

NSACGI

National Studies on Acute Gastrointestinal Illness

Canadian Laboratory Survey



**Health
Canada**

National Studies of Acute Gastrointestinal Illness (NSAGI)

2001 Laboratory Survey

Please return before DATE

INTRODUCTION

This survey is strictly confidential. No laboratory or individual identifiers will appear in any reports or papers arising from this study. If you have any questions, please do not hesitate to contact the co-ordinator of this study:

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Thank you for your time in completing this form, your assistance is appreciated.

Please follow the SKIP patterns carefully

Please ignore numbers inside check boxes, they are for data entry purposes only

Throughout this questionnaire 'STOOL' refers to WHOLE STOOL or RECTAL SWAB

N/A = not applicable

SECTION A: General Information

1. Which of the following best describes your laboratory?

- ☐ 1 Hospital based laboratory
- ☐ 2 Private laboratory
- ☐ 3 Other, specify

2. Which of the following descriptions characterise the population served by your laboratory? (check all that apply)

- ☐ 1 Patients seen at a tertiary care hospital (that is, a major referral hospital for the area) and/or its affiliated clinics
- ☐ 2 Patients seen at a primary care community hospital and/or affiliated clinics
- ☐ 3 Patients seen in private physicians' offices and/or other outpatient clinics
- ☐ 4 Other, specify

3. Does your laboratory have level 3 containment capabilities to work with risk group 3 pathogens?

- ☐ 1 YES [SKIP to Q5]
- ☐ 2 NO
- ☐ 99 Don't know

4. If no, would your laboratory have sufficient access to such a laboratory capacity if needed in Canada?

- ☐ 1 YES
- ☐ 2 NO

☐ 99 Don't know

5. Is your laboratory able to study environmental samples (e.g. sewage, soil) for enteric pathogens?

☐ 1 YES

☐ 2 NO

☐ 99 Don't know

6. Does your laboratory receive any stool specimens to test for the presence of enteric bacterial pathogens, microbial toxins, ova and parasites or viruses? (check YES even if you refer all specimens received by your laboratory to another laboratory)

☐ 1 YES

☐ 2 NO Stop here and return the questionnaire, thank you for your contribution

SECTION B: Primary Culture and Toxin Testing of Enteric Bacterial Pathogens

7. Does your laboratory perform on-site testing of stool specimens submitted for isolation of enteric bacterial pathogens?

☐ 1 YES

☐ 2 NO SKIP to Q9

☐ 99 N/A, our laboratory does not receive stool for culturing enteric bacterial pathogens SKIP to Q37

8. On average, approximately what percentage of the stool specimens received by your laboratory for culturing of enteric bacterial pathogens are referred to an off-site laboratory for primary culturing each month?

On average, approximately % of stool specimens

NOTE: If "0%" (you refer no specimens), SKIP to Q12

9. When you refer a stool specimen to an off-site laboratory for culturing of enteric bacterial pathogens, how frequently does that laboratory report,

	always (100%)	routinely (80-99%)	sometimes (20-79%)	rarely (1-19%)	never (0%)	don't know
a) positive results back to your laboratory?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99
b) negative results back to your laboratory?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99

10. If a reportable enteric bacterial pathogen (or condition due to enteric bacterial pathogen) is identified in a referred specimen, who reports the positive finding to the local/regional health authority? (check all that apply)

☐ 1 Your laboratory (i.e. the laboratory that initially received the stool specimen)

☐ 2 Testing laboratory (i.e. the laboratory that received the referred specimen and isolated the enteric bacterial pathogen)

☐ 99 Don't know

11. Approximately what percentage of stool specimens arrive to your laboratory in a condition that requires them to be rejected without referral?

On average, approximately % of stool specimens

NOTE: reasons for rejection of a stool specimen may include: not enough stool was provided; the stool collection container arrived damaged; there was an excessive time delay between collection and receipt at laboratory; the specimen arrived without transport media etc.

12. How many stool specimens were examined for enteric bacterial pathogens (excluding C. difficile) in your laboratory in the year 2000 (i.e. from 1 January 2000 to 31 December 2000 OR 1 April 2000 to 31 March 2001)?

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Total number of specimens examined

NOTE: If "0" SKIP to Q37 (if you refer all specimens, enter "0" and skip to Q37)

- 12b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

- 12c. Approximately what percentage of these stool specimens come from outpatients?

Approximately

--	--	--	--	--

 % of stool specimens

13. Of those specimens tested, how many were positive for an enteric bacterial pathogen (excluding C. difficile)?

--	--	--	--	--

Total number of positive specimens

- 13b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

14. How many stool specimens were examined for C. difficile in your laboratory in the year 2000 (i.e. from 1 January 2000 to 31 December 2000 OR 1 April 2000 to 31 March 2001)?

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Total number of specimens examined

NOTE: If "0" SKIP to Q16

- 14b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

15. Of those specimens tested, how many were positive for C. difficile? (note, a positive result may be defined by culture or toxin detection)

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Total number of positive specimens

- 15b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

16. On average, approximately what percentage of stool specimens received by your laboratory each month (for culturing of enteric bacterial pathogens) are rejected without culturing or referral?

On average, approximately

--	--	--	--	--

 % of stool specimens

NOTE: reasons for rejection of a stool specimen may include: not enough stool was provided; the stool collection container arrived damaged; there was an excessive time delay between collection and receipt at laboratory; the specimen arrived without transport media etc.

17. How often are the stool specimens received for examination of enteric bacterial pathogens in the following manner:

	always (100%)	routinely (80-99%)	sometimes (20-79%)	rarely (1-19%)	never (0%)	don't know
a) as stool with transport media	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99
b) as stool without transport media (on ice or refrigerated)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99
c) as stool without transport media (not on ice, not refrigerated)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99

18. When your laboratory receives a stool specimen without transport media, do you:

- ☐ 1 Perform usual routine tests
- ☐ 2 Perform routine tests under certain conditions (e.g. if the specimen is received within a certain time period following collection)
- ☐ 3 Perform a limited range of tests
- ☐ 4 Perform a limited range of tests under certain conditions (e.g. if the specimen is received within a certain time period following collection)
- ☐ 5 Reject the specimen
- ☐ 6 N/A, our laboratory has not received a stool specimen without transport media
- ☐ 99 Don't know

19. Does your laboratory reject a stool specimen if the stool is fully formed (i.e. it is not loose, watery etc.)?

- ☐ 1 Yes
- ☐ 2 Yes, except when testing for the following pathogen(s) is/are specifically requested:
- ☐ 3 No
- ☐ 4 No, except when testing for the following pathogen(s) is/are specifically requested:
- ☐ 99 Don't know

20. Does your laboratory have a limit on the number of stool specimens you will accept for culture of enteric bacterial pathogens from a single outpatient?

- ☐ 1 YES, please specify:
 - i) No more than specimen(s) accepted per day(s)
 - ii) Other criteria (please describe briefly)
- ☐ 2 NO
- ☐ 3 N/A, our laboratory does not receive stool specimens for enteric bacterial culture from outpatients
- ☐ 99 Don't know

21. Does your laboratory have a limit on the number of stool specimens you will accept for culture of enteric bacterial pathogens from a single inpatient?

- ☐ 1 YES, please specify:
 - i) No more than specimen(s) accepted per day(s)
 - ii) Other criteria (please describe briefly)

☐ NO

☐ N/A, our laboratory does not receive stool specimens for enteric bacterial culture from inpatients

☐ Don't know

22. Does your laboratory have any criteria for rejecting a stool specimen submitted from an inpatient for enteric bacterial pathogens culture based on the length of the patient's hospitalization?

☐ YES, please specify:

- i) No specimens tested if patient has been hospitalized for day(s) unless requested by physician
- ii) Other criteria (please describe briefly)

☐ NO

☐ N/A, our laboratory does not receive stool specimens for enteric bacterial culture from inpatients

☐ Don't know

23. When performing a routine culture of stool received from an outpatient, which of the following enteric bacterial pathogens are tested for in your laboratory? (check all that apply)

☐ *Aeromonas spp*

☐ *Campylobacter spp*

☐ *Clostridium spp*

☐ *E. coli* → which virulence group/serotype do you also identify in your laboratory? (check all that apply)

☐ *Plesiomonas spp*

☐ *Salmonella spp*

☐ *Shigella spp*

☐ *Vibrio spp*

☐ *Yersinia spp*

☐ Other, please specify

☐ O157

☐ VTEC/STEC (verotoxigenic *E. coli*)

☐ EPEC (enteropathogenic *E. coli*)

☐ EHEC (enterohemorrhagic *E. coli*)

☐ ETEC (enterotoxigenic *E. coli*)

☐ EIEC (enteroinvasive *E. coli*)

☐ Other, specify

☐ None

24. In addition to the enteric bacterial pathogens you routinely culture when testing stool specimens from outpatients, which of the following enteric bacterial pathogens do you test for in your laboratory if specifically requested by the physician? (check all that apply)

☐ *Aeromonas spp*

☐ *Campylobacter spp*

☐ *Clostridium spp*

☐ *E. coli* → which virulence group/serotype do you also identify in your laboratory? (check all that apply)

☐ *Plesiomonas spp*

☐ *Salmonella spp*

☐ *Shigella spp*

☐ *Vibrio spp*

☐ *Yersinia spp*

☐ Other, please specify

☐ None (i.e. our laboratory only tests for those pathogens indicated in Q23)

☐ O157

☐ VTEC/STEC (verotoxigenic *E. coli*)

☐ EPEC (enteropathogenic *E. coli*)

☐ EHEC (enterohemorrhagic *E. coli*)

☐ ETEC (enterotoxigenic *E. coli*)

☐ EIEC (enteroinvasive *E. coli*)

☐ Other, specify

☐ None

25. When performing a routine culture of stool received from an inpatient, which of the following enteric bacterial pathogens are tested for in your laboratory? (if same as an outpatient, check the first box only)

☐ 99 Same as an outpatient

☐ 1 *Aeromonas* spp

☐ 2 *Campylobacter* spp

☐ 3 *Clostridium* spp

☐ 4 *E. coli* —————> which virulence group/serotype do you also identify in your laboratory? (check all that apply)

☐ 5 *Plesiomonas* spp

☐ 6 *Salmonella* spp

☐ 7 *Shigella* spp

☐ 8 *Vibrio* spp

☐ 9 *Yersinia* spp

☐ 10 Other, please specify

☐ a O157

☐ b VTEC/STEC (verotoxigenic *E. coli*)

☐ c EPEC (enteropathogenic *E. coli*)

☐ d EHEC (enterohemorrhagic *E. coli*)

☐ e ETEC (enterotoxigenic *E. coli*)

☐ f EIEC (enteroinvasive *E. coli*)

☐ g Other, specify

☐ h None

26. In addition to the bacteria you routinely culture when testing stool specimens from inpatients, which of the following enteric bacterial pathogens do you test for in your laboratory if specifically requested by the physician? (if same as an outpatient, check the first box only)

☐ 99 Same as an outpatient

☐ 1 *Aeromonas* spp

☐ 2 *Campylobacter* spp

☐ 3 *Clostridium* spp

☐ 4 *E. coli* —————> which virulence group/serotype do you also identify in your laboratory? (check all that apply)

☐ 5 *Plesiomonas* spp

☐ 6 *Salmonella* spp

☐ 7 *Shigella* spp

☐ 8 *Vibrio* spp

☐ 9 *Yersinia* spp

☐ 10 Other, please specify

☐ 11 None (i.e. our laboratory only tests for those pathogens indicated in Q25)

☐ a O157

☐ b VTEC/STEC (verotoxigenic *E. coli*)

☐ c EPEC (enteropathogenic *E. coli*)

☐ d EHEC (enterohemorrhagic *E. coli*)

☐ e ETEC (enterotoxigenic *E. coli*)

☐ f EIEC (enteroinvasive *E. coli*)

☐ g Other, specify

☐ h None

27. Does your laboratory use any non-culture methods for primary detection of enteric bacterial pathogens?

☐ 1 YES

☐ 2 NO **SKIP to Q29**

☐ 99 Don't Know **SKIP to Q29**

28. If yes, for which of the following enteric bacterial pathogens are non-culture methods used for primary detection?
Please specify species and/or serotype when appropriate (check all that apply)

- ☐ 1 *Aeromonas* spp
- ☐ 2 *Campylobacter* spp
- ☐ 3 *Clostridium* spp
- ☐ 4 *E. coli* O157
- ☐ 5 *E. coli* (other)
- ☐ 6 *Plesiomonas* spp
- ☐ 7 *Salmonella* spp
- ☐ 8 *Shigella* spp
- ☐ 9 *Vibrio* spp
- ☐ 10 *Yersinia* spp
- ☐ 11 Other, please specify

29. Do you ever send enteric bacterial isolates (which you have cultured in your laboratory) to the provincial public health laboratory?

- ☐ 1 YES
- ☐ 2 NO **SKIP to Q31**
- ☐ 99 Don't know **SKIP to Q31**

30. For the following pathogens, approximately what percentage of isolates cultured in your laboratory are sent to the provincial public health laboratory during an average month/year? (please indicate percentage of non-outbreak related isolates and outbreak related isolates separately in box i and ii)

N/A = not applicable, do not test for this pathogen in our laboratory

	i. Non-outbreak related isolates							ii. Outbreak related isolates						
	100%	80-99%	20-79%	1-19%	0%	N/A	don't know	100%	80-99%	20-79%	1-19%	0%	N/A	don't know
a) <i>Aeromonas</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
b) <i>Campylobacter</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
c) <i>Clostridium</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
d) <i>E. coli</i> O157	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
e) <i>E. coli</i> other	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
f) <i>Plesiomonas</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
g) <i>Salmonella</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
h) <i>Shigella</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
i) <i>Vibrio</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
j) <i>Yersinia</i> spp	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
k) Other, specify	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99

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SECTION C: Antimicrobial Susceptibility Testing

31. Do you ever perform antimicrobial sensitivity testing on enteric bacterial pathogens isolated in your laboratory?

☐ 1 YES

☐ 2 NO SKIP to Q37

☐ 99 Don't Know SKIP to Q37

32. How frequently do you perform sensitivity testing in your laboratory on the following enteric bacterial pathogens?

N/A = not applicable, do not test for this pathogen in our laboratory

	always (100%)	routinely (80-99%)	sometimes (20-79%)	rarely (1-19%)	never (0%)	N/A	don't know
a) <i>Aeromonas spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
b) <i>Campylobacter spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
c) <i>Clostridium spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
d) <i>E. coli</i> O157	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
e) <i>E. coli</i> other	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
f) <i>Plesiomonas spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
g) <i>Salmonella typhi</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
h) <i>Salmonella paratyphi</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
i) <i>Salmonella typhimurium</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
j) <i>Salmonella</i> other	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
k) <i>Shigella spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
l) <i>Vibrio spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
m) <i>Yersinia spp</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99
n) Other, please specify	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 99

33. What method(s) are commonly used in your laboratory for sensitivity testing on enteric bacterial pathogens?
(check all that apply)

☐ 1 Kirby-Bauer (Disk diffusion)

☐ 2 Broth dilution

☐ 3 Agar dilution

☐ 4 Vitek system

☐ 5 MicroScan system

☐ 6 Sensititre system

☐ 7 E-test

☐ 8 Other, please specify

☐ 99 Don't know

34. Why do you perform sensitivity tests on enteric bacterial pathogens? (check all that apply)

- ☐ 1 Because a physician/infectious disease specialist has or may request sensitivity results
- ☐ 2 Because it is a routine part of the laboratory or hospital testing protocol
- ☐ 3 Because the laboratory is participating in an antimicrobial resistance research or surveillance program
- ☐ 4 Other, please specify
- ☐ 99 Don't Know

35. Do you record sensitivity results quantitatively or qualitatively? (check all that apply)

- ☐ 1 Quantitatively (i.e. zone diameter, MIC value)
- ☐ 2 Qualitatively (i.e. abbreviations such as S, I, R)
- ☐ 99 Don't know

36. Do you store sensitivity results on a laboratory computer system?

- ☐ 1 YES
- ☐ 2 NO
- ☐ 99 Don't Know

SECTION D: Ova and Parasite Testing

37. Does your laboratory perform on-site testing of stool specimens submitted for testing of ova and parasites?

- ☐ 1 YES
- ☐ 2 NO **SKIP to Q39**
- ☐ 99 N/A, our laboratory does not receive stool for culturing enteric *parasitic* pathogens **SKIP to Q45**

38. On average, approximately what percentage of the stool specimens received by your laboratory for ova and parasite testing are referred to an off-site laboratory for testing each month?

On average, approximately % of stool specimens

NOTE: If "0%" SKIP to Q41

39. When you refer a stool specimen to an off-site laboratory for ova and parasite testing, how frequently does that laboratory report,

- | | always
(100%) | routinely
(80-99%) | sometimes
(20-79%) | rarely
(1-19%) | never
(0%) | don't
know |
|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|
| a) positive results back to your laboratory? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 99 |
| b) negative results back to your laboratory? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | <input type="checkbox"/> 99 |

40. If a reportable parasite (or condition due to an enteric parasite) is identified in a referred specimen, who reports the positive finding to the local/regional health authority? (check all that apply)

- ☐ 1 Your laboratory (i.e. the laboratory that initially received the stool specimen)
- ☐ 2 Testing laboratory (i.e. the laboratory that received the referred specimen and isolated the enteric parasite)
- ☐ 99 Don't know

41. How many stool specimens were examined for ova and parasites in your laboratory in the year 2000 (i.e. from 1 January 2000 to 31 December 2000 OR 1 April 2000 to 31 March 2001)?

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Total number of specimens examined

NOTE: If "0" SKIP to Q45 (if you refer all specimens, enter "0" and skip to Q45)

41b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

41c. Approximately what percentage of these stool specimens come from outpatients?

Approximately

 % of stool specimens

42. Of those specimens tested, how many were positive for ova and parasites?

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Total number of positive specimens

42b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

43. Do you report to the physician all pathogenic ova and parasites you see, regardless of the test ordered?

☐ 1 YES

☐ 2 NO

☐ 99 Don't know

44. Which of the following techniques do you use to identify the following parasites?

(check box if your laboratory uses the technique)
(check all that apply)

	wet mount	concentration method (e.g. formalin-ethyl acetate)	permanent stain method	antigen detection tests (e.g. EIA, FA)	molecular diagnostic tests (e.g. PCR)	do not test for this parasite	other technique, please specify
a) <i>Entamoeba</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
b) <i>Cryptosporidium</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
c) <i>Cyclospora</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
d) <i>Giardia</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
e) <i>Microsporidia</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
f) Other, specify below	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7

g) Other, specify below

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
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SECTION E: Viral Testing

45. Does your laboratory perform on-site testing of stool specimens submitted for enteric viral detection?

☐ 1 YES

☐ 2 NO **SKIP to Q47**

☐ 99 N/A, our laboratory does not receive stool for culturing enteric *viral* pathogens **SKIP to Q52**

46. On average, approximately what percentage of the stool specimens received by your laboratory for detection of enteric viral pathogens are referred to an off-site laboratory for testing each month?

On average, approximately % of stool specimens

NOTE: If "0%" SKIP to Q49

47. When you refer a stool specimen to an off-site laboratory for enteric viral testing, how frequently does that laboratory report,

	always (100%)	routinely (80-99%)	sometimes (20-79%)	rarely (1-19%)	never (0%)	don't know
a) positive results back to your laboratory?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99
b) negative results back to your laboratory?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 99

48. If a reportable enteric viral pathogen (or condition due to an enteric viruses) is identified in a referred specimen, who reports the positive finding to the local/regional health authority? (check all that apply)

☐ 1 Your laboratory (i.e. the laboratory that initially received the stool specimen)

☐ 2 Testing laboratory (i.e. the laboratory that received the referred specimen and identified the enteric viral pathogen)

☐ 99 Don't know

49. How many stool specimens were examined for enteric viral pathogens in your laboratory in the year 2000 (i.e. from 1 January 2000 to 31 December 2000 OR 1 April 2000 to 31 March 2001)?

Total number of specimens examined

NOTE: If "0" SKIP to Q52 (if you refer all specimens, enter "0" and skip to Q52)

49b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

49c. Approximately what percentage of these stool specimens come from outpatients?

Approximately % of stool specimens

50. Of those specimens tested, how many were positive for an enteric viral pathogen?

Total number of positive specimens

50b. Is this number from records, or is it an estimate? (please use records if available)

☐ 1 Records

☐ 2 Estimate

51. Please indicate the **primary** method of detection for the following viral agents performed **in your laboratory** (check box to indicate primary method; EM = Electron Microscopy, EIA = Enzyme Immunoassay, PCR = Polymerase Chain Reaction)

	EM	EIA	PCR	do not test for this virus	other method, please specify
a) Astroviruses	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
b) Enteric Adenoviruses	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
c) Calicivirus/Norwalk-like/Norwalk/SRSV	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
d) Rotaviruses	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
e) Hepatitis A virus	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
f) Other virus(es) (please describe below)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

SECTION F: Recording and Transfer of Information

52. Does your laboratory have any mechanism(s) in place to prevent repeat specimens from a single patient being **recorded** as multiple cases?

- ☐ 1 YES
- ☐ 2 NO
- ☐ 99 Don't know

53. How does your laboratory usually **report** notifiable/reportable diseases to the Local/Regional Medical Officer of Health or Local/Regional Health Unit/Authority? (check all that apply)

- ☐ 1 Email
- ☐ 2 Web-based interface
- ☐ 3 Fax
- ☐ 4 Regular mail
- ☐ 5 Telephone
- ☐ 6 Other, please specify
- ☐ 99 Don't know

54. When reporting to a regional health unit/authority is required, do you selected the appropriate regional health unit/authority based on,

- ☐ 1 The patient's address
- ☐ 2 The physician's address
- ☐ 3 The laboratory address (i.e. the regional health authority responsible for the area in which your laboratory is located)
- ☐ 4 Other, please specify
- ☐ 99 Don't know

55. Does your laboratory report positive results to a **provincial public health laboratory** without an accompanying specimen? (i.e. you report data but send no specimens)

- ☐ 1 YES, please specify for what enteric pathogens
- ☐ 2 NO
- ☐ 99 Don't Know

56. Concerning the reporting of information, how often are confirmed positive results reported to the Local/Regional Medical Officer of Health or the Local/Regional Health Unit/Authority for the following pathogens?

NOTE: do not answer for pathogens that are not isolated in your laboratory

	always (100%)	routinely (80-99%)	sometimes (20-79%)	rarely (1-19%)	never (0%)	don't know	n/a, don't test for this pathogen, or have never had to test for this pathogen
BACTERIA							
a) <i>Aeromonas spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <i>Campylobacter spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) <i>Clostridium perfringens</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) <i>Clostridium botulinum</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) <i>E. coli</i> O157	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) <i>E. coli</i> other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) <i>Plesiomonas spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) <i>Salmonella spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) <i>Shigella spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) <i>Vibrio spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) <i>Yersinia spp</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l) Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PARASITES

m) <i>Entamoeba</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n) <i>Cryptosporidium</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o) <i>Cyclospora</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p) <i>Giardia</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q) <i>Microsporidia</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r) Other, specify below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VIRUSES

s) Astroviruses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t) Enteric Adenoviruses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u) Norwalk-like/Calicivirus/SRSV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Rotaviruses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
w) Other, specify below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Thank you very much for participating

Your time and effort is greatly appreciated

**Please mail this survey in the
self-addressed stamped envelope**

If you have misplaced the return envelope, please mail to the following address:

*James Flint, Health Canada,
Division of Enteric, Foodborne and Waterborne Disease
1 Stone Road West, 4th Floor, Guelph ON N1G 4Y2*

If you have any additional comments, please record them below

Did you know...

Every day, some 200 million people world-wide suffer from diarrhoea.
The fluid lost is equal to the volume of water flowing over
Victoria Falls in Zimbabwe every minute!