

## Supplemental Information

<b>SUPPLEMENTAL TABLE 4</b> Prevalence of GIP Pathogens Detected, in Descending Order	
<b>Pathogen</b>	<b>N (%)</b>
<b>Bacteria<sup>a</sup></b>	<b>272 (24.2%)</b>
<i>C. difficile</i>	163 (14.5%)
<i>Salmonella</i>	47 (4.2%)
Shiga-like toxin-producing <i>E. coli</i> / <i>E. coli</i> 0157	32 (2.8%)
<i>Campylobacter</i>	25 (2.2%)
<i>Shigella/enteroinvasive E. coli</i>	10 (0.9%)
<i>Plesiomonas shigelloides</i>	1 (0.1%)
<i>Vibrio</i>	0 (0%)
<i>Yersinia enterocolitica</i>	0 (0%)
<b>Virus</b>	<b>434 (38.6%)</b>
Norovirus	216 (19.2%)
Rotavirus	92 (8.2%)
Adenovirus	58 (5.2%)
Sapovirus	57 (5.1%)
Astrovirus	48 (4.3%)
<b>Parasite</b>	<b>23 (2.0%)</b>
<i>Giardia lamblia</i>	12 (1.1%)
<i>Cryptosporidium</i>	11 (1.0%)
<i>Cyclospora cayetanensis</i>	0 (0%)
<i>Entamoeba histolytica</i>	0 (0%)
Actionable result (bacteria or parasite detected)	278 (24.7%)
When excluding <i>C. difficile</i> in ages <2 y	234 (20.8%)
When excluding <i>C. difficile</i> in ages <3 y	218 (19.4%)
When excluding <i>C. difficile</i> with viral coinfection	213 (19.0%)
Non- <i>C. difficile</i> bacteria and parasites only	127 (11.3%)
Nonactionable result (virus only)	348 (31.0%)
Any positive result	626 (55.7%)
>1 pathogen type detected	96 (8.5%)
<p>Values are displayed as N (%) where N represents the number of GIP tests. GIP, FilmArray GIP. Targets include bacteria: <i>Campylobacter</i>, <i>C. difficile</i> (toxin A/B), <i>Plesiomonas shigelloides</i>, <i>Salmonella</i>, <i>Yersinia enterocolitica</i>, <i>Vibrio</i> (parahaemolyticus, vulnificus, and cholerae), <i>Vibrio cholera</i>, diarrheagenic <i>Escherichia coli/Shigella</i> including enteroaggregative <i>Escherichia coli</i>, enteropathogenic <i>Escherichia coli</i>, enterotoxigenic <i>Escherichia coli</i>, Shiga-like toxin-producing <i>Escherichia coli</i> Shiga toxin 1/Shiga toxin 2 (including <i>Escherichia coli</i> 0157), and <i>Shigella/enteroinvasive Escherichia coli</i>; viruses: Adenovirus F 40/41, astrovirus, norovirus GI/GII, rotavirus A, and sapovirus (I, II, IV, and V); parasites: <i>Cryptosporidium</i>, <i>Cyclospora cayetanensis</i>, <i>Entamoeba histolytica</i>, and <i>Giardia lamblia</i>. <i>E. coli</i>, <i>Escherichia coli</i>. Boldface indicates <math>P &lt; 0.05</math>.</p> <p><sup>a</sup> Given high rates of asymptomatic carriage, our laboratory does not report detection of enteroaggregative, enteropathogenic, and enterotoxigenic strains of <i>Escherichia coli</i> in patients of any age and <i>C. difficile</i> in patients aged &lt;12 months.</p>	

**SUPPLEMENTAL TABLE 5** Non-CCC Cohort: Sensitivity Analyses for Multivariable Logistic Regression Analysis

Non-CCC Variable <sup>a</sup>	Non-C. Diff Bacteria and Parasites as Actionable <sup>c</sup>		C. Diff Nonactionable for <2 y <sup>d</sup>		C. Diff Nonactionable for <3 y <sup>e</sup>		C. Diff Nonactionable When Codetected With Virus <sup>f</sup>	
	RR (95% CI)	P	RR (95% CI)	P	RR (95% CI)	P	RR (95% CI)	P
Age (y)								
<1	1	—	1	—	1	—	1	—
1–2	2.36 (1.2–4.63)	<b>.012</b>	2.08 (1.07–4.07)	<b>.032</b>	2.08 (1.06–4.06)	<b>.033</b>	3.01 (1.62–5.61)	<b>&lt;.001</b>
2–5	2.75 (1.52–4.95)	<b>&lt;.001</b>	3.38 (1.89–6.03)	<b>&lt;.001</b>	3 (1.66–5.43)	<b>&lt;.001</b>	2.85 (1.57–5.18)	<b>&lt;.001</b>
≥5	2.18 (1.24–3.85)	<b>.007</b>	3.62 (2.08–6.29)	<b>&lt;.001</b>	3.63 (2.09–6.3)	<b>&lt;.001</b>	3.36 (1.93–5.83)	<b>&lt;.001</b>
Season								
Winter	1	—	1	—	1	—	1	—
Spring	2.54 (1.26–5.11)	<b>.009</b>	1.66 (1–2.74)	<b>.049</b>	1.54 (0.93–2.56)	.096	1.55 (0.94–2.54)	.084
Summer	3.82 (1.95–7.48)	<b>&lt;.001</b>	2.26 (1.39–3.66)	<b>.001</b>	2.16 (1.33–3.51)	<b>.002</b>	2.07 (1.29–3.32)	<b>.003</b>
Fall	2.8 (1.38–5.69)	<b>.004</b>	1.78 (1.07–2.96)	<b>.026</b>	1.75 (1.06–2.9)	<b>.03</b>	1.63 (0.99–2.68)	.053
ICU admission	1.14 (0.7–1.85)	.59	0.99 (0.65–1.5)	.94	1.02 (0.67–1.56)	.94	1.04 (0.68–1.59)	.87
≥4 stools per d	1.61 (1.05–2.48)	<b>.03</b>	1.24 (0.89–1.72)	.2	1.26 (0.9–1.75)	.17	1.29 (0.92–1.8)	.14
Order indication <sup>b</sup>								
All other indications	1	—	1	—	1	—	1	—
Diarrhea with blood or pus	2.41 (1.53–3.78)	<b>&lt;.001</b>	1.62 (1.12–2.33)	<b>.01</b>	1.59 (1.1–2.3)	<b>.014</b>	1.6 (1.11–2.31)	<b>.012</b>
Severe water-loss diarrhea	0.92 (0.5–1.68)	.79	0.86 (0.54–1.35)	.51	0.82 (0.52–1.31)	.41	0.68 (0.41–1.11)	.12
International travel	3.06 (1.69–5.54)	<b>&lt;.001</b>	1.64 (0.95–2.84)	.076	1.66 (0.96–2.87)	.07	1.73 (1.01–2.96)	<b>.046</b>
Epi/surveillance testing	0.41 (0.06–2.91)	.38	0.23 (0.03–1.56)	.13	0.23 (0.03–1.54)	.13	0.22 (0.03–1.5)	.12
Other	0.78 (0.41–1.51)	.47	0.88 (0.56–1.38)	.58	0.85 (0.53–1.34)	.48	0.89 (0.56–1.42)	.62

CI, confidence interval; epi, epidemiologic. —, no value. Boldface indicates  $P < 0.05$ .

<sup>a</sup> The variables age, sex, seasonality, ICU admission, and number of daily stools were determined a priori to be included in the multivariable logistic regression models.

<sup>b</sup> Individual order indications included in this regression model are the same as the order indications included in the original model (Table 3, independent variable = actionable result) to maintain consistency. Individual order indications were originally included in the original model if they were associated with actionable results in bivariate analyses with a  $P$  value  $< .2$ .

<sup>c</sup> In this model, an actionable result is defined as detection of at least 1 non-*C. difficile* bacteria or parasite.

<sup>d</sup> In this model, *C. difficile* is not considered an actionable result for patients aged  $< 2$  years.

<sup>e</sup> In this model, *C. difficile* is not considered an actionable result for patients aged  $< 3$  years.

<sup>f</sup> In this model, *C. difficile* is not considered an actionable result if a virus is also codetected on GP.

**SUPPLEMENTAL TABLE 6** CCC Cohort: Sensitivity Analyses for Multivariable Logistic Regression Analysis

CCC Variable <sup>a</sup>	Non- <i>C. Diff</i> Bacteria and Parasites as Actionable <sup>c</sup>		<i>C. Diff</i> Nonactionable for <2 y <sup>d</sup>		<i>C. Diff</i> Nonactionable for <3 y <sup>e</sup>		<i>C. Diff</i> Nonactionable When Codetected With Virus <sup>f</sup>	
	RR (95% CI)	P	RR (95% CI)	P	RR (95% CI)	P	RR (95% CI)	P
Age (y)								
<1	1	—	1	—	1	—	1	—
1–2	0.92 (0.24–3.55)	.91	1.04 (0.27–4.05)	.95	1.07 (0.28–4.18)	.92	2.88 (0.94–8.77)	.063
2–5	0.83 (0.21–3.28)	.79	7.06 (2.57–19.42)	<b>&lt;.001</b>	4.15 (1.43–12.07)	<b>.009</b>	3.38 (1.14–10)	<b>.028</b>
≥5	1.36 (0.45–4.05)	.58	5.53 (2.04–15.02)	<b>&lt;.001</b>	5.72 (2.1–15.62)	<b>&lt;.001</b>	4.75 (1.73–13.02)	<b>.003</b>
Season								
Winter	1	—	1	—	1	—	1	—
Spring	1.05 (0.4–2.77)	.91	0.85 (0.53–1.36)	.49	0.89 (0.54–1.46)	.64	0.98 (0.56–1.71)	.93
Summer	1.79 (0.7–4.55)	.22	1.03 (0.64–1.68)	.89	0.99 (0.59–1.67)	.97	1.2 (0.68–2.11)	.54
Fall	0.67 (0.21–2.17)	.51	1.06 (0.66–1.7)	.8	0.85 (0.49–1.47)	.56	1.18 (0.68–2.06)	.56
ICU admission	0.42 (0.19–0.94)	<b>.034</b>	0.68 (0.47–0.99)	<b>.047</b>	0.73 (0.48–1.09)	.12	0.78 (0.51–1.19)	.25
≥4 stools per d	0.8 (0.4–1.6)	.53	0.72 (0.51–1.01)	.058	0.67 (0.46–0.97)	<b>.036</b>	0.91 (0.6–1.37)	.64
Order indication <sup>b</sup>								
All other indications	1	—	1	—	1	—	1	—
Diarrhea with blood or pus	1.62 (0.68–3.87)	.27	1.43 (0.91–2.23)	.12	1.28 (0.77–2.13)	.35	1.29 (0.76–2.19)	.35

CI, confidence interval. —, no value. Boldface indicates  $P < 0.05$ .

<sup>a</sup> The variables age, sex, seasonality, ICU admission, and number of daily stools were determined a priori to be included in the multivariable logistic regression models.

<sup>b</sup> Individual order indications included in this regression model are the same as the order indications included in the original model (Table 3, independent variable = actionable result) to maintain consistency. Individual order indications were originally included in the original model if they were associated with actionable results in bivariate analyses with a  $P$  value  $< .2$ .

<sup>c</sup> In this model, an actionable result is defined as detection of at least 1 non-*C. difficile* bacteria or parasite.

<sup>d</sup> In this model, *C. difficile* is not considered an actionable result for patients aged <2 years.

<sup>e</sup> In this model, *C. difficile* is not considered an actionable result for patients aged <3 years.

<sup>f</sup> In this model, *C. difficile* is not considered an actionable result if a virus is also codetected on GIP.

<b>SUPPLEMENTAL TABLE 7</b> Median Number of Patient Stools Reported in the Last 24 Hours, by GIP Result Type			
<b>Result Type</b>	<b>All Encounters, <i>N</i> = 1110</b>	<b>Non-CCC, <i>N</i> = 507</b>	<b>CCC, <i>N</i> = 603</b>
Actionable result	5 (3–8)	5 (3–8)	4 (3–6)
Nonactionable result (virus only)	5 (3–8)	5 (3–8)	5 (3–8)
No pathogen detected	5 (3–7)	5 (3–8)	5 (3–6)

*N* represents the number of GIP tests with documented number of stools. Values are displayed as median (interquartile range).