HealthInsights.ai

Our practice provides data analytics solutions and services that are tailored for providers, payers, and accountable care organizations in the healthcare industry.

Our mission is to enable healthcare leaders to achieve their strategic goals and improve outcomes by unleashing the power of their data.

HealthIsights.ai is **an established leader** in delivering valuable solutions that drive the healthcare of today and tomorrow.

Our healthcare practice includes a team of domain experts with decades of experience with industry leading firms including McKesson, Becton & Dickinson, Change Healthcare, and Kaufman Hall and we have demonstrated success developing and delivering proven solutions to provider and payer organizations.



HealthInsights.ai Library

Operational

Radiology Volumes

ED Throughput

Surgical Cases

Appointment Scheduling

Home Care Admissions

<u>Purchasing Metrics</u>

Mobile Dashboard

Laboratory Testing

IT Ticket Analysis

Analytics Adoption

PHI Audit Logging

Hospital Administrator

Emergency Statistics

Financial

Resource Consumption

Profitability

Market Share

Accounts Receivable

Daily Statistics

Physician Financial Impact

<u>Payor Performance</u>

Case Mix Monitoring

Clinical

<u>Inpatient Mortality</u>

<u>Patient Experience</u>

Readmissions

Secondary Diagnosis Analysis

Statistical Variation

Core Measure Compliance

HCAHPS Patient Satisfaction

<u>Culture of Safety Survey</u>

VBC Opportunity Map

Staff Management

Clinic Productivity

Nursing Productivity

Employee Turnover

Payroll Analytics

Population

Patient Origin

Population Density

<u>Diabetes Registry</u>

Clinical Network Adequacy

The Surgical Operations Imperative: Improve Efficiency & Reduce Costs

"Operating rooms are one of the costliest areas of hospital operations, and as hospitals face a range of mounting financial pressures, most are reexamining OR operations for any avoidable costs." 1

of all hospital admissions are due to surgical interventions

40%
Of costs are related to surgical care

OR delays range from 40% to 90%

2.5x

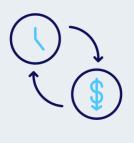
Higher cost for stays that involve a surgical procedure



\$22

per minute

Estimated cost of an OR delay



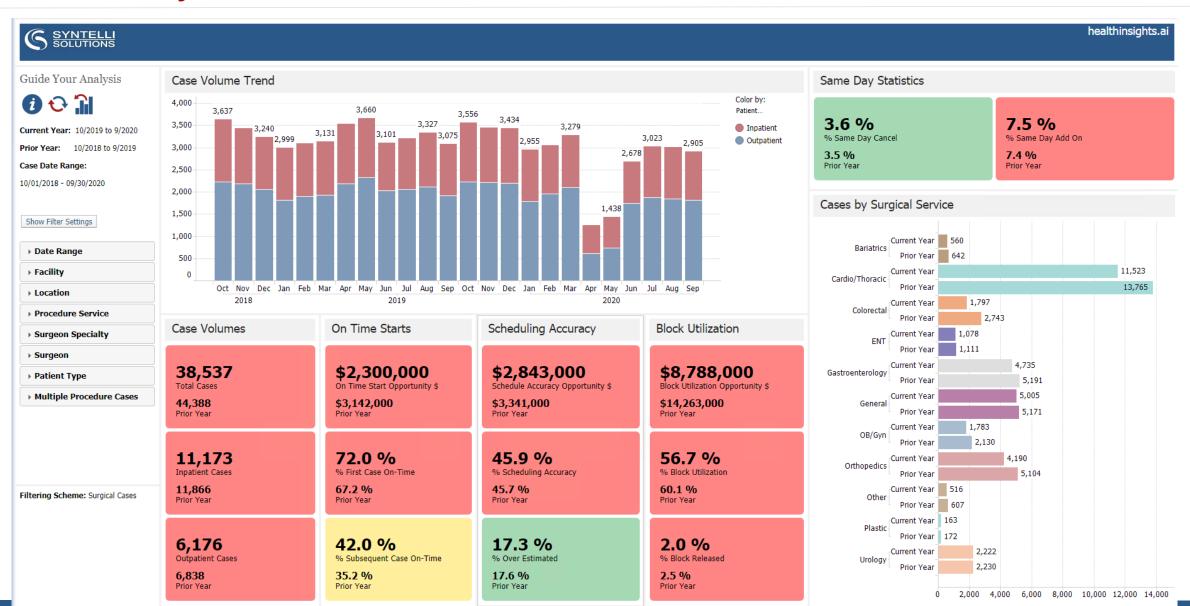
1 http://www.beckershospitalreview.com/or-efficiency-best-practices-for-each.html

https://nursing.duke.edu/sites/default/files/vanwinkle_article.pdf



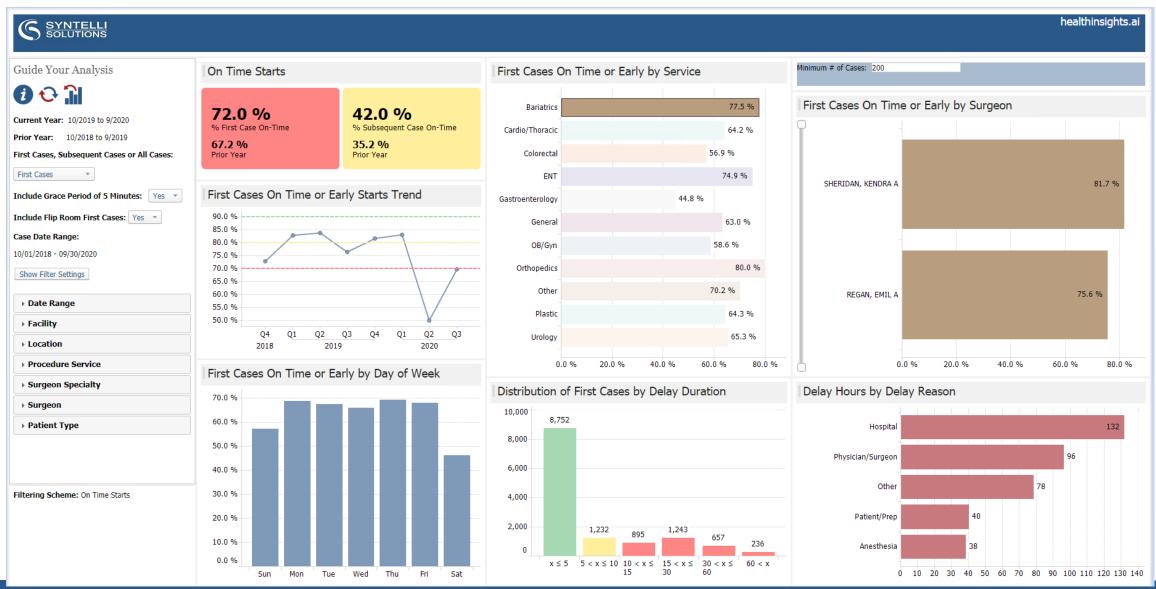
Executive Summary





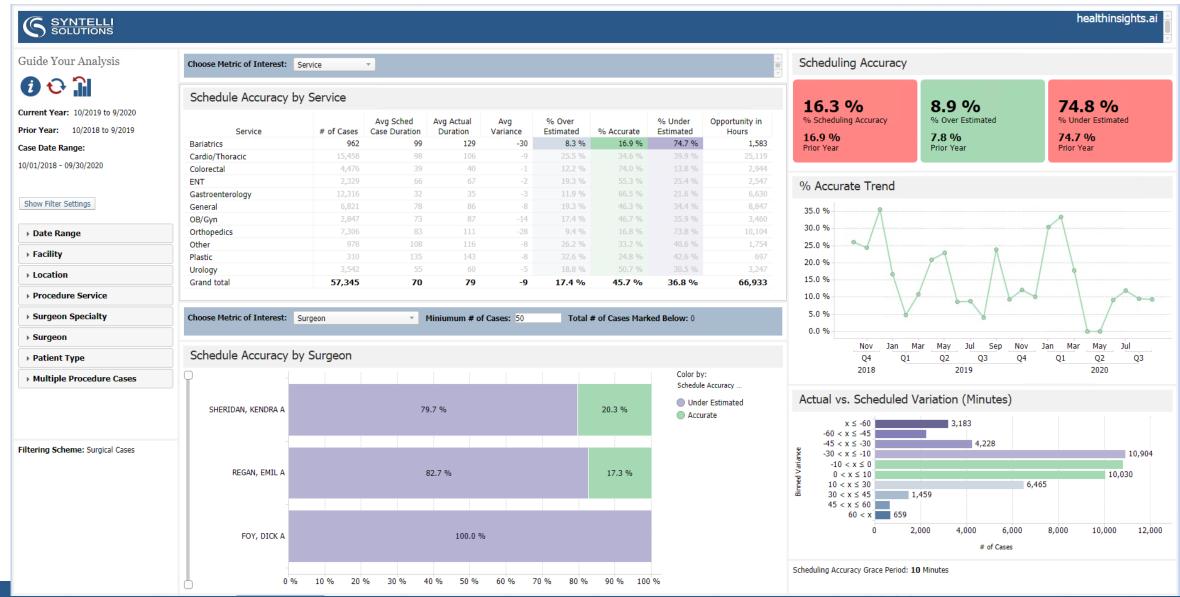
On Time Starts





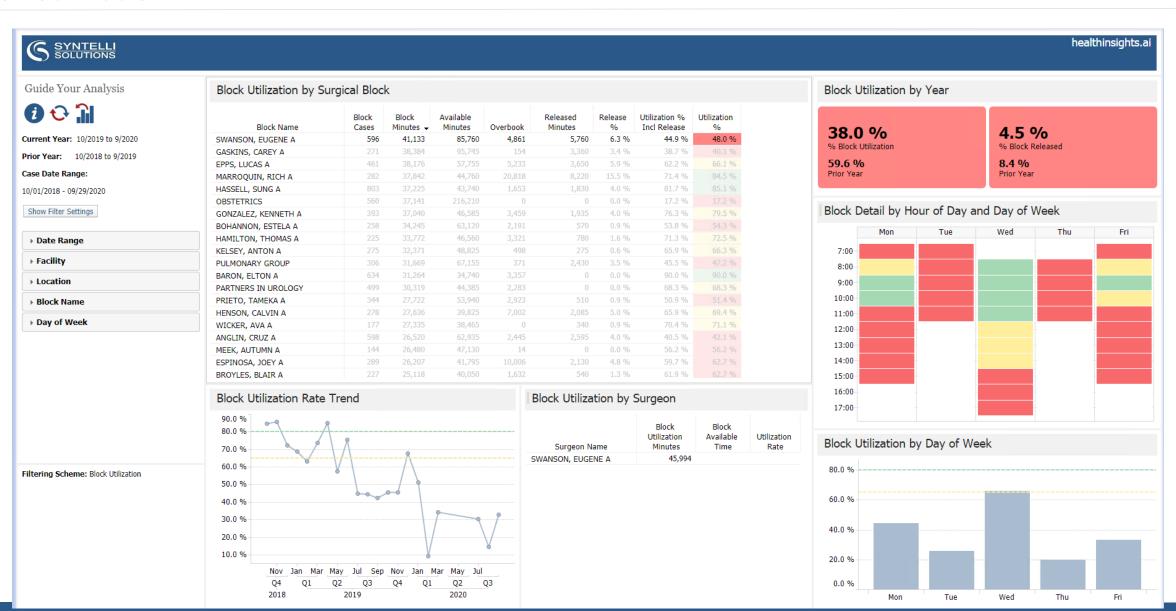
Schedule Accuracy





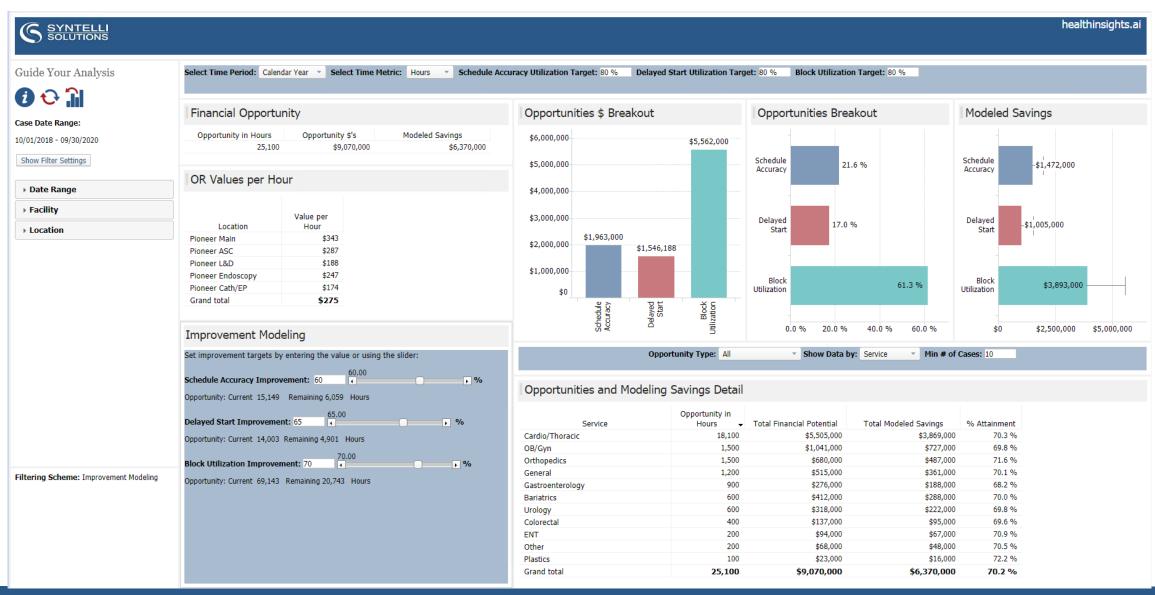
Block Utilization





Improvement Modeling

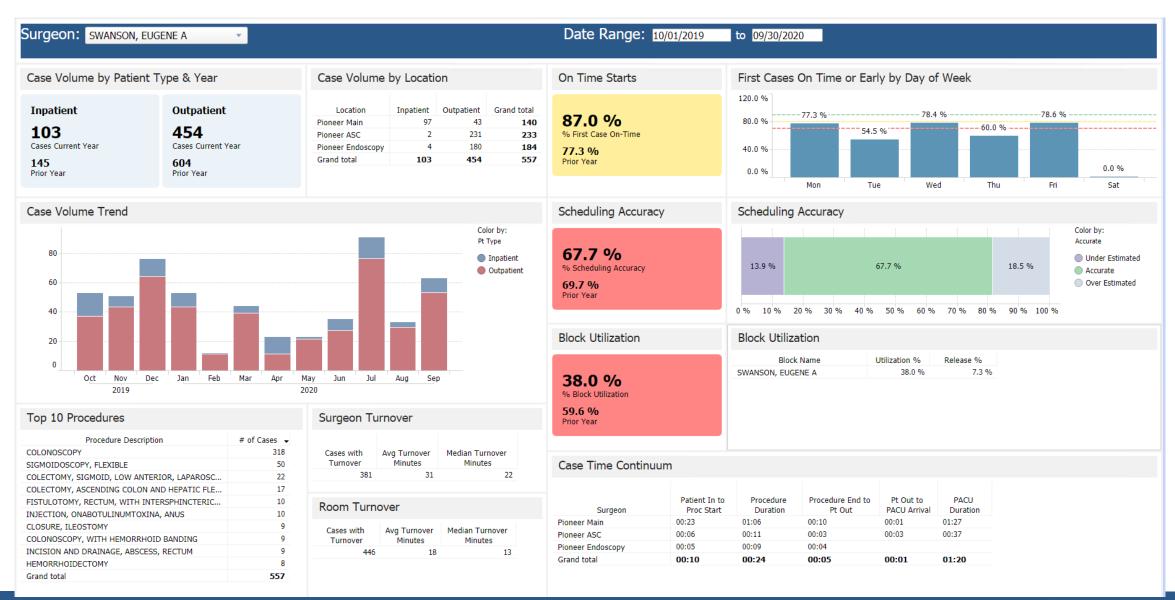






Surgeon Scorecard

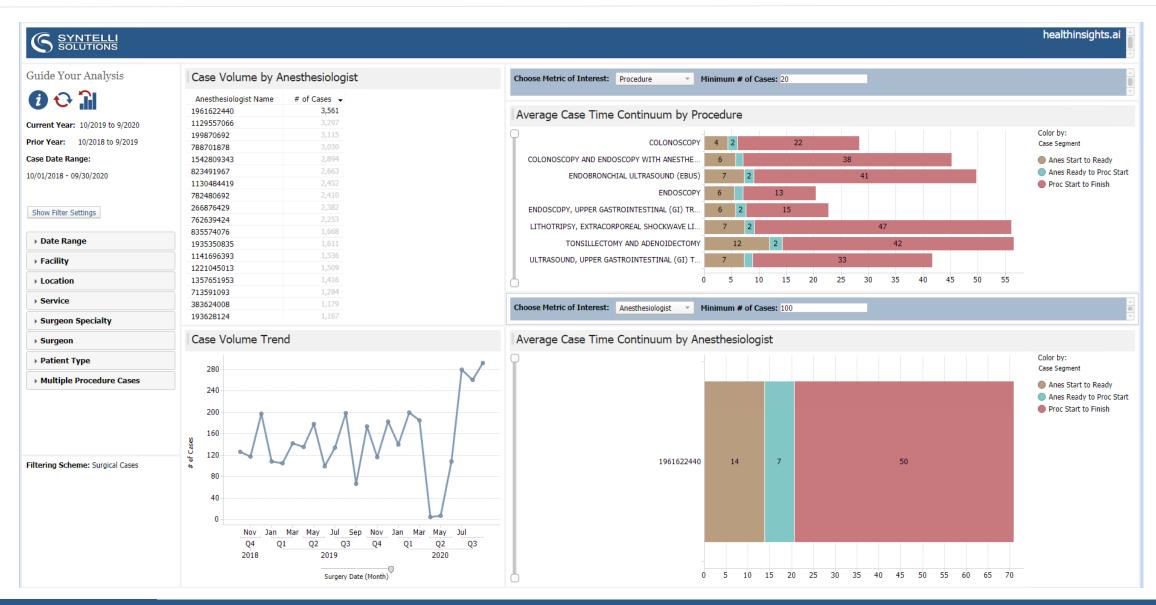






Anesthesia Statistics

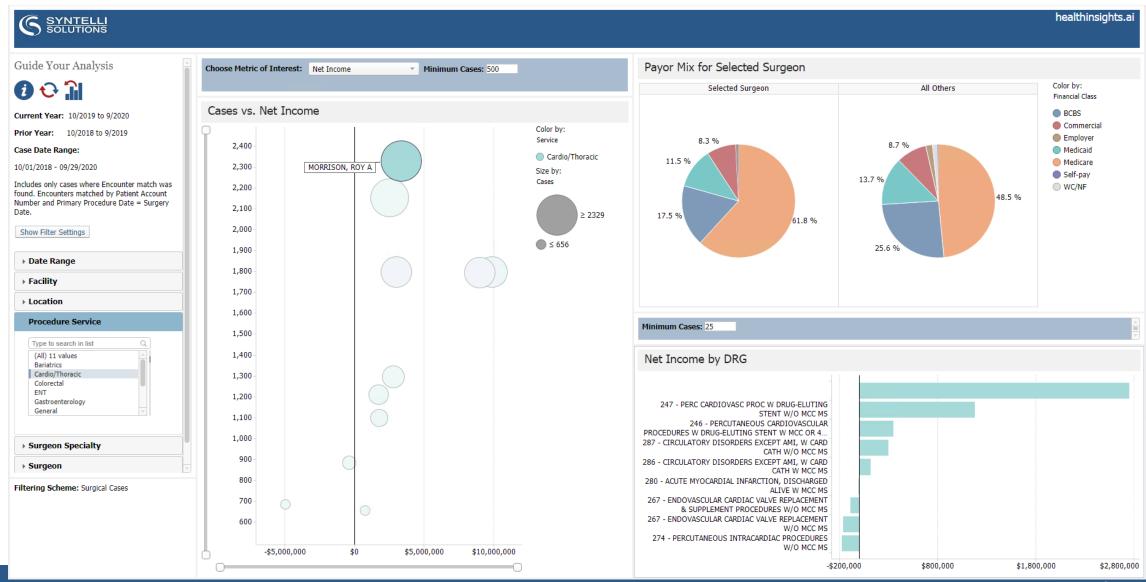






Contribution Margin & Net Income





Direct Cost Opportunity



SYNTELLI

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Guide Your Analysis







Case Date Range:

10/01/2018 - 06/16/2020

Includes only cases where Encounter match was found. Encounters matched by Patient Account Number and Primary Procedure Date = Surgery Date.

Direct Costs by Procedure

Show Filter Settings

→ Date Range

▶ Facility ▶ Location

▶ Procedure Service

Surgeon Specialty

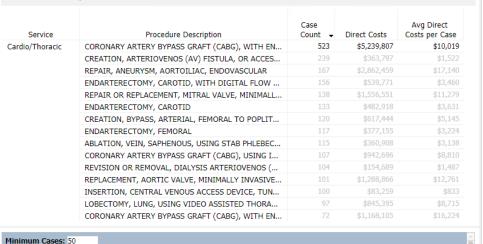
▶ Surgeon

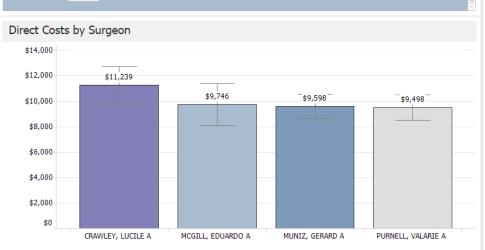
▶ Patient Type

▶ MS DRG

▶ Department ▶ Revenue Code

Filtering Scheme: Cost Detail









Detailed Utilization



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Guide Your Analysis







Case Date Range:

10/01/2018 - 02/07/2020

Includes only cases where Encounter match was found. Encounters matched by Patient Account Number and Primary Procedure Date = Surgery Date.

Show Filter Settings

→ Patient Type→ MS DRG→ Service Item

→ Date Range	
→ Facility	
→ Location	
→ Procedure Service	
→ Surgeon Specialty	
→ Surgeon	

Filtering Scheme: Cost Detail

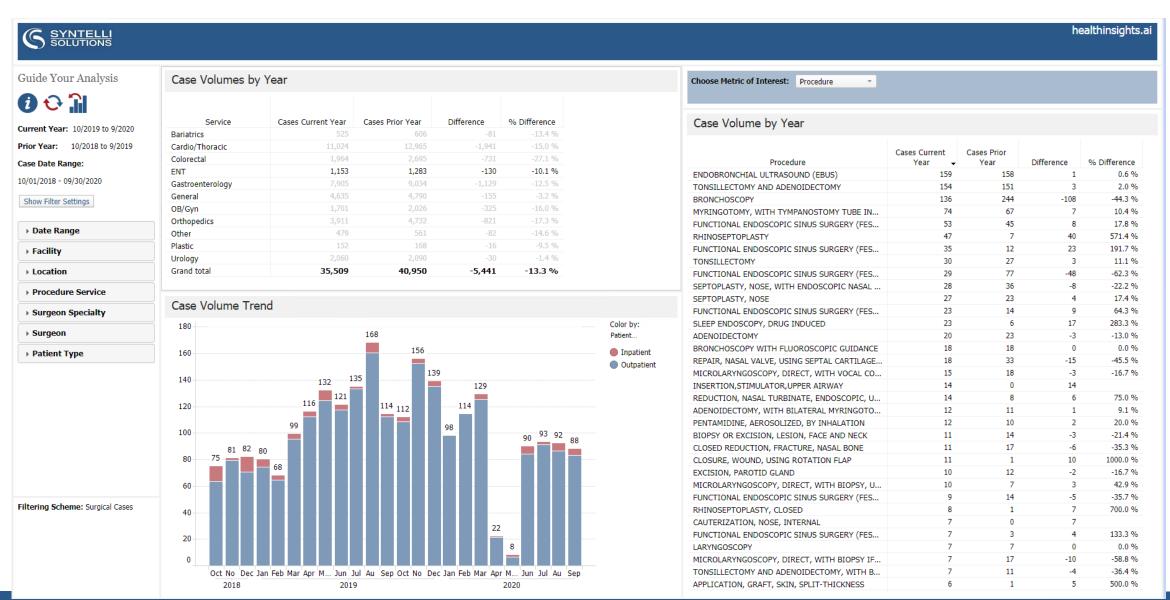
Minimum # of Cases: 10

Service Item Detail

Service Item Code & Name	Avg Direct Tot
SUP32849 - STABILIZER, TISSUE, EVOL, OCTOPUS 92 \$1,515 \$139,408 -	Costs
SUP64796 - CDS,CABG,OFF-PUMP 100 \$1,104 \$110,410 -	\$1,783
SUP33869 - POSITIONER,HEART,URCHIN 100 \$966 \$96,646 - </th <th>\$1,469</th>	\$1,469
SUP53493 - DRESSING,PREVENA,CUSTOMIZABLE 17 \$494 \$8,401 - - - 27 \$503 \$13,576 - SUP29502 - CDS,CABG PART 1 103 \$493 \$50,781 93 \$481 \$44,749 155 \$482 \$74,715 130 SUP33073 - DRESSING,PREVENA,20CM 25 \$428 \$10,702 - - - 111 \$459 \$50,903 12 SUP32376 - PACK,SMART,PREP2 23 \$397 \$9,138 - - - 31 \$416 \$12,905 26 SUP29518 - CATH,SWAN,CCO,8F 99 \$359 \$35,508 47 \$354 \$16,618 155 \$354 \$54,802 130 SUP29480 - KIT,INTRO,PERCU SHEATH,7.5-8FR 103 \$239 \$24,655 93 \$241 \$22,453 155 \$356 \$36,646 130 SUP32140 - DERMABOND,SKIN CLOS,SM,PRINEO,22CM 98 \$175 \$17,173 - - - - - - - - - - <th>-</th>	-
SUP29502 - CDS,CABG PART 1 103 \$493 \$50,781 93 \$481 \$44,749 155 \$482 \$74,715 130 SUP33073 - DRESSING,PREVENA, 20CM 25 \$428 \$10,702 - - - 111 \$459 \$50,903 12 SUP32376 - PACK, SMART, PREP2 23 \$397 \$9,138 - - - - 31 \$416 \$12,905 26 SUP29518 - CATH, SWAN, CCO,8F 99 \$359 \$35,508 47 \$354 \$16,618 155 \$354 \$54,802 130 SUP29480 - KIT, INTRO, PERCU SHEATH, 7.5-8FR 103 \$239 \$24,655 93 \$241 \$22,453 155 \$236 \$36,646 130 SUP58140 - DERMABOND, SKIN CLOS, SM, PRINEO, 22CM 98 \$175 \$17,173 - - - 89 \$148 \$13,147 120 SUP32346 - KIT, BLOWER/MISTER 13 \$64 \$830 - - - - - - - - - <th>-</th>	-
SUP33073 - DRESSING,PREVENA,20CM 25 \$428 \$10,702 - - - 111 \$459 \$50,903 12 SUP32376 - PACK,SMART,PREP2 23 \$397 \$9,138 - - - - 31 \$416 \$12,905 26 SUP29518 - CATH,SWAN,CCO,8F 99 \$359 \$359 \$35,508 47 \$354 \$16,618 155 \$354 \$54,802 130 SUP29480 - KIT,INTRO,PERCU SHEATH,7.5-8FR 103 \$239 \$24,655 93 \$241 \$22,453 155 \$236 \$36,646 130 SUP58140 - DERMABOND,SKIN CLOS,SM,PRINEO,22CM 98 \$175 \$17,173 - - - 89 \$148 \$13,147 120 SUP32346 - KIT,BLOWER/MISTER 13 \$64 \$830 - <t< th=""><th>-</th></t<>	-
SUP32376 - PACK,SMART,PREP2 23 \$397 \$9,138 - - - 31 \$416 \$12,905 26 SUP29518 - CATH,SWAN,CCO,8F 99 \$359 \$35,508 47 \$354 \$16,618 155 \$354 \$54,802 130 SUP29480 - KIT,INTRO,PERCU SHEATH,7.5-8FR 103 \$239 \$24,655 93 \$241 \$22,453 155 \$236 \$36,646 130 SUP58140 - DERMABOND,SKIN CLOS,SM,PRINEO,22CM 98 \$175 \$17,173 - - - 89 \$148 \$13,147 120 SUP32346 - KIT,BLOWER/MISTER 13 \$64 \$830 - <	\$483
SUP29518 - CATH,SWAN,CCO,8F 99 \$359 \$35,508 47 \$354 \$16,618 155 \$354 \$54,802 130 SUP29480 - KIT,INTRO,PERCU SHEATH,7.5-8FR 103 \$239 \$24,655 93 \$241 \$22,453 155 \$236 \$36,646 130 SUP38140 - DERMABOND,SKIN CLOS,SM,PRINEO,22CM 98 \$175 \$17,173 - - - 89 \$148 \$13,147 120 SUP32346 - KIT,BLOWER/MISTER 13 \$64 \$830 - <th>\$425</th>	\$425
SUP29480 - KIT,INTRO,PERCU SHEATH,7.5-8FR 103 \$239 \$24,655 93 \$241 \$22,453 155 \$236 \$36,646 130 SUP58140 - DERMABOND,SKIN CLOS,SM,PRINEO,22CM 98 \$175 \$17,173 - - - 89 \$148 \$13,147 120 SUP32346 - KIT,BLOWER/MISTER 13 \$64 \$830 - - - - - - - 26 SUP32143 - DRESSING,AQUACEL,SURG,9X30CM 57 \$57 \$3,270 78 \$58 \$4,501 25 \$56 \$1,399 -	\$402
SUP58140 - DERMABOND,SKIN CLOS,SM,PRINEO,22CM 98 \$175 \$17,173 - - - 89 \$148 \$13,147 120 SUP32346 - KIT,BLOWER/MISTER 13 \$64 \$830 - - - - - - - - 26 SUP32143 - DRESSING,AQUACEL,SURG,9X30CM 57 \$57 \$3,270 78 \$58 \$4,501 25 \$56 \$1,399 -	\$354
SUP32346 - KIT,BLOWER/MISTER 13 \$64 \$830 -	\$237
SUP32143 - DRESSING,AQUACEL,SURG,9X30CM 57 \$57 \$3,270 78 \$58 \$4,501 25 \$56 \$1,399 -	\$200
	\$68
SUB30701 - DRESSING AQUACEL SURG 9235CM 11 \$51 \$564 17 \$51 \$871	-
50F50F01 DRESSING, PAZSON 11 401 401 17 401	-
SUP32615 - SUTURE,WIRE,S/S #7,M655G 102 \$50 \$5,132 93 \$45 \$4,220 126 \$64 \$8,036 46	\$45
SUP33217 - KIT,APPLICATOR,SPRAY 45 \$49 \$2,222 65 \$50 \$3,236 -	-
SUP33841 - CLIP,LIGATION,TI 24,5M RED 103 \$46 \$4,754 93 \$35 \$3,219 155 \$30 \$4,579 129	\$32
SUP31840 - CLAMP, VACUSTAT, ANG, MIDI, WHT 103 \$40 \$4,080 - <	-
SUP32725 - CATH,THORACIC,RT ANG,28F 102 \$36 \$3,698 123 \$34 \$4,158 79	\$35
SUP29582 - DERMABOND, SKIN CLOSURE, ADVANCD, PEN 39 \$32 \$1,253 93 \$60 \$5,579 107 \$32 \$3,403 21	\$34
SUP28943 - PUNCH,AORTIC,4.0 42 \$30 \$1,242 66 \$30 \$1,957 127 \$30 \$3,810 81	\$30
SUP29102 - CLIP,LIGATION,TI 24,MED 41 \$18 \$738 24 \$18 \$431 13 \$22 \$288 14	\$18
SUP33354 - CATH, THORACIC, STRT, 32F 101 \$13 \$1,322 121 \$12 \$1,504 101	\$13
SUP33487 - DRESSING,BIOPATCH,1,4MM CH 103 \$11 \$1,115 22 \$13 \$281 155 \$11 \$1,643 129	\$11
2721323 - HC EOPA CATH 3D 20FR 88 \$75 \$6,557 145 \$74 \$10,716 98	\$72
2721325 - HC 26 SINGLE STAGE VENOUS	\$53
SUP30480 - BLADE,GLIDESCOPE,GVL,3 STAT - - - - 10 \$30 \$298 -	-
SUP31063 - SUTURE,WIRE,S/S,5,18 ,M657G	\$11
SUP31823 - SET,TUBE,INSUFFLATOR 13 \$14 \$188 10	\$15
SUP31907 - HEMOSTAT,ABSORB,NU-KNIT,6X9 154 \$212 \$32,708 -	-
SUP32120 - CLIP,CORONARY,RETRACT,3.0MM 93 \$26 \$2,452 154 \$27 \$4,133 10	\$27
SUP32240 - SENSOR, TEMP, MYOCARDIAL	

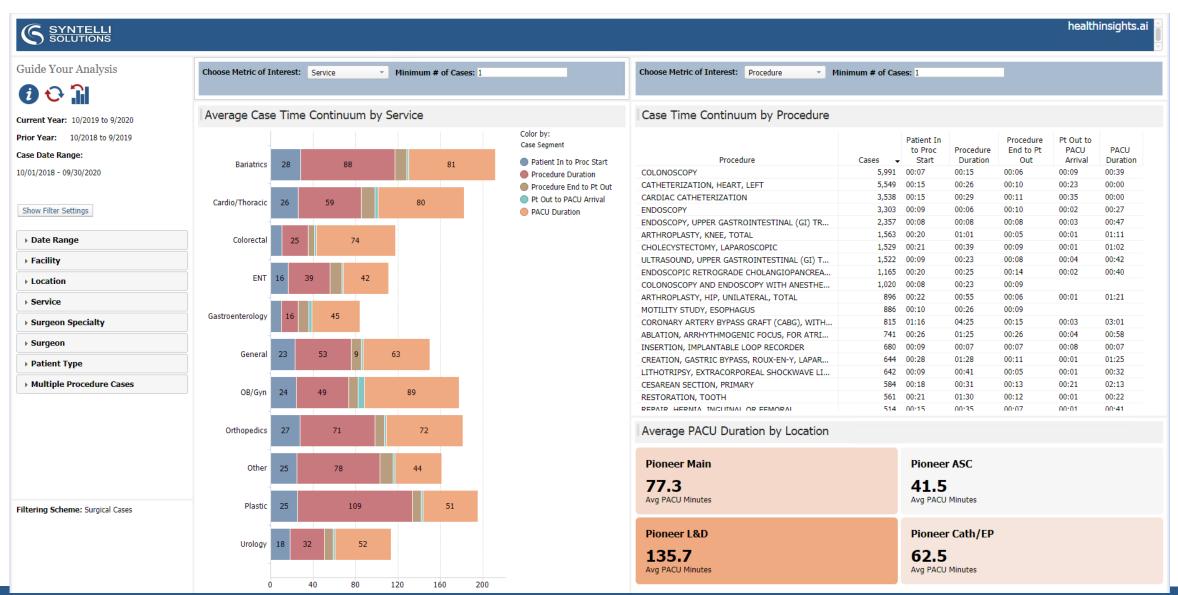
Case Volumes





Case Durations







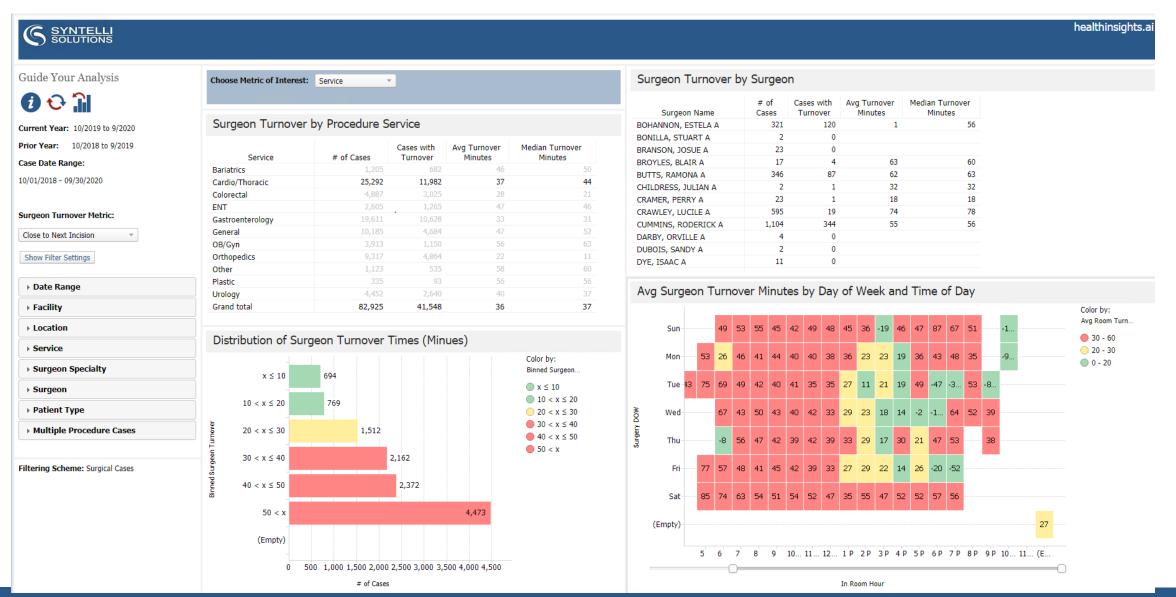
Cancellation Statistics





Surgeon Turnover





Room Utilization





Surgeon Utilization



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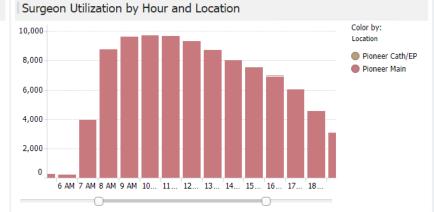
Surgeon Utilization

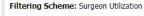
Surgeon Name	Total Cases ↓	Block Cases	Block Case Minutes	Out of Block Minutes	Non Block Cases	Non Block Minutes	Out of Block Case %
MORRISON, ROY A	867	471	21,743	12,626	396	24,460	45.7 %
FALCON, RAE A	802	475	19,257	27,503	327	27,654	40.8 %
PURNELL, VALARIE A	668	497	140,825	19,560	171	49,465	25.6 %
GEE, ED A	651	552	58,248	880	99	10,619	15.2 %
PEOPLES, OMAR A	609	436	11,612	24,516	173	12,520	28.4 %
HAYWOOD, FRANCIS A	588	382	23,203	4,312	206	14,958	35.0 %
NOONAN, CORNELL A	536	281	22,949	499	255	21,062	47.6 %
MUNIZ, GERARD A	500	402	111,586	8,872	98	26,359	19.6 %
GOETZ, DAMIEN A	444	141	15,350	2,499	303	29,388	68.2 %
HASSELL, SUNG A	430	213	10,465	762	217	11,801	50.5 %
BREEDEN, BRIANNA A	429	315	29,179	546	114	9,612	26.6 %
CRAWLEY, LUCILE A	428	361	102,814	3,697	67	19,593	15.7 %
BARON, ELTON A	423	189	10,487	1,033	234	14,351	55.3 %
BOLIN, MAXWELL A	413	167	16,523	1,556	246	25,009	59.6 %
SPEER, DINA A	400	207	25,424	2,215	193	26,090	48.3 %
ALVARADO, VINCENT A	389	66	4,736	930	323	25,297	83.0 %
FONTAINE, JACKSON A	364	288	34,198	434	76	9,070	20.9 %
CUMMINS, RODERICK A	355	53	5,213	1,288	302	35,673	85.1 %
CHILDRESS, JULIAN A	352	177	18,509	269	175	17,925	49.7 %
COLEY, RANDAL A	345	218	7,824	1,104	127	6,310	36.8 %

								Color by:
6 AM								Total Minutes
7 AM-								Max (2,100)0
8 AM								0
9 AM-								
10 AM								
11 AM								
12 PM								
1 PM-								
2 PM-								
3 PM-								
4 PM								
5 PM-								
6 PM								
7 PM								
	Sun	Mon	Tue	Wed	Thu	Fri	Sat	

Surgeon Utilization Detail

Case ID	Room	Block Case Minutes	Block Case Minutes No Turnover	Out of Block Minutes	Out of Block Minutes No Turnover	Non Block Minutes	Non Block Minutes No Turnover
1011197293	PRM 0003	0	0	0	0	354	354
1018190738	PRM 0003	264	264	0	0	0	(
1019215459	PRM 0007	0	0	0	0	69	69
1020342893	PRM 0006	309	309	0	0	0	(
1025824875	PRM 0002	18	18	0	0	0	(
1026718665	PRM 0002	280	280	0	0	0	(
1035171281	PRM 0002	0	0	0	0	337	337
1051951918	PRM 0003	466	466	14	14	0	(
1053358834	PRM 0002	0	0	0	0	398	398
106082275	PRM 0007	563	563	0	0	0	(
1065041317	PRM 0006	373	373	1	1	0	(

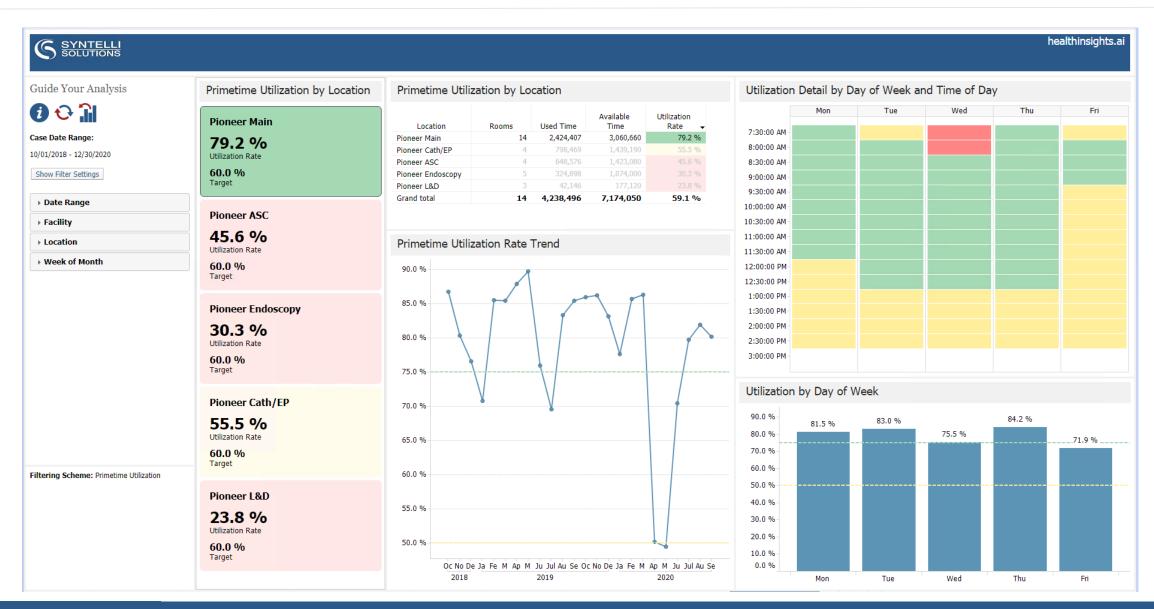




→ Surgeon

Prime Time Utilization

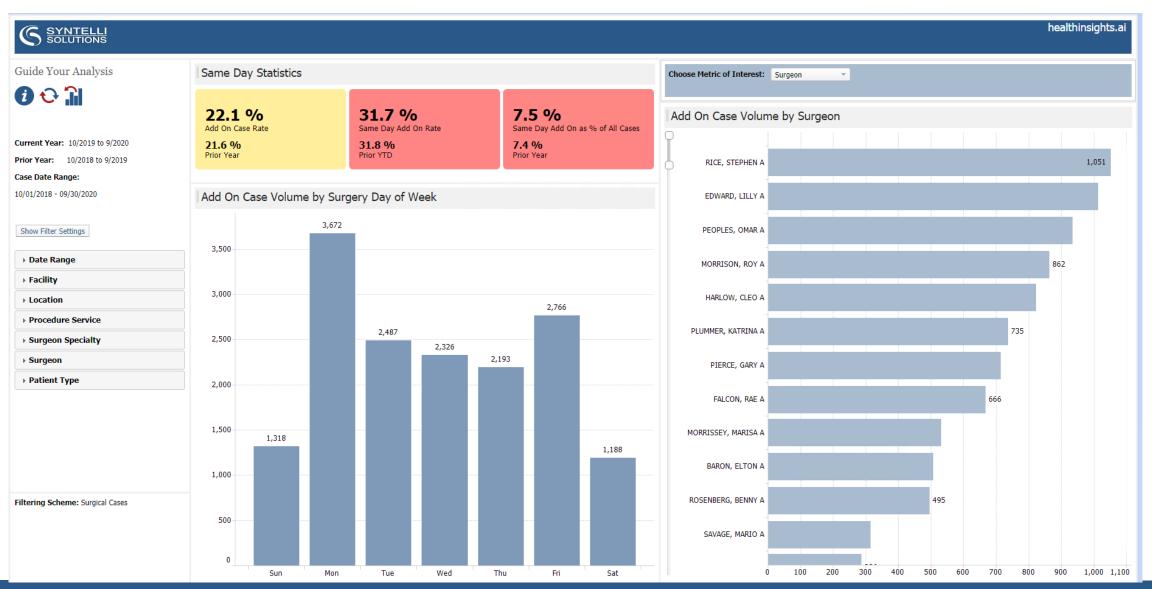






Add On / Same Day Add On Analysis







About Saint Francis

- Implementation Duration: Four months
 - Cloud based implementations: 4 to 6 weeks
- **Deployment:** On-Prem
- Number of Users: 10
- Next Steps: Migrate them to cloud
- Advantages of Cloud:
 - Continuous updates
 - Centralized security
 - Uptime Commitments
 - Ability to add Quaeris













Surgery Insights Customer Success

- 25% improvement in first-case on-time starts
- 20% increase in Surgery block utilization
- \$450,000 estimated value of recaptured surgery time

"We use the Block Utilization Scorecards to identify opportunities to optimize surgical capacity. The reports are an invaluable management tool to quantify usage, encourage timely block release, and to help us to allocate time to new surgeons."

Meaghan McCoy, RN
 Business Manager

 Saint Francis Hospital



HealthInsights.ai – Scheduling Accuracy Data Science Function

Procedure Characteristics

- Planned Number of Procedures
- Laparoscopic or Not
- Anesthesia Type and Risk Class

Surgical Team Characteristics

- Surgery Team Size
- Surgeon's Estimate
- Surgeon Experience
- Anesthesiologists Experience

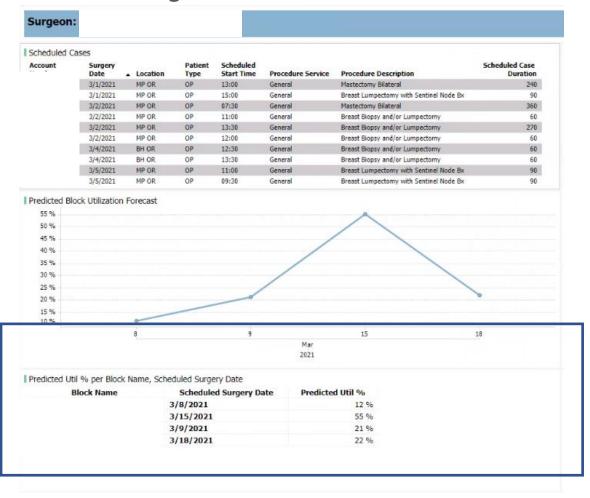
Patient Characteristics

- Patient Severity
- Patient Age
- Patient Gender
- Patient BMI
- Patient Previous Hospital Admissions
- Specific Patient Risk Factors

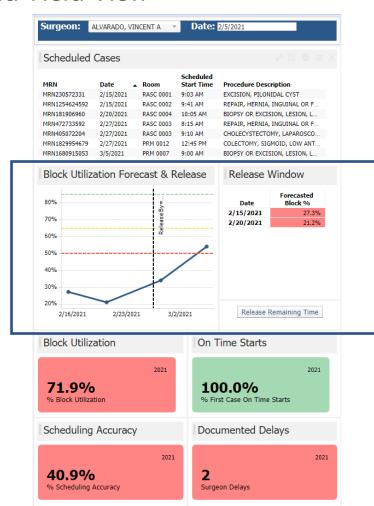


Block Forecasting

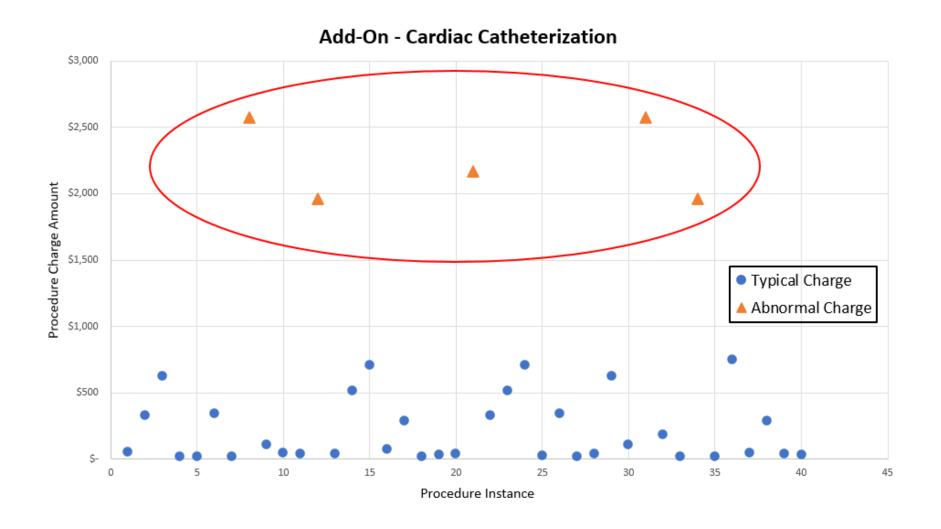
Practice Management



Hand-Held View



Anomaly Detection for Charges



Basic Assessment for your Surgery Analytics Maturity

Level 3 – Integrating data from multiple data systems & basic interactive reports/dashboards

Level 2 – Gathering data from EHR but still running daily volume metrics in excel

Level 1 – Manual input of surgery data and manipulating in Excel

Level 4 – Mastering retrospective reports with some data integration and moving to predictive analytics

Level 5 – Building and deploying predictive surgery models to forecast block utilization, volumes, etc.

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