

**Diarrhoea in the critically ill is common, associated with poor
outcome, and rarely due to *Clostridium difficile***

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Supplementary Table S1. Relationship between type of surgery (gastrointestinal vs non-gastrointestinal) and diarrhoea.

	Admissions with Diarrhoea^a (N = 1207)	Admissions with No Diarrhoea^a (N = 8124)	P-value
Referring Specialty			
Medical	726 (60.1%)	2358 (29.0%)	
Surgical	481 (39.9%)	5766 (71.0%)	
GI surgery	212 (17.6%)	2533 (31.2%)	0.96
Non-GI surgery	269 (22.3%)	3233 (39.8%)	
Reason for Intensive Care Unit admission			
Operative intervention	228 (18.9%)	4735 (58.3%)	
GI surgery	107 (8.9%)	2155 (26.5%)	0.68
Non-GI surgery	121 (10.0%)	2580 (31.8%)	

^aData shown as N (%) unless stated otherwise.

Supplementary Table S2. Reasons for intensive care unit admission in patients admitted following gastrointestinal surgery and suffering diarrhoea.

GI Surgery Admissions with Diarrhoea^a	
(N = 212)	
Reason for ICU Admission	
Operative intervention	102 (48.1%)
Cardiovascular	13 (6.1%)
Respiratory failure	25 (11.8%)
Haemorrhage	16 (7.5%)
Sepsis	49 (23.1%)
Renal failure	1 (0.5%)
Neurological	1 (0.5%)
Haematological	0 (0.0%)
Liver failure	2 (0.9%)
Other	3 (1.4%)

^aData shown as N (%) unless stated otherwise.

Supplementary Table S3. Reasons for operative intervention in patients suffering diarrhoea following admission to the intensive care unit due to operative intervention after gastrointestinal surgery.

GI Surgery Admissions with Diarrhoea^a	
(N = 102)	
Reason for Operative Intervention	
Emergency	55 (53.9%)
Elective	47 (46.1%)
Tumour	27 (26.5%)
Fistula	10 (9.8%)
Congenital malformation	4 (3.9%)
Hernia	2 (2.0%)
Bariatric	2 (2.0%)
Inflammatory bowel disease	2 (2.0%)

^aData shown as N (%) unless stated otherwise.

Supplementary Table S4. Study population results per year from 2006 to 2010.

	2006 (N=1551)	2007 (N=1620)	2008 (N=1837)	2009 (N=2098)	2010 (N=2225)
Admissions Suffering Diarrhoea During ICU Stay	214	262	253	238	240
Prevalence of Diarrhoea	13.8%	16.2%	13.8%	11.3%	10.8%
Admissions with <i>C Difficile</i>	23	16	7	19	32
Prevalence of <i>C Difficile</i>	1.5%	1.0%	0.4%	0.9%	1.4%
Mean Age Years [SD]	57.8 [17.9]	58.6 [17.9]	58.5 [17.7]	58.6 [17.8]	59.3 [17.3]
Male Sex	917 (59.1%)	935 (57.7%)	994 (54.1%)	1088 (51.9%)	1201 (54.0%)
Referring Specialty					
Medical	614 (39.6%)	625 (38.6%)	653 (35.5%)	626 (29.8%)	566 (25.4%)
Surgical	937 (60.4%)	995 (61.4%)	1184 (64.5%)	1427 (70.2%)	1659 (74.6%)
Median APACHE II [IQR]	18 [13-23]	17 [12-23]	16 [12-22]	17 [12-22]	14 [7-20]
Cause for ICU Admission (no [%])					
Cardiovascular	106 (6.8%)	121 (7.5%)	117 (6.4%)	131 (6.2%)	121 (5.4%)
Respiratory Failure	219 (14.1%)	223 (13.8%)	294 (16.0%)	263 (12.5%)	230 (10.3%)
Haemorrhage	132 (8.5%)	129 (8.0%)	120 (6.5%)	130 (6.2%)	126 (5.7%)
Sepsis	151 (9.7%)	135 (8.3%)	128 (7.0%)	106 (5.1%)	135 (6.1%)
Renal Failure	41 (2.6%)	37 (2.3%)	52 (2.8%)	44 (2.1%)	31 (1.4%)
Operative intervention	667 (43.0%)	778 (48.0%)	935 (50.9%)	1200 (57.2%)	1383 (62.2%)
<i>GI Surgery</i>	233 (15.0%)	361 (22.3%)	509 (27.7%)	597 (28.5%)	562 (25.3%)
<i>Non-GI Surgery</i>	434 (28.0%)	417 (25.7%)	426 (23.2%)	603 (28.7%)	821 (36.9%)
Neurological	149 (9.6%)	118 (7.3%)	92 (5.0%)	138 (6.6%)	128 (5.8%)
Haematological	23 (1.5%)	21 (1.3%)	35 (1.9%)	29 (1.4%)	31 (1.4%)
Liver Failure	16 (1.0%)	11 (0.7%)	18 (1.0%)	20 (1.0%)	12 (0.5%)
Other	47 (3.0%)	47 (2.9%)	46 (2.5%)	37 (1.8%)	28 (1.3%)
Median ICU LOS Days [IQR]	1.8 [0.9-4.9]	2.2 [1.0-5.4]	2.0 [1.0-4.8]	1.8 [0.9-4.0]	1.8 [1.0-3.9]
ICU Mortality (no [%])	224 (14.4%)	210 (13.0%)	175 (9.5%)	188 (9.0%)	173 (7.8%)

Supplementary Figure I. Prevalence of diarrhoea over study period unadjusted vs adjusted for reason for ICU admission and APACHE-II score.

