

**Supplementary Table I. Current Procedure Terminology codes for inclusion into cohort.**

Procedure	CPT codes
Open Abdominal Aortic Aneurysm repair	35081, 35082, 35091, 35092, 35102, 35103, 34830, 34831, 34832
Open Aortoiliac repair	35331, 35351, 35355, 35361, 35521, 35533, 35537, 35538, 35539, 35540, 35563, 35565, 35621, 35623, 35637, 35638, 35646, 35647, 35654, 35661, 35663, 35665
Open Lower Extremity Revascularization	35556, 35566, 35571, 35583, 35585, 35587, 35656, 35666, 35671

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**Supplementary Table II. Assessment of factors associated with post-discharge**
**SSI occurring with 30-days after major vascular surgery.**

Characteristic	Post-discharge SSI n=3,411 (6.9%)	No SSI after discharge n=46,406 (93%)	P-value
<i>Demographics</i>			
Female gender	43%	35%	<.0001
Age			
< 65	45%	39%	<.0001
≥ 65	55%	61%	
Race:			
White	79%	78%	.1027
Black	13%	13%	
Other	8.7%	9.9%	
<i>Comorbidities</i>			
BMI			
Normal	24%	34%	<.0001
Overweight	31%	35%	
Obese	43%	26%	
Underweight	2.4%	4.1%	
Diabetes			
Insulin	26%	16%	<.0001

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Non-insulin (PO)	19%	16%	
No Diabetes	54%	68%	
Smoker	49%	46%	.0077
Hypertension	86%	82%	<.0001
Coronary Artery Disease	33%	28%	<.0001
Critical Limb Ischemia <sup>a</sup>	45%	34%	<.0001
Peripheral Vascular Disease <sup>a</sup>	52%	42%	<.0001
Congestive Heart Failure	2.6%	2.1%	.0990
Dyspnea			
None	79%	82%	<.0001
With Moderate Exertion	19%	16%	
At Rest	2.0%	1.7%	
Functionally status			
Independent	87%	89%	<.0001
Partially dependent	12%	9.9%	
Totally dependent	0.7%	1.5%	
COPD	17%	15%	.0349
Dialysis	5.8%	4.3%	<.0001
Neurological Disease	17%	15%	<.0001
Open or infected wound	30%	23%	<.0001
Chronic steroid use	4.1%	3.5%	.0740
Bleeding disorder	24%	20%	<.0001
Disseminated Cancer	0.3%	0.5%	.0848

Loss of weight	0.9%	1.7%	.0005
Alcohol abuse <sup>a</sup>	5.9%	6.1%	.6148
<i>Perioperative Characteristics</i>			
Ventilator 48 hours before surgery	0.2%	0.5%	.0193
Emergency Case	6.3%	7.7%	.0023
Transfusion in 72 hours before surgery	0.9%	1.4%	.0326
Operation time			
<4 hours	56%	63%	<.0001
4-6 hours	32%	27%	
>6 hours	13%	10%	
ASA class:			
I or II	5.3%	6.4%	.0275
III	71%	70%	
IV or V	24%	23%	
Groin anastomosis			
Graft			
None	3.7%	3.6%	<.0001
Vein	51.4%	38.6%	
Other than vein	44.9%	57.9%	
Wound Class			
Clean	93%	92%	.3888

Clean/Contaminated	2.4%	2.8%	
Contaminated	2.6%	2.4%	
Dirty	2.4%	2.4%	
<i>Complications</i>			
Infectious	2.2 %	4.5%	<.0001
Respiratory	2.1%	5.3%	<.0001
Renal	0.6%	2.0%	<.0001
Central nervous system	0.1%	0.2%	.3540
Cardiac	1.8%	1.8%	.8766
DVT/PE	0.1%	0.3%	.0276
Transfusion for Bleeding	15%	17%	.0029
Graft Loss	0.0%	0.2%	.0383
Sepsis	1.4%	3.5%	<.0001
<i>Adverse Outcomes</i>			
Reoperation within 30-days	39%	12%	<.0001
Prolonged LOS ( $\geq$ 14-days)	4.2%	11%	<.0001

<sup>a</sup>Variables with 21% missing values; respective percentages and  $\chi^2$  p-values reflect exclusion of the respective missing data.

*SSI*, Surgical site infection; *BMI*, Body Mass Index; *DNR*, Do Not Resuscitate;

*COPD*, Chronic Obstructive Pulmonary Disease; *ASA*, American Society of

Anesthesiologists; *AAA*, Abdominal Aortic Aneurysm; *LOS* Length of Stay;

*DVT/PE* thrombophlebitis, deep vein thrombosis, pulmonary embolism.

**Supplementary Table III. Significant results of multivariable regression analysis for predictors of 30-day in-hospital and post-discharge surgical site infection.**

<i>Variables</i>	<i>In-hospital</i>			<i>Post-discharge</i>		
	<i>OR</i>	<i>95% CI</i>	<i>P</i>	<i>OR</i>	<i>95% CI</i>	<i>P</i>
<i>Demographics</i>						
Age $\geq$ 65				0.9	(0.9, 1.0)	.0426
Female gender	1.3	(1.2, 1.5)	<.0001	1.4	(1.3, 1.5)	<.0001
Race:						
White				Ref		
Black	1.0	(0.8, 1.2)	0.8960	0.8	(0.7, 0.9)	0.0002
Other	1.4	(1.2, 1.7)	0.0005	0.9	(0.8, 1.0)	0.2041
<i>Comorbidities</i>						
BMI						
Normal	Ref			Ref		
Overweight	1.1	(1.0, 1.3)	0.1158	1.3	(1.2, 1.5)	<.0001
Obese	1.7	(1.5, 2.0)	<.0001	2.3	(2.1, 2.5)	<.0001
Underweight	0.7	(0.5, 1.0)	0.0660	0.8	(0.7, 1.1)	0.1323
Diabetes						
No Diabetes				Ref		
Non-insulin (PO)				1.2	(1.1, 1.3)	0.0019
Insulin				1.3	(1.2, 1.4)	<.0001
Smoker				1.2	(1.1, 1.3)	<.0001

Hypertension				1.2	(1.1, 1.4)	0.0002
Coronary Artery Disease				1.1	(1.0, 1.2)	0.0307
Critical Limb Ischemia	1.2	(1.0, 1.4)	0.0315	1.2	(1.1, 1.3)	<.0001
Congestive heart failure	1.4	(1.0, 1.9)	0.0420			
Functionally status						
Independent	Ref			Ref		
Partially dependent	1.3	(1.1, 1.5)	0.0063	1.1	(1.0, 1.2)	0.0856
Totally dependent	2.3	(1.6, 3.2)	<.0001	0.5	(0.4, 0.8)	0.0066
COPD				1.1	(1.1, 1.2)	0.0327
Dyspnea						
None				Ref		
Moderate exertion				1.2	(1.1, 1.3)	.0004
At rest				1.2	(0.9, 1.6)	.1457
Dialysis	1.4	(1.1, 1.8)	0.0091			
Neurological Disease				1.1	(1.0, 1.3)	0.0088
Open or infected wound	1.3	(1.1, 1.5)	0.0030			
Chronic steroid use	1.4	(1.1, 1.9)	0.0146			
<i>Perioperative Characteristics</i>						
Ventilator 48 hours before surgery	0.5	(0.3, 0.9)	0.0141			
Emergency Case	1.7	(1.4, 2.0)	<.0001			

Operation time						
<4 hours	Ref			Ref		
4-6 hours	1.7	(1.4, 1.9)	<.0001	1.4	(1.3, 1.5)	<.0001
>6 hours	2.1	(1.8, 2.6)	<.0001	1.5	(1.4, 1.7)	<.0001
Operative Procedure						
AAA	Ref			Ref		
Aortoiliac	1.2	(1.0, 1.5)	0.0337	2.8	(1.9, 2.9)	<.0001
Lower extremity revascularization	1.0	(0.8, 1.3)	0.9009	3.8	(2.5, 3.8)	<.0001
Groin anastomosis				1.2	(1.0, 1.4)	.0110
ASA class						
I or II	Ref			Ref		
III	1.4	(1.0, 1.9)	0.0892	1.1	(0.9, 1.3)	0.4209
IV or V	1.6	(1.1, 2.3)	0.0149	1.2	(1.0, 1.4)	0.0411
Wound Class						
Clean	Ref					
Clean/Contaminated	1.8	(1.3, 2.4)	<.0001			
Contaminated	1.6	(1.2, 2.2)	0.0010			
Dirty	1.0	(0.7, 1.5)	0.8008			
<i>Complications<sup>a</sup></i>						
Infectious	0.7	(0.5, 0.9)	0.0046			



Respiratory	2.6	(2.1, 3.2)	<.0001			
Renal				0.6	(0.4, 0.9)	0.0270
Transfusion for bleeding	1.3	(1.1, 1.5)	0.0008			
Graft Loss	2.4	(1.8, 3.1)	<.0001			
Sepsis	3.7	(3.0, 4.5)	<.0001	0.7	(0.5, 0.9)	0.0118
<i>Other Adverse Outcomes</i>						
Prolonged LOS ( $\geq 14$ -days)	.	.	.	0.4	(0.3, 0.5)	<.0001

In-hospital SSI logistic regression model additionally controlled for age, diabetes, smoking, chronic obstructive pulmonary disease, disseminated cancer and cardiac complications. Post-discharge logistic regression model additionally controlled for age, chronic steroid use, bleeding disorder, loss of weight, alcohol abuse, emergency case, cardiac complications and graft loss complications.

<sup>a</sup>Complications were coded to only count if they happened prior to the occurrence of an in-hospital SSI diagnosis in the in-hospital model.

*OR*, odds ratio; *CI*, confidence interval; *Ref*, Reference; *AAA*, Abdominal Aortic Aneurysm; *COPD*, Chronic Obstructive Pulmonary Disease; *AAA*, Abdominal Aortic Aneurysm; Length of Stay, *LOS*; Length of Stay; *ASA*, American Society of Anesthesiologists.