

Supplemental Table 2 A, B, C. Surgical site infection (SSI) rates, follow-up and hospitals with significant temporal trends

A.

	Appendectomy	Cholecystectomy	Herniorraphy	Gastric bypass	Colon surgery	Rectum surgery
No. of SSIs/total	609/15439	448/20402	169/17030	135/3077	3304/22889	212/1835
SSI rate, % (95% CI)	3.9 (3.6-4.2)	2.2 (2.0-2.4)	1.0 (0.9-1.2)	4.4 (3.7-5.2)	14.4 (14.0-14.9)	11.6 (10.1-13.1)
SSI rate by NNIS/NHSN index category, % (95% CI)						
NNIS/NHSN 0	0.8 (0.4-1.5)	1.2 (1.0-1.4)	0.6 (0.5-0.8)	4.5 (3.6-5.7)	8.6 (7.9-9.4)	5.7 (3.0-9.5)
NNIS/NHSN 1	2.9 (2.6-3.3)	2.1 (1.8-2.5)	1.8 (1.4-2.3)	4.0 (3.1-5.2)	12.4 (11.8-13.1)	9.4 (7.5-11.6)
NNIS/NHSN 2	5.4 (4.9-6.1)	4.5 (3.8-5.3)	6.9 (4.3-10.4)	5.0 (1.9-10.6)	19.7 (18.7-20.8)	13.7 (11.1-16.7)
NNIS/NHSN 3	10.5 (7.9-13.7)	8.4 (6.4-10.7)	13.0 (4.7-33.6)	25.0 (3.2-65.1)	27.0 (24.8-29.2)	24.0 (17.4-31.7)
SSI rate by surgical technique, % (95% CI)						
Laparoscopy	3.5 (3.2-3.9)	1.6 (1.5-1.8)	0.5 (0.3-0.7)	4.2 (3.5-5.0)	8.9 (8.4-9.5)	7.3 (5.7-9.1)
Open surgery	7.2 (6.1-8.6)	8.0 (6.8-9.3)	1.3 (1.1-1.5)	6.7 (3.6-11.2)	18.5 (17.8-19.1)	16.1 (13.8-18.7)
Type of SSI, N (%)						
Superficial incisional	200 (33.0)	236 (52.7)	119 (70.4)	67 (50.0)	1124 (34.0)	58 (27.4)
Deep incisional	59 (9.7)	49 (10.9)	38 (22.5)	11 (8.1)	460 (13.9)	31 (14.6)
Organ/space	350 (57.4)	163 (36.4)	12 (7.1)	57 (41.9)	1720 (52.1)	123 (58.0)
Completed follow-up (%)	92.1	92.4	93.5	91.9	92.1	97.1
Mean time to diagnosis (Q1, median, Q3), days	10 (6, 9, 13)	11 (5, 9, 14)	12.9 (7, 12, 18)	14.7 (7, 11, 14)	9.8 (6, 8, 12)	10.8 (6, 9, 14)
Post-discharge SSI (%)	71.8	63.0	84.6	66.7	20.8	22.2
No. hospitals with significant decrease	3	2	3	1	6	1
No. hospitals with significant increase	1	2	0	0	6	0

B.

	C-section	Hysterectomy abdominal	Hysterectomy vaginal	Laminectomy w/o implant	Laminectomy with implant
No. of SSIs/total	511/32814	25/841	11/452	30/2050	22/430
SSI rate, % (95% CI)	1.6 (1.4-1.7)	3.0 (1.9-4.4)	2.4 (1.2-4.3)	1.5 (1.0-2.1)	5.1 (3.0-7.6)

SSI rate by NNIS/NHSN index category, % (95% CI)					
NNIS/NHSN 0	1.2 (1.1-1.4)	1.1 (0.4-2.5)	1.9 (0.7-4.1)	0.9 (0.4-1.6)	3.4 (0.7-9.7)
NNIS/NHSN 1	2.1 (1.9-2.5)	3.8 (2.0-6.5)	3.4 (0.9-8.5)	2.2 (1.3-3.6)	4.4 (2.3-7.5)
NNIS/NHSN 2	2.5 (1.8-3.4)	11.3 (4.7-21.9)	5.9 (0.1-28.7)	2.3 (0.6-5.7)	10.5 (4.3-20.4)
NNIS/NHSN 3	4.3 (1.4-9.7)	12.5 (0.3-52.5)	0 (0-97.5)	0 (0-45.9)	0 (0-97.5)
Type of SSI, N (%)					
Superficial incisional	340 (66.5)	11 (44.0)	2 (18.2)	9 (30.0)	4 (18.2)
Deep incisional	50 (9.8)	4 (16.0)	2 (18.2)	11 (36.7)	5 (22.7)
Organ/space	121 (23.7)	10 (40.0)	7 (63.6)	10 (33.3)	13 (59.1)
Completed follow-up (%)	91.0	93.3	96.2	96.9	88.7
Mean time to diagnosis (Q1, median, Q3), days	13.6 (8, 11, 17)	12.7 (10, 12, 14)	11.6 (7, 10, 14)	17.6 (12, 16, 25)	71.6 (20, 34, 97)
Post-discharge SSI (%)	86.5	72.0	72.7	90.0	68.2
No. hospitals with significant decrease	4	---	---	---	---
No. hospitals with significant increase	2	---	---	---	---

C.

	Cardiac surgery overall	CABG w/o other cardiac surgery	Hip arthroplasty	Knee arthroplasty
No. of SSIs/total	566/11974	281/5541	436/32102	194/20625
SSI rate, % (95% CI)	4.7 (4.4-5.1)	5.1 (4.5-5.7)	1.4 (1.2-1.5)	0.9 (0.8-1.1)
SSI rate by NNIS/NHSN index category, % (95% CI)				
NNIS/NHSN 0	1.8 (0.8-3.5)	2.1 (0.6-5.3)	1.0 (0.9-1.2)	0.8 (0.6-0.9)
NNIS/NHSN 1	4.3 (3.9-4.8)	4.8 (4.2-5.4)	1.8 (1.6-2.1)	1.0 (0.8-1.2)
NNIS/NHSN 2	6.6 (5.6-7.8)	7.2 (5.6-9.1)	3.3 (2.4-4.3)	2.0 (1.3-2.8)
NNIS/NHSN 3	13.2 (8.0-20.1)	6.7 (0.2-32.0)	0 (0-84.2)	0 (0-97.5)
Type of SSI, N (%)				
Superficial incisional	207 (36.6)	104 (37.0)	124 (28.4)	87 (44.8)
Deep incisional	162 (28.6)	90 (32.0)	61 (14.0)	17 (8.8)
Organ/space	197 (34.8)	87 (31.0)	251 (57.6)	90 (46.4)
Completed follow-up (%)	83.0	84.2	91.4	89.8

Mean time to diagnosis (Q1, median, Q3), days	40.9 (11, 19, 32)	29.9 (10, 17, 28)	53.1 (15, 24, 45)	83.2 (18, 34, 102)
Post-discharge SSI (%)	61.8	60.1	90.8	93.3
No. hospitals with significant decrease	2	1	3	1
No. hospitals with significant increase	0	0	3	0

SSI : surgical site infection ; CI : confidence interval ; NNIS : National Nosocomial Infection Surveillance ; NHSN : National Healthcare Security Network