

Supporting information

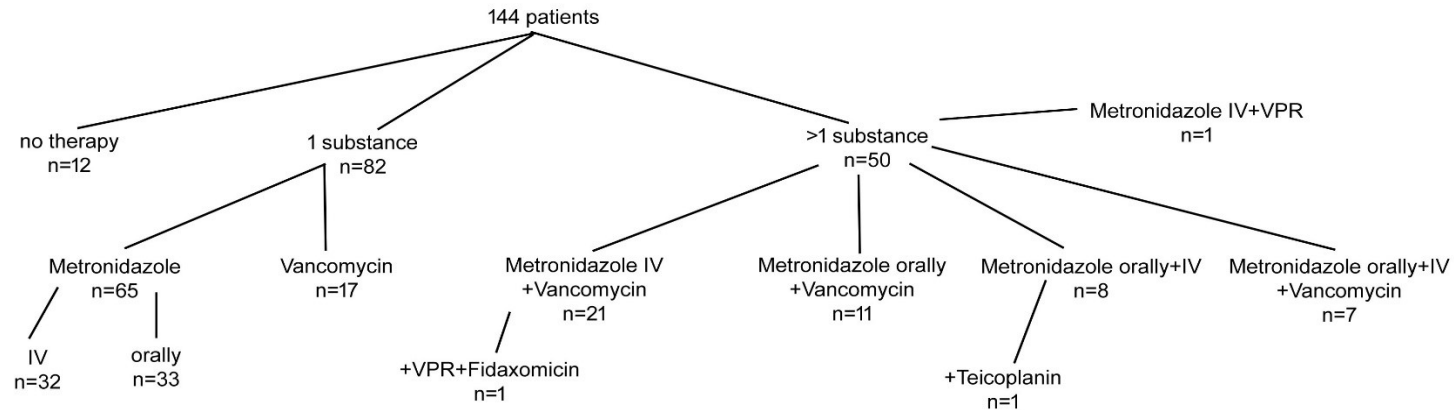


Figure S1: CDI specific therapy in all ICU patients with CDI 2010-2015. Legend: Abbreviations: IV: intravenously, VPR: Vancomycin per rectum

Table S1: Treatment strategy according to CDI severity during first 48 h after diagnosis of CDI.

A: Medication during first 48 h after diagnosis	All patients with CDI n=132	Severe CDI n=80	Non-severe CDI n=52
Initial Combination therapy	12 (9.1)	7 (8.8)	5 (9.6)
Initial metronidazole IV single	49 (37.1)	30 (37.5)	19 (36.5)
Initial vancomycin orally single	24 (18.2)	16 (20)	8 (15.4)
Initial metronidazole orally single	47 (35.6)	27 (33.8)	20 (38.5)
B: Medication during first 48h after diagnosis (2014-2015)	All patients with CDI n=54	Severe CDI n=34	Non-severe CDI n=20
Initial Combination therapy	9 (15.5)	5 (13.5)	4 (20)
Initial metronidazole IV single	11 (19)	7 (18.9)	4 (20)
Initial vancomycin orally single	13 (22.4)	9 (24.3)	4 (20)
Initial metronidazole orally single	21 (36.2)	13 (35.1)	8 (40)

Legend: A: before 2014, B: 2014-October 2015.

Table S2: Characteristics of all treated patients with CDI.

Parameters	All patients with CDI n=132		28-day-survivors n=96		28-day-non-survivors n=36		p	
	admission	diagnosis	admission	diagnosis	admission	diagnosis	admission	diagnosis
Laboratory characteristics								
Thrombocytes (Median, IQR25-75)	197 (116-282)	249 (128-385)	198 (128-292)	262 (164-394)	172 (87-212)	143 (71-318)	0.007*	0.006*
Leukocytes (Median, IQR25-75)	11.5 (7-17)	12.2 (7.9-17,7)	11.5 (7.9-17)	12.5 (9.1-17,9)	11.5 (3.8-17,5)	12.2 (3.7-17.6)	0.655	0.482
Hemoglobin (Median, IQR25-75)	9.5 (8.7-10.9)	8.8 (8-9.9)	9.8 (8.9-11)	8.8 (8-9.9)	9.7 (9-11.6)	9.3 (8-10.5)	0.489	0.206
BUN (Median, IQR25-75)	23 (14-37.5)	27 (17-40)	22 (13-38)	26 (17-39)	29 (21-44)	32 (23-41)	0.002*	0.049*
Creatinine (Median, IQR25-75)	1.3 (0.9-2.1)	1.1 (0.8-2)	1.3 (0.9-2.1)	1.1 (0.7-2)	1.6 (1.1-2.6)	1.3 (0.9-2.4)	0.032*	0.067
CRP (Median, IQR25-75)	93 (24-150)	108 (52-157)	82 (20-159)	108 (58-149)	104 (63-148)	104 (44-163)	0.051	0.894
Lactate (Median, IQR25-75)	1.2 (0.8-2)	1 (0.7-1.4)	1.2 (0.9-1.8)	0.9 (0.7-1.2)	1.4 (0.8-2.5)	1.3 (0.8-1.9)	0.450	0.008*
Albumin (Median, IQR25-75)	19 (17-23)	17 (15-22)	19 (17-23)	18 (15-22)	17 (16-19)	17 (15-22)	0.127	0.844
Bilirubin (Median, IQR25-75)	0.6 (0.3-1)	0.4 (0.2-0.7)	0.6 (0.3-0.9)	0.4 (0.2-0.6)	0.9 (0.5-1.9)	0.7 (0.4-1.6)	0.001*	<0.001*
Clinical characteristics								
Urine vol. (l), (Median, IQR25-75)	1350 (658-2300)	1665 (710-2488)	1515 (748-2501)	1910 (1317-2862)	915 (460-1535)	950 (173-1585)	0.006*	<0.001*
SAPS (Median, IQR25-75)	41 (33-50)	36.5 (29-45)	38.5 (31-48)	34 (28-43)	44.5 (38-55)	43 (34-55)	0.003*	0.001*
TISS28 (Median, IQR25-75)	10 (9-17)	10 (5-14)	14 (9-19)	10 (5-14)	10 (8-14)	10 (5-13)	0.233	0.907
SOFA Score (Median, IQR25-75)	6 (4-9)	4 (2-6.3)	6.5 (4-9)	4 (2-6)	6 (4-9)	6 (4-9)	0.472	<0.001*
Temp. (C°) (Median, IQR25-75)	36.7 (36-37.3)	37.1 (36.7-37.6)	36.7 (36.1-37.3)	37.2 (36.7-37.6)	36.7 (35.8-37.3)	37.1 (36.4-37.7)	0.698	0.442

Therapy/Treatment								
Parenteral nutrition, n (%)	23 (17.4)	27 (20.5)	15 (15.6)	15 (15.6)	8 (22.2)	12 (33.3)	0.374	0.025*
Enteral nutrition, n (%)	105 (79.5)	125 (94.7)	79 (82.3)	93 (96.9)	26 (72.2)	32 (88.9)	0.201	0.068

Legend: Univariate regression analysis of risk factors of 28-day survivors vs. 28-day-nonsurvivors. Abbreviations: BUN: blood urea nitrogen, CRP: C-reactive protein, vol.: volume, MAP: mean arterial pressure

Table S3: Patients` characteristics of the study population with CDI stratified according to diarrhoea > 5 days.

Parameter	All patients n=132	Diarrhoea < 5 days n=66	Diarrhoea > 5 days n=66	p
Severe CDI, n (%)	87 (65.9)	38 (57.6)	49 (74.2)	0.098
Male, n (%)	94 (71.2)	45 (68.2)	49 (74.2)	0.701
Recurrent CDI, n (%)	25 (18.9)	12 (18.2)	13 (19.7)	0.505
Principal diagnosis sepsis, n (%)	40 (30.3)	24 (36.4)	16 (24.2)	0.130
Neutropenia, n (%)	8 (6.1)	4 (6.1)	4 (6.1)	1.000
Treatment				
Parenteral nutrition on diagnosis, n (%)	27 (20.5)	15 (22.7)	12 (18.2)	0.281
Enteral nutrition on diagnosis, n (%)	125 (94.7)	62 (93.9)	63 (95.5)	0.698
Proton pump inhibitors, n (%)	126 (95.5)	63 (95.5)	63 (95.5)	1.000
Immunosuppressants, n (%)	33 (25)	15 (22.7)	18 (27.3)	0.546

Table S4: Patients` characteristics of the study population with CDI stratified according to initial CDI therapy (first 48 h)

Parameter	All patients with CDI n=132	Metronidazole IV n=49	Other CDI therapy n=83	p
Number of patients, n (%)	132 (100)	49 (37.1)	83 (62.9)	
Age in years (Median, IQR25-75)	70 (59-77)	67 (58-74)	72 (60-78)	0.093
Male, n (%)	94 (71.2)	31 (63.3)	63 (75.9)	0.121
Charlson Comorbidity Index (Median, IQR25-75)	5 (3-7)	4 (2-7)	5 (3-7)	0.136
SAPS on diagnosis (Median, IQR25-75)	37 (29-45)	40 (30-46)	34 (29-45)	0.167
SOFA Score on admission (Median, IQR25-75)	6 (4-9)	6 (5-10)	6 (4-8)	0.105
SOFA Score on diagnosis (Median, IQR25-75)	4 (2-6)	5 (3-6)	4 (2-7)	0.350
Diagnoses				
Principal diagnosis <i>C. difficile</i> infection (CDI), n (%)	5 (3.8)	2 (4.1)	3 (3.6)	0.892
Principal diagnosis Sepsis, n (%)	40 (30.3)	17 (34.7)	23 (27.7)	0.399
Principal diagnosis Postoperative, n (%)	39 (29.5)	17 (34.7)	22 (26.5)	0.319
Neutropenia, n (%)	8 (6.1)	4 (8.2)	4 (4.8)	0.437
Severe CDI, n (%)	87 (65.9)	33 (67.3)	54 (65.1)	0.789
Treatment				
Mechanical ventilation overall, n (%)	96 (72.7)	37 (75.5)	59 (71.1)	0.488
Vasopressor therapy on admission, n (%)	104 (78.8)	40 (81.6)	64 (77.1)	0.539
Renal replacement therapy (RRT), n (%)	32 (24.2)	16 (32.7)	16 (19.3)	0.083

Parenteral nutrition on diagnosis, n (%)	27 (20.5)	12 (24.5)	15 (18.1)	0.377
Enteral nutrition on diagnosis, n (%)	125 (94.7)	47 (95.9)	78 (94)	0.630
Outcome				
Death 28d, n (%)	36 (27.3)	17 (34.7)	19 (22.9)	0.141
Death 90d, n (%)	42 (31.8)	20 (40.8)	22 (26.5)	0.088
Medication				
Immunosuppressants, n (%)	33 (25)	11 (22.4)	22 (26.5)	0.603
Steroids > 10mg/day, n (%)	28 (21.2)	11 (22.4)	17 (20.5)	0.789