

ASC General Surgery Measure Submission to PQM: Figures and Tables

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Figure 1. ASC General Surgery: Cohort Flowchart

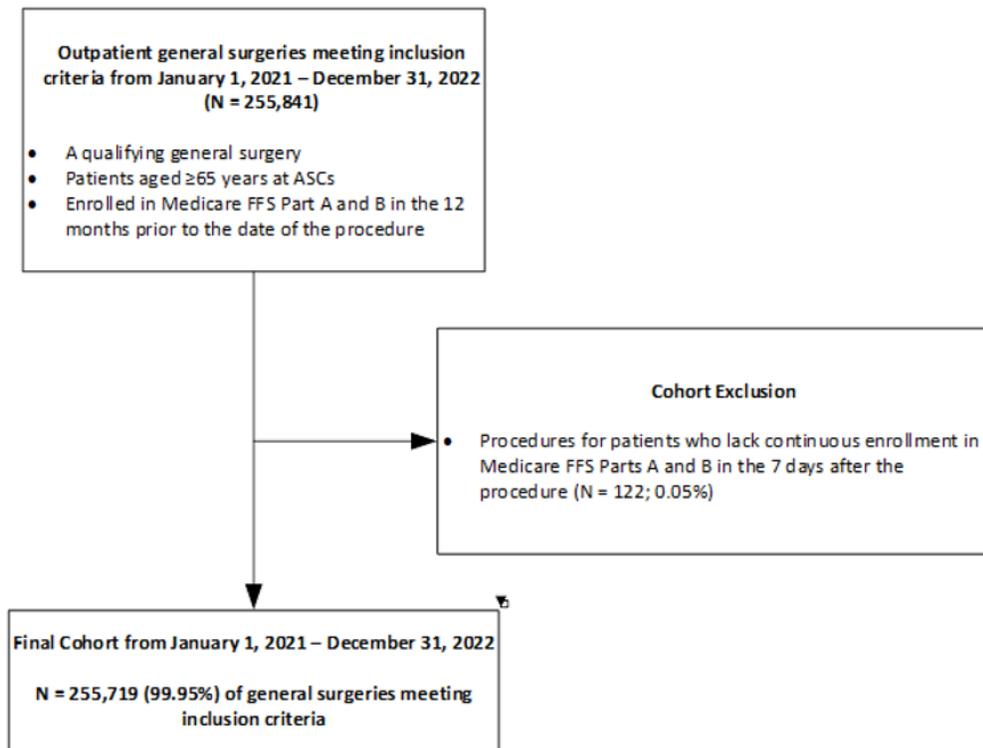


Figure 2. ASC General Surgery: Logic Model

The conceptual model for outpatient general surgery quality at an ASC, shown below, shows the pathway by which facilities can modify the outcome (all-cause, unplanned hospital visits within seven days of the orthopedic ASC procedure). For example, the model identifies that patient-level factors, such as comorbidities, increase the risk of unplanned hospital visits. Better management of the risk associated with these comorbidities may be a potential avenue for facilities to reduce unplanned hospital visits. Provider-level factors (such as technical quality of the procedure, post-procedure provider accessibility), and facility-level factors (such as patient selection/risk assessment, pre- and post-discharge patient communication) may also contribute to the risk of unplanned hospital visits. Therefore, facilities may have opportunities to lower their unplanned hospital visit rates through quality improvement efforts focused on patient, provider, and facility factors.

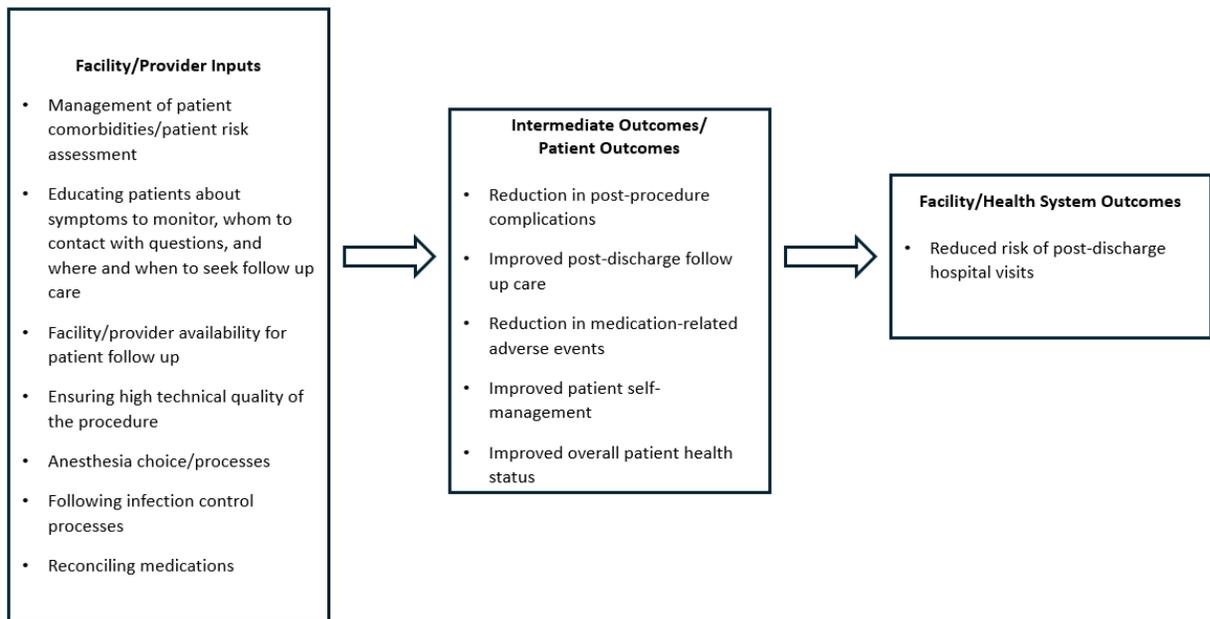


Table 1. ASC General Surgery: Distribution of Measure Scores

Characteristic	Value
Number of facilities	3,485
Mean RSHVR (standard deviation [SD])	1.00 (0.09)
Range (min – max)	0.59 – 1.84
25th percentile	0.97
50th percentile (median)	0.99
75th percentile	1.01

Table 2. ASC General Surgery: Distribution of Measure Scores

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean Score	1.00 (0.09)	0.59	0.86	0.95	0.97	0.98	0.99	1.00	1.00	1.02	1.07	1.20	1.84
Entities	3,485	-	348	349	348	349	348	349	349	348	349	348	-
Total Persons	255,719	-	106,851	24,044	12,868	11,268	4,615	4,569	1,088	27,123	22,425	40,868	-

Figure 3. ASC General Surgery: Distribution of Measure Scores

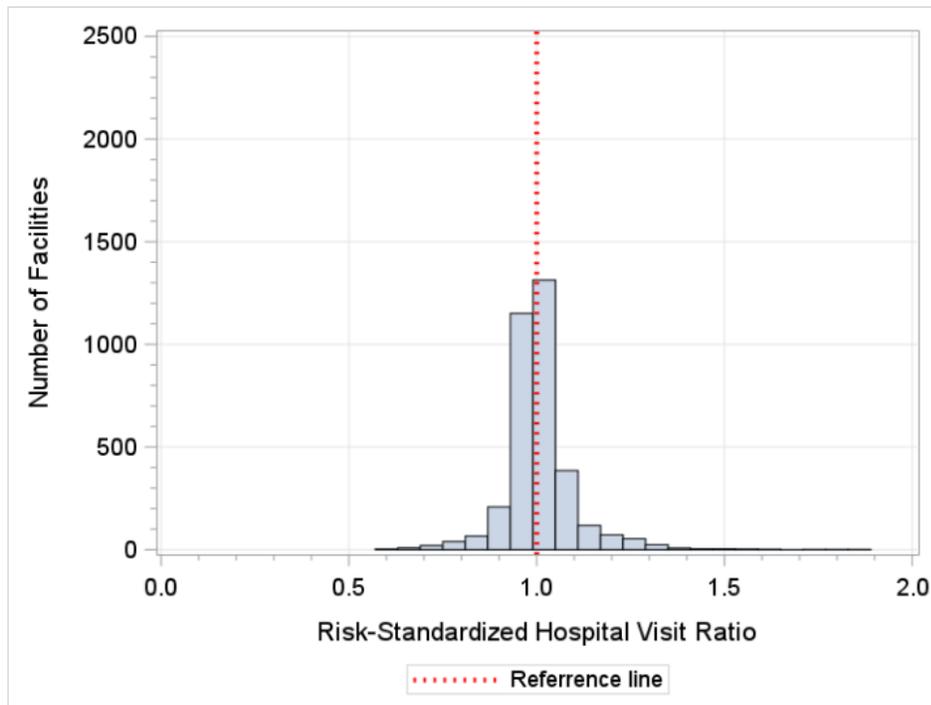


Table 3. ASC General Surgery: Distribution of Signal-to-Noise Reliability

Facilities	Min-Max	25 th Percentile	50 th Percentile	75 th Percentile
≥1 procedure (n=3,485 facilities)	0.030 – 0.990	0.109	0.341	0.630
Facilities with ≥25 procedures (n=1,455 facilities)	0.432 – 0.990	0.555	0.690	0.824

Table 4. ASC General Surgery: Distribution of Signal-to-Noise Reliability (For Facilities with At least 25 Procedures)

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Reliability	0.690	0.432	0.452	0.502	0.553	0.600	0.658	0.717	0.775	0.826	0.879	0.947	0.990
Mean RSHVR	1.007 (0.135)	-	1.008	1.001	1.023	1.006	1.005	1.033	1.012	1.034	1.011	0.933	-
N of Entities	1,455	-	163	137	131	147	143	153	146	145	145	145	-
N of Procedures	240,050	-	4,426	4,554	5,326	7,258	9,068	12,783	16,648	22,800	35,501	121,686	-

Table 5. ASC General Surgery: Frequency of Diagnosis Codes (Top 25) Associated with the Outcome (Post-Procedural Unplanned Hospital Visits within 7 Days)

Principal Diagnosis Code (ICD-10)	Principal Diagnosis Code Description	Frequency Count	Cumulative Percent
R339	Retention of urine, unspecified	331	7.0
L7622	Postprocedural hemorrhage of skin and subcutaneous tissue following other procedure	117	9.5
L7621	Postprocedural hemorrhage of skin and subcutaneous tissue following a dermatologic procedure	114	11.9
K5900	Constipation, unspecified	105	14.2
A419	Sepsis, unspecified organism	98	16.3
G8918	Other acute postprocedural pain	86	18.1
R55	Syncope and collapse	85	19.9
R338	Other retention of urine	80	21.6
R112	Nausea with vomiting, unspecified	58	22.8
R0789	Other chest pain	55	24.0
R079	Chest pain, unspecified	55	25.2
U071	COVID-19	53	26.3
R42	Dizziness and giddiness	53	27.4
N390	Urinary tract infection, site not specified	52	28.5
N401	Benign prostatic hyperplasia with lower urinary tract symptoms	45	29.5
I10	Essential (primary) hypertension	41	30.4
K9189	Other postprocedural complications and disorders of digestive system	40	31.2
N179	Acute kidney failure, unspecified	39	32.0
L7632	Postprocedural hematoma of skin and subcutaneous tissue following other procedure	38	32.8
J189	Pneumonia, unspecified organism	35	33.6
K625	Hemorrhage of anus and rectum	35	34.3
T8131XA	Disruption of external operation (surgical) wound, not elsewhere classified, initial encounter	35	35.1

Principal Diagnosis Code (ICD-10)	Principal Diagnosis Code Description	Frequency Count	Cumulative Percent
K91840	Postprocedural hemorrhage of a digestive system organ or structure following a digestive system procedure	35	35.8
E860	Dehydration	34	36.5
R531	Weakness	33	37.2

Table 6. ASC Gen Surgery: Frequency of Model Risk Factors

Risk Factor	Mean (SD) or %
Total N	255,719
Age minus 65 (years above 65): Mean (SD)	10.69 (6.94)
Procedure type:	--
Procedure type: Abdomen and its contents	12.62
Procedure type: Alimentary tract	6.16
Procedure type: Breast	7.56
Procedure type: Skin/soft tissue	50.90
Procedure type: Wound	22.29
Procedure type: Vascular	0.47
Work Relative Value Units: Mean (SD)	7.20 (3.66)
Other benign tumors (CC15, 16)	73.93
Liver or biliary disease (CC 27, 28, 29, 30, 31, 32)	7.41
Intestinal obstruction or perforation (CC 33)	1.36
Dementia or senility (CC 51, 52, 53)	4.87
Psychiatric disorders (CC 57, 58, 59, 60, 61, 62, 63)	15.05
Other significant central nervous system (CNS) disease (CC 77, 78, 79, 80)	2.98
Ischemic Heart Disease (CC 86, 87, 88, 89)	21.41
Specified arrhythmias and other heart rhythm disorders (CC 96, 97)	23.21
Stroke (CC 99, 100)	2.29
Chronic lung disease (CC 110, 111, 112, 113)	13.49
Pneumonia (CC 114, 115, 116)	3.67
Dialysis or severe chronic kidney disease (CC 134, 136, 137)	2.26
Benign prostatic hyperplasia	15.91
Cellulitis, local skin infection (CC 164)	8.80
Major traumatic fracture or internal injury (CC 169, 170, 171, 172, 173, 174)	22.54
Complications of care (CC 176, 177)	6.12
Long term (current) use of anticoagulants	8.92
Opioid abuse	0.41

Table 7. ASC General Surgery: Facility-level Distribution of Patients with Social Risk Factors

Statistic	Dual Eligibility (Count)	Dual Eligibility (Percent)	High ADI (Count)	High ADI (Percent)
Minimum	0	0%	0	0%
25%	0	0%	0	0%
50% (median)	0	0%	0	0%
75%	1	2%	2	9%
Maximum	286	100%	708	100%

Table 8. ASC General Surgery: Model Risk Variable Odds Ratios (ORs) and 95% CIs

Risk Factor	Odds Ratio (95% CI)
Age	1.03 (1.02-1.03)
Procedure type: Alimentary tract	0.53 (0.41-0.70)
Procedure type: Breast	0.14 (0.08-0.24)
Procedure type: Skin/soft tissue	0.39 (0.31-0.50)
Procedure type: Wound	0.35 (0.26-0.48)
Procedure type: Vascular	0.25 (0.01-6.64)
Other benign tumors (CC 15, 16)	0.81 (0.76-0.88)
Liver or biliary disease (CC 27, 28, 29, 30, 31, 32)	1.30 (1.19-1.43)
Intestinal obstruction or perforation (CC 33)	1.16 (0.97-1.40)
Dementia or senility (CC 51, 52, 53)	1.32 (1.19-1.48)
Psychiatric disorders (CC 57, 58, 59, 60, 61, 62, 63)	1.31 (1.22-1.42)
Other significant central nervous system (CNS) disease (CC 77, 78, 79, 80)	1.52 (1.33-1.73)
Ischemic Heart Disease (CC 86, 87, 88, 89)	1.20 (1.12-1.29)
Specified arrhythmias and other heart rhythm disorders (CC 96, 97)	1.22 (1.13-1.31)
Stroke (CC 99, 100)	1.29 (1.11-1.49)
Chronic lung disease (CC 110, 111, 112, 113)	1.31 (1.21-1.41)
Pneumonia (CC 114, 115, 116)	1.40 (1.24-1.57)
Dialysis or severe chronic kidney disease (CC 134, 136, 137)	1.49 (1.30-1.72)
Benign prostatic hyperplasia	1.13 (1.05-1.21)
Cellulitis, local skin infection (CC 164)	1.25 (1.14-1.38)
Major traumatic fracture or internal injury (CC 169, 170, 171, 172, 173, 174)	1.16 (1.08-1.24)
Complications of care (CC 176, 177)	1.21 (1.09-1.34)
Long term (current) use of anticoagulants	1.27 (1.15-1.39)
Opioid abuse	1.49 (1.08-2.05)
Work RVU in abdomen and its contents procedure	1.03 (1.00-1.05)
Work RVU in alimentary tract procedure	1.17 (1.14-1.21)
Work RVU in breast procedure	1.15 (1.10-1.20)
Work RVU in skin/soft tissue procedure	1.02 (1.01-1.03)
Work RVU in wound procedure	1.01 (0.96-1.06)
Work RVU in vascular procedure	1.01 (0.57-1.79)

Figure 4. ASC General Surgery: Risk Decile Plot (All Patients)

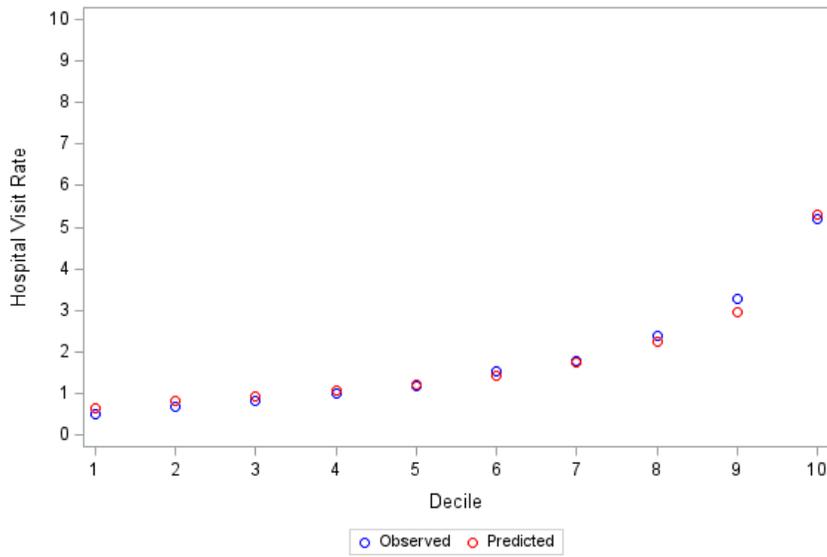


Figure 5. ASC General Surgery: Correlation Between Measures Scores Calculated with and without DE Variable in the Risk Model

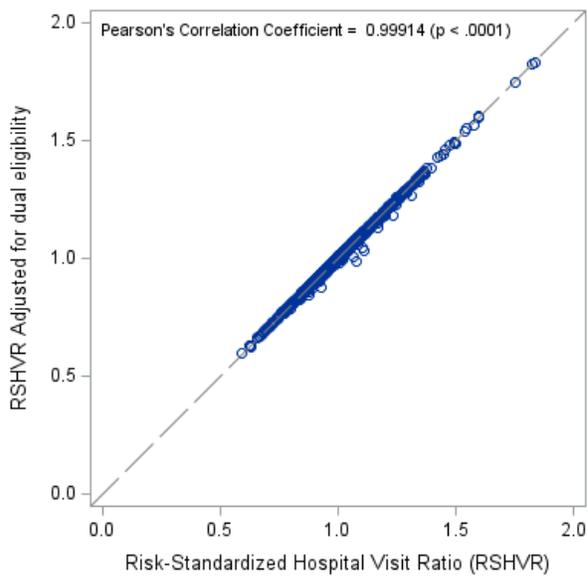


Figure 6. ASC General Surgery: Correlation Between Measures Scores Calculated with and without High ADI Variable in the Risk Model

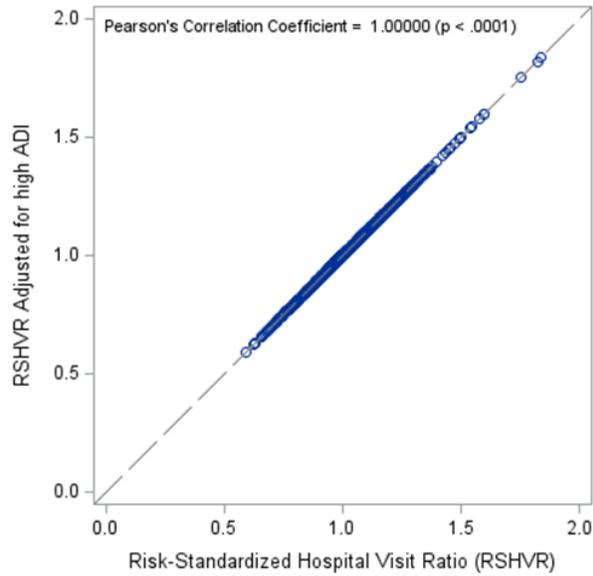


Figure 7. ASC General Surgery: Correlation Between Measure Scores and The Top Quartile of the Facility-Proportion of Patients with DE

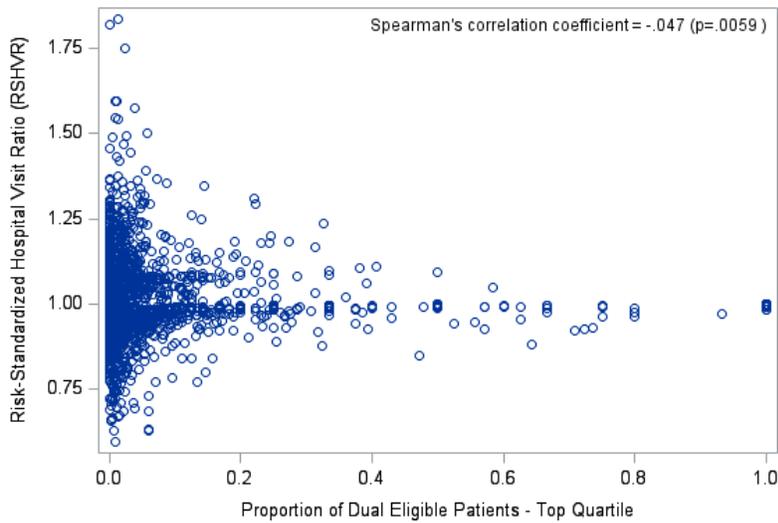


Figure 8. ASC General Surgery: Correlation Between Measure Scores and The Top Quartile of the Facility-Proportion of Patients with High ADI

