

SUPPLEMENTARY MATERIALS

Table S1. Orthopedic SSI incidence rates per year in the teaching hospital, Ujjain, central India.

Year	Incidence Rate (%)
2013 (Aug-Dec)	15.5
2014	6.25
2015	6.45
2016 (Jan-Apr)	3.65

Table S2. Patient-related potential risk factors for orthopedic surgical site infections distributed by sex in the teaching hospital, Ujjain, central India.

	All operated patients			SSI Patients			Non-SSI Patients			P-value
	Total n=1205	Male n=838	Female n=367	Total SSI n=91	Male n=80	Female n=11	Total Non-SSI n=1114	Male n=758	Female n=356	<0.001
Age, median (25-75th), years	35 (19-50)	33 (18-50)	40 (22-60)	35 (22-50)	35 (22-50)	40 (16-60)	35 (18-50)	32 (17-50)	40 (23-60)	0.9260
Age, years, n (%)										
≤18	301 (100)	219 (73)	82 (27)	18 (6)	15 (5)	3 (1)	283 (94)	204 (68)	79 (26)	0.416
19-60	760 (100)	533 (70)	227 (30)	64 (8)	58 (8)	6 (1)	696 (92)	475 (63)	221 (29)	<0.001
>60	144 (100)	86 (60)	58 (40)	9 (6)	7 (5)	2 (1)	135 (94)	79 (65)	56 (39)	0.218
ASA score, n (%)										
ASA I	1013 (100)	680 (67)	333 (33)	63 (6)	53 (5)	10 (1)	950 (94)	627 (62)	323 (32)	0.003
ASA II	148 (100)	132 (89)	16 (11)	22 (15)	21 (14)	1 (1)	126 (85)	111 (75)	15 (10)	0.468
ASA III	43 (100)	26 (60)	17 (40)	6 (14)	6 (14)	0	37 (86)	20 (46)	17 (40)	0.066
ASA IV	1 (100)	0	1 (100)	0	0	0	1 (100)	0	1 (100)	-
Antibiotic prescribed 14 days before hospital admission, n (%)										
73 (100)		60 (82)	13 (18)	17 (23)	16 (22)	1 (1)	56 (77)	44 (60)	12 (17)	0.132
Previous hospitalisation, n (%)										
173 (100)		141 (82)	32 (18)	33 (19)	31 (18)	2 (1)	140 (81)	110 (64)	30 (17)	0.046

Pearson's Chi-squared and Fisher's exact test (for values with expected frequency less than five) were used to compare the categorical variables and the Mann-Whitney test was used to compare the medians of continuous variables. P-values for categorical variables were calculated by comparing the distribution of sex of SSI and non-SSI patients. P-values for continuous variables were calculated by comparison of SSI and non-SSI patients. Significant p-values (<0.05) are marked in bold. Percentages are calculated by division with number of all operated patients. SSI=surgical site infection, ASA=American Society for Anesthesiologists.

Table S3. Surgery-related potential risk factors for orthopedic surgical site infections distributed by sex in the teaching hospital, Ujjain, central India.

	All operated patients			SSI Patients			Non-SSI Patients			p-value
	Total n=1205	Male n=838	Female n=367	Total SSI n=91	Male n=80	Female n=11	Total Non-SSI n=1114	Male n=758	Female n=356	
Type of wound ^a , n (%)										
Closed	1034 (100)	702 (68)	332 (32)	64 (6)	54 (5)	10 (1)	970 (94)	648 (63)	322 (31)	0.004
Compound fracture	37 (100)	31 (84)	6 (16)	9 (24)	9 (24)	0	28 (76)	22 (60)	6 (16)	0.302
Clean	3 (100)	3 (100)	0	0	0	0	3 (100)	3 (100)	0	-
Contaminated	23 (100)	17 (74)	6 (26)	3 (13)	3 (13)	0	20 (87)	14 (61)	6 (26)	0.539
Nature of surgery ^a , n (%)										
Elective	1113 (100)	770 (69)	343 (31)	80 (7)	70 (6)	10 (1)	1033 (93)	700 (63)	333 (30)	<0.001
Emergency	17 (100)	11 (65)	6 (35)	2 (12)	1 (6)	1 (6)	15 (88)	10 (59)	5 (29)	1.000
Duration of surgery ^a , min										
≤60	425 (100)	301 (71)	124 (29)	40 (9)	34 (8)	6 (1)	385 (91)	267 (63)	118 (28)	0.038
61-120	375 (100)	255 (68)	120 (32)	22 (6)	20 (5)	2 (1)	353 (94)	235 (63)	118 (31)	0.017
>120	208 (100)	146 (70)	62 (30)	13 (6)	10 (5)	3 (1)	195 (94)	136 (66)	59 (28)	0.759
Hair removal method ^a , n (%)										
Shaving	1057 (100)	731 (69)	326 (31)	76 (7)	66 (6)	10 (1)	981 (93)	665 (63)	316 (30)	0.001
Clipping	2 (100)	2 (100)	0	0	0	0	2 (100)	2 (100)	0	-
Preoperative shower, n (%)										
	267 (100)	181 (68)	86 (32)	42 (16)	35 (13)	7 (3)	225 (84)	146 (55)	79 (29)	0.019
Preoperative LOS, median (25-75 th), days										
	5 (3-9)	5 (3-8)	6 (3-9)	4 (2-8)	4 (1-8)	5 (3-11)	5 (3-9)	5 (3-8)	6 (3-9)	0.0843
Preoperative LOS ^a , days										
1-3	325 (100)	231 (71)	94 (29)	24 (7)	19 (6)	5 (1)	301 (93)	212 (65)	89 (28)	0.364
4-7	379 (100)	265 (70)	114 (30)	28 (7)	26 (7)	2 (0)	351 (93)	239 (63)	112 (30)	0.005
8-15	312 (100)	202 (65)	110 (35)	16 (5)	14 (4)	2 (1)	296 (95)	188 (60)	108 (35)	0.060
>15	90 (100)	63 (70)	27 (30)	9 (10)	7 (8)	2 (2)	81 (90)	56 (62)	25 (28)	0.719
Postoperative LOS, median (25-75 th), days										
	8 (3-14)	8 (3-14)	9 (4-14)	13 (4-21)	13 (3-21)	13 (7-27)	8 (3-14)	8 (3-14)	9 (4-14)	<0.001
Postoperative LOS ^a , days										
1-3	223 (100)	156 (70)	67 (30)	7 (3)	7 (3)	0	216 (97)	149 (67)	67 (30)	0.106
4-7	239 (100)	165 (69)	74 (31)	8 (3)	5 (2)	3 (1)	231 (97)	160 (67)	71 (30)	0.706
8-15	440 (100)	287 (65)	153 (35)	28 (6)	24 (5)	4 (1)	412 (94)	263 (60)	149 (34)	0.023
>15	203 (100)	152 (75)	51 (25)	33 (16)	29 (14)	4 (2)	170 (84)	123 (61)	47 (23)	0.078
Oxygen support, n (%)	1031 (100)	716 (69)	315 (31)	73 (7)	62 (6)	11 (1)	958 (93)	654 (63)	304 (30)	0.003
Blood transfusion, n (%)	405 (100)	274 (68)	131 (32)	27 (7)	26 (7)	1 (0)	378 (93)	248 (61)	130 (32)	<0.001
Drain, n (%)	41 (100)	30 (73)	10 (24)	8 (20)	7 (18)	1 (2)	33 (80)	24 (58)	9 (22)	0.653
Implant, n (%)	297 (100)	221 (74)	76 (26)	49 (17)	44 (15)	5 (2)	248 (84)	177 (60)	71 (24)	0.007
Antibiotic prescription, n (%)										
	1133 (100)	791 (70)	342 (30)	91 (8)	80 (7)	11 (1)	1042 (92)	711 (68)	331 (32)	<0.001
PAP, n (%)	840 (100)	580 (69)	260 (31)	42 (5)	37 (4)	5 (1)	798 (95)	543 (65)	255 (30)	0.006
Antibiotic during hospital stay before PAP, n (%)										
	258 (100)	192 (74)	66 (26)	43 (17)	36 (14)	7 (3)	215 (83)	156 (60)	59 (23)	0.126
Duration of antibiotic treatment before PAP, days										
1-7	186 (100)	138 (74)	48 (26)	29 (16)	25 (14)	4 (2)	157 (84)	113 (61)	44 (23)	0.079
8-14	44 (100)	30 (68)	14 (32)	8 (18)	7 (16)	1 (2)	36 (82)	23 (52)	13 (30)	0.194
>14	28 (100)	24 (86)	4 (14)	6 (21)	4 (14)	2 (7)	22 (79)	20 (72)	2 (7)	0.191
Postoperative antibiotic, n (%)										
	1036 (100)	720 (69)	316 (31)	75 (7)	64 (6)	11 (1)	961 (93)	656 (63)	305 (29)	0.002
Duration of postoperative antibiotic, days										
1-7	440 (100)	307 (70)	133 (30)	17 (4)	14 (3)	3 (1)	423 (96)	293 (67)	130 (29)	0.191
8-14	374 (100)	250 (67)	124 (33)	24 (6)	20 (5)	4 (1)	350 (94)	230 (62)	120 (32)	0.056
>14	248 (100)	179 (72)	69 (28)	36 (15)	32 (13)	4 (2)	212 (85)	147 (59)	65 (26)	0.010
Antibiotic duration, median (25-75 th), days										

	12 (4-16)	12 (4-16)	11 (4-15)	24 (8-36)	23 (7-34)	31 (14-40)	11 (4-15)	10 (4-15)	11 (4-16)	<0.001
Total antibiotic duration^a, days										
1-7	384 (100)	276 (72)	108 (28)	21 (5)	21 (5)	0	363 (95)	255 (67)	108 (28)	0.002
8-14	319 (100)	208 (65)	111 (35)	19 (6)	14 (4)	5 (2)	300 (94)	194 (61)	106 (33)	0.424
> 14	391 (100)	285 (73)	106 (27)	50 (13)	44 (11)	6 (2)	341 (87)	241 (62)	100 (25)	0.010

^aFor the variables where the number of patients does not correspond to the total number of patients in the group, that information for the rest of the patients is missing in the data record. Pearson's Chi-squared and Fisher's exact test (for values with expected frequency less than five) were used to compare the categorical variables and the Mann-Whitney test was used to compare the medians of continuous variables. P-values for categorical variables were calculated by comparing the distribution of sex of SSI and non-SSI patients. P-values for continuous variables were calculated by comparison of SSI and non-SSI patients. Significant p-values (<0.05) are marked in bold. Percentages are calculated by division with number of all operated patients. SSI=surgical site infection, PAP=perioperative antibiotic prophylaxis, LOS= length of stay.