From Stool to Statistics

Reporting of Acute Gastrointestinal Illnesses in Canada

James A. Flint, MPH¹

Kathryn Doré, MSc^{1,2}

Shannon E. Majowicz, MSc^{1,2}

Victoria L. Edge, MSc^{1,2}

Paul Sockett, PhD¹

ABSTRACT

Background: Limitations associated with the under-reporting of enteric illnesses have long been recognized but the extent and variation of this under-reporting in Canada has not been examined. Given the public health value of surveillance data, a closer examination of under-reporting of enteric illnesses in Canada was warranted.

Methods: Paper-based surveys were administered (a) to all laboratories in Canada licensed to process stool specimens and (b) to all local public health authorities in two provinces.

Results: Of the laboratories surveyed, 67% (n=274) conducted on-site testing of stool specimens for enteric bacteria, 31% (n=126) for parasites and 10% (n=42) for viruses. In the year 2000, these laboratories processed 459,982 stool specimens, of which 5%, 15%, 8% and 19% were positive for enteric bacteria (excluding *C. difficile*), *C. difficile*, parasites and viruses, respectively. Variations in laboratory testing and health authority reporting protocols and policies were identified. Of the laboratory-confirmed cases of AGI reported to local public health authorities, 5% (n=846) were not reported to provincial counterparts.

Conclusion: A significant proportion of AGI cases submitting stool specimens are not captured in Canada's passive surveillance system due to unknown etiology. A much smaller proportion of laboratory-confirmed cases reported to local public health authorities are not captured at the provincial or national level.

Given that the number of laboratory-confirmed AGI cases represents such a small fraction of all community cases, strategies to compensate for under-reporting and efforts directed at harmonizing laboratory and local public health authority policies and practices would be welcomed.

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

1. Foodborne, Waterborne and Zoonotic Infections Division, Centre for Infectious Disease Prevention and Control, Population and Public Health Branch, Health Canada

2. Department of Population Medicine, University of Guelph

Correspondence and reprint requests: James Flint, Epidemiologist, CAREC, PAHO/WHO, P.O. Box 164, Port of Spain, Trinidad and Tobago, Tel: 868-622-4261, Fax: 868-622-2792, E-mail: flintjam@carec.paho.org

Acknowledgements: The authors thank Dr. Therese Rabatsky, Ms. Doris Tam and the Canadian Public Health Laboratory Forum for their technical assistance and Dr. Frank Pollari for his constructive comments during the preparation of this article.

This research was funded by the Foodborne, Waterborne and Zoonotic Infections Division, Health Canada.

In passive surveillance systems (where the responsibility of sending information rests with the data provider), under-reporting is a well-recognized problem. Enteric diseases are particularly prone to under-reporting as many patients experience relatively mild illness and do not visit a health care provider, and those who do may not submit, or be asked to submit, a biological specimen for analysis.¹ In most instances, a patient with an acute gastrointestinal illness (AGI) will only be recorded in provincial or national statistics if a pathogen is identified and the results appropriately reported to a local health authority and subsequently to the corresponding provincial health authority.

Health Canada has initiated studies to examine factors affecting the reporting of AGI and estimate the proportion of cases not captured within the national enteric disease surveillance system. Findings from these studies will allow a more accurate interpretation of surveillance data and assist in the development of strategies to enhance existing surveillance. This paper presents results from studies examining the reporting of enteric illnesses at two key surveillance junctions: the local laboratory and the local public health authority.

METHODS

The national laboratory survey was developed with provincial public health laboratory directors, microbiologists and international colleagues; it was piloted in one province prior to national administration. The laboratory survey contained information on primary culture and toxin testing, antimicrobial susceptibility testing, ova and parasite testing, viral testing and disease reporting. The public health reporting survey contained sections on the reporting of outbreak- and non-outbreak-related AGI cases. The surveys are available upon request from the corresponding author.

Contact details for all laboratories licensed to process stool specimens were requested from provincial licensing bodies. The questionnaire was mailed to all microbiology laboratories that received stool specimens, except provincial public health laboratories. The public health authority survey was mailed to all local public health authorities in two provinces. Prior to sending an introductory letter (sent one week before the survey), a telephone call was

TABLE I

Percentage of Laboratories Routinely Testing* Outpatient and Inpatient Stool Specimens for the Following Enteric Pathogens Within Each Province/Territory (A–K)

		A	B	C	D	E	F	G	H	I	J	K
Aeromonas	out†	100	93	57	83	0	100	33	37	100	74	92
	in‡	100	92	60	83	0	100	33	39	100	74	92
Campylobacter	out	100	98	100	100	75	100	100	100	100	95	92
	in	100	97	100	100	75	100	100	100	100	95	92
Clostridium	out	0	7	14	0	0	0	11	2	0	10	8
	in	8	5	0	0	0	0	11	4	0	10	8
E. coli	out	100	95	100	100	75	100	100	100	100	94	92
	in	100	95	80	100	75	100	100	100	100	94	92
Plesiomonas	out	92	88	43	83	0	100	33	34	0	53	83
	in	92	89	60	83	0	100	33	35	0	53	83
Salmonella	out	100	98	100	100	100	100	100	100	100	100	100
	in	100	97	100	100	100	100	100	100	100	100	100
Shigella	out	100	95	100	100	100	100	100	100	100	100	100
	in	100	95	100	100	100	100	100	100	100	100	100
Vibrio	out	46	84	0	67	0	0	33	29	100	29	33
	in	58	81	0	67	0	0	33	29	100	29	33
Yersinia	out	77	98	57	100	88	100	89	99	100	99	75

* culture and/or molecular methods, including toxin detection

† outpatient

‡ inpatient

made to each laboratory to discuss the study and identify the name of the person most qualified to complete the survey. Two weeks following the survey mail-out, a reminder or thank-you letter was sent to all participants, followed two weeks later by a second reminder and survey to all non-responders. Three weeks following the second reminder, telephone reminders were made to non-responders. With the exception of the initial telephone call, the same protocol was used in the public health authority survey. Information collected in the laboratory and the public health authority survey corresponded to the years 2000 and 2001, respectively.

Information from the surveys was entered into EpiData v. 2.0 (The EpiData Association Odense Denmark 2001). Analysis and data presentation were performed using S-PLUS 2000 (Mathsoft Inc), SAS (SAS Institute Inc) and Excel 97 (Microsoft Corp). In order to test differences between sample means, an unpaired t-test was used and the difference was considered statistically significant if the two-sided p-value was <0.05. In addition, assumptions of normality, independence, and homogenous variance were checked.

RESULTS

Respondents

A total of 470 laboratories were eligible for participation; 87% (n=408) responded to the survey (province/territory range: 76% to 100%). Forty (10%) responding laboratories were private; the remaining 368

(90%) were hospital or institution based. The response rate for the local health authority survey was 93% (n=52).

Routine laboratory testing

Of the 408 laboratories surveyed, 67% (n=274) conducted onsite testing of stool specimens for enteric bacteria, 31% (n=126) for parasites and 10% (n=42) for viruses. All laboratories conducting onsite testing included *Salmonella* spp in their routine tests. Most laboratories also routinely tested for *Shigella* spp. (99%), *Campylobacter* spp. (97%), pathogenic *E. coli* (96%) and *Yersinia* spp. (95%). *Aeromonas*, *Plesiomonas* and *Vibrio* spp. were routinely included by 63%, 54% and 38% of laboratories, respectively. Inter-provincial variations in pathogens routinely tested for are shown in Table I. While only 6% of laboratories indicated culturing stool for *Clostridium*, 60% used non-culture and/or culture methods to detect *C. difficile* or its toxin. Of the 126 laboratories testing for parasites, 100% tested for *Giardia*, 98% for *Entamoeba*, 77% for *Cryptosporidium*, 70% for *Cyclospora* and 42% for *Microsporidia*. Of the 42 laboratories testing for enteric viruses, 95% tested for rotavirus, 45% for enteric adenoviruses, 38% for hepatitis A virus, 31% for caliciviruses (norwalk-like or small round structured virus), and 16% for astrovirus.

Number of stools tested and proportion positive for enteric pathogens

A total of 459,982 stools were tested for bacteria, excluding *C. difficile*, in the year 2000 (14.9/1000 people). The number

tested by province or territory ranged from 5.4/1000 to 20.4/1000. A total of 177,696 stool were tested for *C. difficile* (provincial/territorial range 0/1000 to 10.1/1000; average 5.9/1000 people), 392,023 for parasites (provincial/territorial range 0/1000 to 16.3/1000; average 13.1/1000 people) and 14,051 for viruses (provincial/territorial range 0/1000 to 2.2/1000; average 0.5/1000 people). The proportion of stools yielding a positive result is shown in Table II. The overall proportion of tests positive for a bacterial, parasitic or viral pathogen was 8.8% (the sum of all positive isolations divided by the sum of all specimens tested for bacteria, parasites and viruses).

Restriction on testing and rejection of stool

On average, 3% of stool specimens that arrived at Canadian laboratories were rejected without testing or referral. Reasons for rejection included excessive time delays in transportation, leaking or damaged stool containers or not enough stool quantity provided. If an outpatient stool specimen was shipped without transport media, 40% of laboratories indicated performing routine tests, 30% indicated only testing when certain conditions were met (e.g., the specimen was received within a specified time following collection) and 5% rejected the specimen. The remaining 25% of laboratories indicated never receiving a stool specimen from an outpatient without transport media.

Policies on processing fully formed stool specimens (i.e., no evidence of diarrhoea)

TABLE II

Average Percentage of Stools Having a Pathogen Positively Identified; Comparisons Across Provinces/Territories

Province/ Territory	Bacteria, (excl. <i>C. difficile</i>) SD* (Range)		<i>C. difficile</i> SD (Range)		Parasites SD (Range)		Viruses SD (Range)	
A	7.5	(6.5; 3.0 – 25.0)	18.5	(11.3; 11.2 – 31.5)	8.0	(4.6; 2.6 – 15.2)	16.0	(8.1; 10.3 – 21.8)
B	6.8	(6.0; 0.1 – 33.4)	14.8	(7.7; 1.7 – 28.2)	9.7	(7.1; 1.1 – 27.2)	24.0	(23.6; 3.1 – 64.3)
C	2.2	(1.7; 0.0 – 4.9)	11.6	(5.6; 5.7 – 18.9)	5.1	(4.7; 1.7 – 11.8)	10.4	(na)
D	2.6	(0.6; 1.7 – 3.4)	8.0	(2.5; 5.1 – 11.4)	3.9	(4.4; 0.8 – 10.0)	18.2	(14.0; 7.4 – 38.2)
E	2.7	(1.9; 1.1 – 6.3)	11.5	(2.9; 9.4 – 13.5)	1.4	(0.7; 0.8 – 2.5)	6.5	(0.2; 6.4 – 6.7)
F	2.9	(na)	–	–	–	–	–	–
G	8.9	(15.0; 0.5 – 45.7)	14.8	(6.7; 5.7 – 29.4)	4.6	(2.4; 1.6 – 8.2)	7.6	(na)
H	4.3	(2.1; 0.3 – 11.1)	15.5	(6.2; 5.6 – 32.8)	8.8	(3.7; 2.6 – 13.6)	22.3	(13.1; 6.7 – 41.4)
I	1.8	(na)	–	–	–	–	–	–
J	5.3	(4.1; 0.4 – 19.8)	16.0	(9.2; 2.8 – 47.7)	8.1	(6.7; 0.0 – 28.2)	18.3	(17.4; 0.0 – 49.4)
K	3.5	(2.4; 0.5 – 8.6)	23.1	(23.0; 6.4 – 49.4)	6.7	(5.2; 2.4 – 12.5)	34.6	(na)
All	5.0	(4.7; 0.0 – 45.7)	15.3	(8.3; 1.7 – 49.4)	7.6	(6.0; 0.0 – 28.2)	18.9	(15.6; 0.0 – 64.3)

* standard deviation

TABLE III

Comparison Between Laboratory Testing Policy and Percent of Tests Positive for Enteric Bacterial Pathogens

Testing Criteria	Percentage of Stools Positive for a Bacterial Pathogen	P-value
Laboratories testing ≤4 bacterial pathogens	2.7	0.090
Laboratories testing ≥5 bacterial pathogens	5.1	
Rejecting specimen if stool is fully formed	4.6	0.275
Testing specimen if stool is fully formed	5.9	
No limit on the number of specimens tested from a single outpatient	4.4	0.447
Limit on the number of specimens tested from a single outpatient	4.9	
Only test one stool from a single outpatient per day	5.2	0.724
Only test one stool from a single outpatient per 3 or more days	4.5	
No limit on the number of specimens tested from a single inpatient	4.5	0.247
Limit on the number of specimens tested from a single inpatient	5.3	
Only test one stool from a single inpatient per day	4.8	0.165
Only test one stool from a single inpatient per 3 or more days	6.3	

TABLE IV

Proportion of Specific AGI Cases Not Reported From Health Units to the Provincial Health Authority

	Total # Reports Received	Total # Reported to Province	Number Not Reported	Percentage Not Reported
<i>Campylobacter</i>	6712	6498	214	3%
Pathogenic <i>E. coli</i>	482	453	29	6%
<i>Salmonella</i>	3060	2965	95	3%
<i>Salmonella typhi</i>	96	93	3	3%
<i>Shigella</i>	471	465	6	1%
<i>Cryptosporidium</i>	366	352	14	4%
<i>Cyclospora</i>	86	77	9	10%
<i>Giardia</i>	2704	2526	178	7%
Rotavirus	593	578	15	3%
Calicivirus/NLV, SRSV	2330	2070	260	11%
Hepatitis A	270	247	23	9%
TOTAL	17,170	16,324	846	5%

varied between laboratories. The majority (64%) performed usual tests, 23% performed usual tests except when specific pathogens were requested, 8% rejected the specimen and 4% rejected the specimen except when specific pathogens were requested. When asked about testing multiple specimens from a single individual, 74% of laboratories indicated having stool rejection criteria in place for outpatients and 66% for inpatients. Rejection policies based on repeat stool submissions varied greatly, the most common policy was accepting only one specimen per patient

per day. Thirty-four percent of laboratories receiving specimens from inpatients limited testing based on length of hospitalization, the majority of these laboratories (61%) rejected specimens from patients hospitalized for >3 days.

Influence of testing policy on stool yield

Comparisons between various laboratory policies and positive yields are shown in Table III. No correlation was found between the total number of stool specimens tested for by an individual laboratory

and the proportion of positive tests ($p=0.9206$).

Reporting to local public health authorities

Ninety-one percent of local public health authorities indicated receiving reports of confirmed AGI cases from laboratories, 7% indicated receiving reports from both laboratories and physicians, and 2% indicated receiving reports only from physicians. Nearly 80% of all health units received additional isolate information (such as species, serotype or phagetype) from a laboratory after the case had been reported to the province. In such cases, 80% of health units updated their databases and 29% also forwarded the additional information to the province.

When a specimen was referred to another laboratory for testing, 61% indicated they were not responsible for reporting positive findings, 13% indicated they were responsible, 15% indicated both they and the second laboratory were responsible and the remaining 11% did not know who was responsible. The majority (87%) of local health authorities indicated having a mechanism in place to prevent repeat laboratory

reports on a single patient being counted as multiple cases, 10% had no mechanism and 4% did not know.

Reporting from local public health authorities to provincial authorities

If sporadic AGI cases were reported without an identified pathogen, the majority (75%) of local public health authorities did not report these cases to the provincial health authority. If, however, these cases were related to an outbreak, only 25% did not report. The following proportion of laboratories indicated that the reason for not reporting was because (a) the case failed to meet the definition for a reportable disease (58%), (b) a suspected diagnosis was never confirmed (15%), (c) the case was never entered into the database (14%) or (d) key information on the case was missing (6%).

Of all the individual cases of acute gastrointestinal illness reported to local public health authorities in the year 2001 (including suspected, laboratory-confirmed and outbreak-related), approximately 11% were not reported to the provincial health authority. The overall proportion of laboratory-confirmed cases that were reported to the local health authority but not to the provincial health authority is summarized in Table IV.

DISCUSSION

As most cases of AGI are self-limited and managed adequately without a definitive diagnosis, etiology is often considered to be of little clinical significance. From a public health perspective, however, aetiological information is crucial for identifying outbreaks, monitoring trends, assessing the impact of interventions and developing appropriate public health policy.

The number of stool specimens processed per capita in Canada (14.9/1000) is slightly less than in the United States (16.8/1000).² If international figures³ apply in Canada, the cases submitting these 0.5 million stool specimens represent just 4.5% of all AGI cases. Given this fraction, the importance of each positive result to those responsible for monitoring and preventing enteric illnesses cannot be overstated. Of the cases submitting stool, only 5.0% of these test positive for a bacterial pathogen. This percentage is in

the same order of magnitude as international studies reporting bacterial yields from 1% to 28%.⁴⁻¹¹ Similarly with other enteric pathogens, the results from this study are comparable with published data. Published studies have reported yields for *C. difficile* ranging from 2% - 25%,^{9,10,12,13} parasites from 1% - 8%,^{6,8,10,14} and viruses from 12% - 26%.^{6,8-10,15} To assist in the setting of more realistic intervention targets, the true non-infectious portion of AGI cases in the community needs to be more accurately defined.

While there was consistency among laboratories when it came to testing common enteric bacterial pathogens (i.e., *Salmonella*, *Shigella*, *Campylobacter* and *E. coli*), there were variations in routine testing protocols for other bacterial pathogens along with parasites and viruses. As 'less' common pathogens are less commonly tested for, a perpetual cycle of under-recognition is initiated. A number of other variations in testing policies were recorded within and between provinces. These policies, when correlated with pathogen yields, did not show any statistically significant relationships. Increased sample sizes and more controlled study conditions would have provided more favourable conditions to examine the potential impact of specific policies on pathogen yields. This study did not examine variations in culture methods, another factor that could affect yields. Variations in reporting practices, having the potential to result in over- and under-reporting, were also noted.

To enhance the reporting of AGI in Canada, the following three-pronged approach is suggested. First, enhance the harmonization of laboratory testing and reporting policies and protocols provincially and nationally. This could be accomplished through the publication of practice guidelines and appropriate follow-up to assess the use of such guidelines. Increased harmonization would reduce any systematic biases and improve the quality of surveillance data. Second, conduct periodic community etiology studies to validate that the pathogens included on a routine stool culture are those of highest priority. Such studies would involve testing stool specimens for a comprehensive list of bacterial, parasitic and viral pathogens using the most sensitive methodology available. The

results of such studies would assist laboratories in determining what pathogens should be included on routine tests. This, in turn, would improve the quality of surveillance data by reducing systematic under-reporting due to the infrequent testing of specific pathogens. Finally, initiate enhanced surveillance in sentinel sites to monitor emerging pathogens or pathogens that are not routinely included in passive surveillance systems due to financial or other logistical restraints (i.e., viral pathogens), and/or to conduct syndromic surveillance (i.e., surveillance based on certain syndromes indicative of AGI). Sentinel sites could be hospitals, laboratories, general practitioners or local health divisions. Enhanced surveillance on a subset of the population provides an opportunity to develop a system that is more feasible, sensitive and flexible than the national system. Syndromic surveillance, while non-specific, captures cases regardless of laboratory confirmation giving a more complete assessment of the burden attributable to AGI and provides timely data to assist in the detection of outbreaks.

REFERENCES

1. Handysides S. Underascertainment of infectious intestinal disease. *Commun Dis Public Health* 1999;2:78-79.
2. Van Gilder T, Christensen D, Shallow S, Fiorentino T, Desai S, Wicklund J, et al. Variations in stool handling and culturing practices among clinical microbiology laboratories within the Foodborne Diseases Active Surveillance network (FoodNet): Do we need practice guidelines? 99th American Society of Microbiology. Chicago, IL, June 1999 (Abstract).
3. 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 Study Executive. *BMJ* 1999;318:1046-50.
4. Valenstein P, Pfalter M, Yungbluth M. The use and abuse of routine stool microbiology: A College of American Pathologists Q-probes study of 601 institutions. *Arch Pathol Lab Med* 1996;120:206-11.
5. Craven D, Brick D, Morrissey A, O'Riordan MA, Petran V, Schreiber JR. Low yield of bacterial stool culture in children with nosocomial diarrhea. *Pediatr Infect Dis J* 1998;17:1040-44.
6. de Wit MAS, Koopmans MPG, Kortbeek LM, van Leeuwen NJ, Bartelds AIM, van Duynhoven YTHP. Gastroenteritis in sentinel general practices, the Netherlands. *Emerging Infectious Diseases* 2001;7:82-91.
7. Fan K, Morris AJ, Reller LB. Application of rejection criteria for stool cultures for bacterial enteric pathogens. *J Clin Microbiol* 1993;31:2233-35.
8. McIver CJ, Hansman G, White P, Doultree JC, Catton M, Rawlinson WD. Diagnosis of enteric

pathogens in children with gastroenteritis. *Pathology* 2001;33:353-58 (Abstract).

9. Rohner P, Pittet D, Pepey B, Nije-Kinge T, Auckenthaler R. Etiological agents of infectious diarrhea: Implications for requests for microbial culture. *J Clin Microbiol* 1997;35:1427-32.
10. Tompkins DS, Hudson MJ, Smith HR, Eglin RP, Wheeler JG, Brett MM, et al. A study of infectious intestinal disease in England: Microbiological findings in cases and controls. *Commun Dis Public Health* 1999;2:108-13.
11. Zaidi AK, Macone A, Goldmann AD. Impact of simple screening criteria on utilization of low-yield bacterial stool cultures in a Children's Hospital. *Pediatrics* 1999;103:1189-92.
12. Alfa MJ, Du T, Beda G. Survey of incidence of *Clostridium difficile* infection in Canadian hospitals and diagnostic approaches. *J Clin Microbiol* 1998;36:2076-80.
13. Siegel DL, Edelstein PH, Nachamkin I. Inappropriate testing for diarrheal diseases in the hospital. *JAMA* 1990;263:979-82 (Abstract).
14. Morris AJ, Wilson ML, Reller LB. Application of rejection criteria for stool ovum and parasite examinations. *J Clin Microbiol* 1992;30:3213-16.
15. Marie-Cardine A, Goullain K, Mouterde O, Castignolles N, Hellot MF, Mallet E, et al. Epidemiology of acute viral gastroenteritis in children hospitalized in Rouen, France. *CID* 2002;34:1170-78.

Received: June 23, 2003

Accepted: January 30, 2004

RÉSUMÉ

Contexte : On connaît depuis longtemps les limites associées à l'insuffisance de notification des maladies entériques, mais l'envergure et les variations de cette sous-notification au Canada n'ont pas été étudiées. Étant donné l'utilité des données de surveillance pour la santé publique, la sous-notification des maladies entériques au Canada mérite que l'on s'y intéresse de plus près.

Méthode : Nous avons administré des questionnaires écrits a) dans tous les laboratoires du Canada autorisés à analyser des échantillons de selles et b) auprès de toutes les autorités locales de santé publique de deux provinces.

Résultats : De tous les laboratoires sondés, 67 % (n=274) procédaient sur place à la détection d'entérobactéries, 31 % (n=126) à la détection de parasites, et 10 % (n=42) à la détection de virus dans des échantillons de selles. En 2000, ces laboratoires avaient analysé 459 982 échantillons de selles, dont 5 %, 15 %, 8 % et 19 % avaient révélé la présence d'entérobactéries (autres que *C. difficile*), de *C. difficile*, de parasites et de virus, respectivement. Nous avons constaté des écarts entre les épreuves de laboratoire et les protocoles et politiques des autorités sanitaires en matière de rapports. Sur les cas de maladie gastro-intestinale aiguë (MGA) confirmés en laboratoire et déclarés aux autorités locales de santé publique, 5 % (n=846) n'avaient pas été déclarés aux autorités provinciales.

Conclusion : Une proportion significative des cas de MGA qui soumettent des échantillons de selles n'est pas enregistrée par le système de surveillance passive du Canada en raison d'une étiologie inconnue. La proportion des cas confirmés en laboratoire et déclarés aux autorités locales de santé publique qui ne sont pas enregistrés au palier provincial ou national est beaucoup plus faible. Puisque le nombre de cas de MGA confirmés en laboratoire représente une si petite fraction de tous les cas dans la population, il serait bon d'avoir des stratégies pour pallier l'insuffisance de notification et de consacrer des efforts à l'harmonisation des politiques et des pratiques des laboratoires et des autorités locales de santé publique.

Recension

Le système de santé au Québec : organisations, acteurs et enjeux

Sous la direction de V. Lemieux, P. Bergeron, C. Bégin et G. Bélanger Sainte-Foy (Québec) : Les Presses de l'Université Laval, 2003; 528 pp, 45\$

Les grands enjeux qui sous-tendent les débats actuels sur l'avenir du système de santé québécois ne sont pas sans intérêt pour la santé publique. L'organisation des services qui en découlera ne peut manquer d'avoir un impact sur la santé et le bien-être de la population et de ses sous-groupes. Pouvoir interpréter la complexité du système de santé et les changements qui l'affectent ou risquent de l'affecter, est par conséquent une nécessité pour ceux qui se sentent concernés par la perspective populationnelle de la santé. Cependant, le champ de l'organisation des services de santé, un champ pourtant reconnu comme un déterminant de la santé de la population, reste souvent méconnu par ceux qui travaillent en santé publique. L'avènement d'un livre qui se donne pour objectif non seulement de présenter l'organisation du système de santé québécois et ses composantes, mais

également le jeu des acteurs qui s'y déploie, et qui se veut une source pour mieux penser l'évolution du système de santé et ses conséquences attendues, est donc, pour la santé publique, un événement heureux.

Réaliser un tel livre représentait un défi de taille. Il fallait réussir à présenter la complexité des composantes du système en évitant une attitude par trop disciplinaire ou idéologique, peu compatible avec la diversité des paradigmes et disciplines impliqués. Il fallait également surmonter la tentation de simplement décrire des structures et l'histoire du système de santé, en négligeant la dynamique des relations entre groupes et institutions (dont certains souvent peu décrits, tels que les syndicats, les organismes communautaires, la communauté infirmière avec sa diversité), qui soutient ce système et qui est à la base de sa capacité d'évoluer. Un défi réel, mais qui est remarquablement relevé dans cet ouvrage récemment paru et intitulé : « Le système de santé au Québec : organisations, acteurs et enjeux ».

Présenter sans complaisance aucune non seulement la complexité d'un système avec ses effets indésirables – tels que des structures trop en silos avec des éléments

en tension les uns par rapport aux autres, ou un trop faible investissement dans les ressources humaines et dans le secteur social – mais également son étonnante cohérence qui lui a permis d'offrir des services somme toute remarquables en termes d'efficacité, d'efficience et d'équité, était un tour de force. L'avoir réussi fait de ce livre un ouvrage de référence. Les quelques inévitables positions politiques dans le débat fédéral-provincial, ou économistes, lorsque le financement est abordé, avec leur corollaire, l'oubli de l'extraordinaire créativité qui émerge à travers bon nombre d'initiatives un peu partout sur le terrain, n'entachent en rien le succès de l'ensemble.

Un livre à lire et relire de bout en bout pour mieux asseoir la capacité de réfléchir et pouvoir contribuer, sur des bases solides, à ce que les préoccupations propres à la santé publique ne puissent pas, dans le discours actuel, être oubliées. Un livre à recommander aux étudiants, professionnels et administrateurs en santé, tant au Québec que dans les autres provinces.

Daniel Reinharz
Département de médecine sociale et
préventive
Université Laval, Québec

(Book Reviews continued on page 315)