.

Sex differences by diagnosis were also observed. Higher proportions of males were hospitalized for food poisoning due to “listeriosis” (69%), “amebiasis” (67%), and “food poisoning due to *Vibrio parahaemolyticus*” (64%). More women were hospitalized with known pathogens “*Escherichia coli*” (56%) and “*Clostridium spp.*” (56%). The median length of stay was highest for patients hospitalized with “listeriosis” (10 days), followed by “intestinal infections due to other organisms” (7 days) and “amebiasis” (6 days). A medi-

TABLE IV

Characteristics of Hospitalizations for Gastrointestinal Illness by Type of Gastrointestinal Condition, Canada, 1995-2004 Combined

Gastrointestinal Condition	Characteristics of Hospitalizations for Gastrointestinal Illness				
	Number of Cases	Average Annual Rate*	Mean Age in Years (median)	Percent Male	LOS† Mean Days (median)
Cholera	380	1.27	44 (51)	48	5.4 (3)
Typhoid/Paratyphoid	671	2.24	27 (24)	54	6.4 (5)
Salmonella	8728	29.09	34 (29)	50	6.2 (4)
Shigella	1085	3.62	22 (12)	45	4.7 (3)
Other bacterial food poisoning					
• Staphylococcal food poisoning	166	0.55	44 (42)	54	2.2 (1)
Other bacterial food poisoning					
• Botulism	139	0.46	44 (48)	47	13.4 (4)
Other bacterial food poisoning					
• Clostridium perfringens and other Clostridia	115	0.38	44 (48)	44	9.4 (5)
Other bacterial food poisoning					
• Vibrio parahaemolyticus	11	0.04	46 (38)	64	5.7 (4)
Other bacterial food poisoning					
• Bacillus cereus	159	0.53	43 (41)	50	4.9 (3)
Other bacterial food poisoning					
• Unspecified bacterial food poisoning	3068	10.22	44 (42)	46	2.3 (1)
Intestinal infections due to other organisms					
• Escherichia coli	3928	13.09	33 (23)	44	5.1 (4)
Intestinal infections due to other organisms					
• Campylobacter					
• Yersinia enterocolitica					
• Clostridium difficile					
• Other	66,337	221.07	61 (69)	42	14.7 (7)
Gastrointestinal anthrax	N/A	N/A	N/A		N/A
Listeriosis	13	0.04	59 (59)	69	12.5 (10)
Amebiasis	485	1.62	40 (40)	67	8.8 (6)
Other protozoal intestinal diseases					
• Giardiasis	1399	4.66	29 (27)	51	6.4 (4)
Other protozoal intestinal diseases					
• Cryptosporidium					
• Other	773	2.58	25 (17)	56	7.1 (4)
Viral Infections	105,417	351.31	21 (4)	47	3.4 (2)
Hepatitis A	40	0.13	35 (36)	45	6.3 (5)
Ill-defined intestinal infections	17,578	58.58	45 (46)	42	5.5 (3)
Other non-infectious gastroenteritis and colitis, gastritis and duodenitis, nausea and vomiting	717,153	2389.95	43 (46)	41	5.4 (3)

* The average annual rate (per million) was multiplied by the 2001 census data for Canada = 30,007,090

† LOS = length of stay (in days) at the hospital

an length of stay observed was between 1 and 2 days for “staphylococcal infections”, “unspecified bacterial food poisoning”, and “enteritis due to specific viral infection”.

DISCUSSION

The results of this study indicate that in Canada between 1995 and 2004, GI was responsible for at least 92,765 hospital admissions per year. GI hospitalizations per capita were greater in Canada than in the United States (the latter with a population 10 times larger than that of Canada, and 181,177 reported hospitalizations per year).³ Although reportable disease data are a good source of information for estimating the burden of reportable GI in Canada, the majority of such diseases are under-reported in Canada.¹⁰ No surveillance tool or database accurately captures the total burden of infectious GI. This study demonstrates that information derived from HMDB can contribute to a better understanding of the true burden due to GI in Canada.

The majority of patients (78.3%) admitted to hospital for GI did not have laboratory-confirmed intestinal infections. Rather, the CIHI database captured many reports of gastrointestinal syndromes. The proportion of patients without a specific diagnosis varied by age group, however specific pathogens were more frequently diagnosed and recorded for the younger age groups. These findings are consistent with other studies using hospital administration data and similar ICD-9/ICD-10 codes conducted in the United States.^{5,7,11} Both ICD-9 and ICD-10 were used because of the transition of some provinces within this time frame to ICD-10.

Rates of hospitalization for GI have declined over the study period from 355 per 100,000 in 1995 to 275 per 100,000 in 2004 and have done so for both males and females. This trend could reflect a true decrease in the rate of severe GID in the population. This is supported by a decline in the total rate of most National Notifiable Diseases (NND) in Canada (<http://dsol-smed.phac-aspc.gc.ca/dsol-smed/>

[ndis/c_time_e.html](http://dsol-smed.phac-aspc.gc.ca/dsol-smed/ndis/c_time_e.html); accessed October 2008). The decline in hospitalizations and disease incidence in general could be due to better education programs, advances in food safety and regulations and/or better public health interventions (e.g., boil water advisories). However, the trend visible in the data may not reflect a true decrease of severe GI as it may be an artefact caused by decreased access to hospitals and beds, decreased willingness to go to a hospital, or decreased likelihood of being admitted to hospital for GI.¹²

The age-adjusted rates showed that female rates of hospitalization for GI were consistently higher on average than rates for males across all age groups. This may be due to a sex bias at admission and possible differences in severity of illness experienced by males and females, as has been suggested by research from Zarling et al.¹³ Rates of hospitalization were highest in the young and older age groups, and age-specific rates reflected a typical “U” shaped curve. This distribution is similar to previous studies in which the incidence of GI

was found to be highest in children and the elderly.^{14,15} Greater severity in older and younger cases and/or greater diligence in care sought for them may result in higher hospitalization rates.

In addition to hospitalizations for reportable pathogens and those with a non-specific etiology, we were able to assess the pathogen-specific hospitalization rates for infections that are not currently reportable at the national level, including staphylococcal food poisoning and food poisoning due to *Vibrio parahaemolyticus*. Average annual hospitalization rates of GI differed by province and were highest in Prince Edward Island, New Brunswick and Saskatchewan. All differences between provinces might be attributed to differences in hospital services and policies, surveillance activities, food safety regulations, water regulation standards and access to health care.

Gastrointestinal illness still presents a significant burden in Canada and could be lessened with improved technologies for assessing water and food safety, enhanced surveillance and response systems (e.g., hand washing has been shown to reduce the spread of GI).¹⁶ Although the accuracy of the diagnoses cannot be verified post-hoc, and the data used in this study only reflect those ill enough to require hospitalization, the study provides a novel perspective on the burden of GI in Canada including insights into GI from other pathogens not currently collected through national surveillance tools. The HMDB is an underutilized source of data that could become an additional tool in GI surveillance in Canada.

REFERENCES

- Bryce J, Boschi-Pinto C, Shibuya K, Black RE. WHO estimates of the causes of death in children. *Lancet* 2005;365:1147-52.
- Wheeler JG, Sethi D, Cowden JM, Wall PG, Rodrigues LC, Tompkins DS, et al. Study of infectious intestinal disease in England: Rates in the community, presenting to general practice, and reported to national surveillance. *The Infectious Intestinal Disease Executive. BMJ* 1999;318(7190):1046-50.
- Mead PS, Slutsker L, Dietz V, McCaig LF, Bresee JS, Shapiro C, et al. Food-related illness and death in the United States. *Emerg Infect Dis* 2000;5(5):607-25.
- Majowicz S, Doré K, Flint J, Edge V, Read S, Buffett M, et al. Magnitude and distribution of acute, self-reported gastrointestinal illness in a Canadian community. *Epidemiol Infect* 2004;132(4):607-17.
- Gangarosa RE, Glass RI, Lew JF, Boring JR. Hospitalizations involving gastroenteritis in the United States, 1985: The special burden of the disease among the elderly. *Am J Epidemiol* 1992;135(3):281-90.
- To T, Feldman W, Young W, Maloney S. Hospitalization rates of children with gastroenteritis in Ontario. *Can J Public Health* 1996;87(1):62-65.
- Mounds AW, Holman RC, Clarke MJ, Bresee JS, Glass RI. Trends in hospitalization associated with gastroenteritis among adults in the United States, 1979-1995. *Epidemiol Infect* 1999;123:1-8.
- Richards J, Brown A, Homan C. The Data Quality Study of the Canadian Discharge Abstract Database. Proceedings of the Statistics Canada Symposium 2001: Achieving Data Quality in a Statistical Agency: A Methodological Perspective. Ottawa, ON: Canadian Institute for Health Information, 2001.
- Aramini J, Wilson J, Allen B, Holt J, Sears W, McLean M, Copes R. Drinking water quality and health care utilization for gastrointestinal illness in Greater Vancouver. Guelph, ON: Health Canada, 2000.
- Majowicz SE, Edge VL, Fazil A, McNab WB, Doré KA, Sockett PN, et al. Estimating the under-reporting rate for infectious gastrointestinal illness in Ontario. *Can J Public Health* 2005;96(3):178-81.
- Curns AT, Holman RC, Sejar JJ, Owings MF, Schonberger LB. Infectious disease hospitalizations among older adults in the United States from 1990 through 2002. *Arch Intern Med* 2005;165(21):2514-20.
- Parmley JE. An Epidemiological Investigation into the Use of Human Health Databases for Surveillance of Zoonotic Enteric Disease in Alberta [thesis]. Guelph, ON: University of Guelph, 2005.
- Zarling EJ, Bernsen MB. The effect of gender on the rates of hospitalization for gastrointestinal illness. *Am J Gastroenterol* 1997;92(4):621-23.
- Hoogenboom-Verdegaal AM, de Jong JC, During M, Hoogenveen R, Hoekstra JA. Community-based study of the incidence of gastrointestinal diseases in The Netherlands. *Epidemiol Infect* 1994;112:481-87.
- de Wit MAS, Koopmans MPG, Kortbeek LM, Wannet WJB, Vinjé J, van Leusden F, et al. Sensor, a population-based cohort study on gastroenteritis in the Netherlands: Incidence and etiology. *Am J Epidemiol* 2001;154:666-74.
- Curtis V, Cairncross S. Effect of washing hands with soap on diarrhoea risk in the community: A systematic review. *Lancet Infect Dis* 2003;3:275-81.

Received: August 20, 2007

Accepted: June 4, 2008

RÉSUMÉ

Contexte : Les maladies gastrointestinales (MGI) demeurent l'une des principales causes de morbidité et de mortalité dans le monde. Au Canada, des études ont déjà fait état d'un taux de MGI supérieur à un accès par personne par année. Les programmes nationaux de surveillance passive pourraient être améliorés avec des données sur les hospitalisations pour maladie gastrointestinale aiguë. Nous avons voulu analyser l'incidence des MGI aiguës dans les données administratives des hôpitaux recueillies par l'Institut canadien d'information sur la santé (ICIS), plus spécifiquement dans la Base de données sur la morbidité hospitalière (BDMH).

Méthode : Nous avons analysé les données des établissements de soins actifs et de certains établissements de soins chroniques et de réadaptation du Canada à l'aide de taux normalisés et de taux rajustés selon l'âge et le sexe pour les années 1995 à 2004.

Résultats : Nos résultats indiquent que les MGI causent au moins 92 765 hospitalisations par année au Canada. Pour la majorité (78,3 %) des hospitalisations attribuables aux MGI, aucune étiologie précise n'est consignée au dossier du patient. Sur les diagnostics restants, la cause est attribuée à des virus dans 11,6 % des cas, à des bactéries dans 9,7 % des cas et à des parasites dans 0,3 % des cas. Les taux d'hospitalisation pour MGI aiguës normalisés selon l'âge semblent avoir diminué pendant cette période de 10 ans.

Conclusion : Les maladies gastrointestinales sévissent encore dans la population canadienne et représentent un lourd fardeau pour le système de santé. La BDMH sous-estime probablement le taux réel de MGI, mais elle saisit néanmoins les cas suffisamment graves pour nécessiter une hospitalisation. C'est une source de données unique en son genre, et elle contient aussi des données sur d'autres maladies dues à des agents pathogènes (p. ex., d'origine virale) que les outils de surveillance nationale actuels ne recueillent pas encore.

Mots clés : maladies gastrointestinales; diarrhée; hospitalisation; Canada