Using Publicly Available Data for Better Decision Making

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Introduction

Jason Hardin, CPA

Director of Business Intelligence
& Analytics
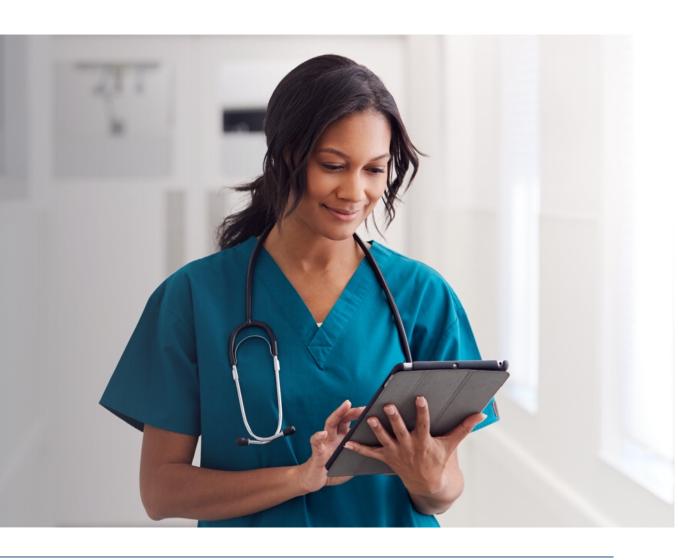
jhardin@pyapc.com

PYA

pyapc.com
800.270.9629

ATLANTA | HELENA | KANSAS CITY | KNOXVILLE | NASHVILLE | TAMPA

Overview

- Open Payments

- Price Transparency

- HCRIS (Hospital Cost Report Information System)

- Survey Data

- NPI Database & Provider Needs Assessments

Overview of Public Data Sources

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- Data-driven approaches can make significant impacts to the way a healthcare system operates and prepares for challenges ahead. Publicly available data is making it easier for analysts to senior-level executives to make educated decisions regarding their company's financial viability, operational performance, and reputational image.

- There are thousands of metrics that can be used and tracked by an organization. It is essential to determine what data is most important by first understanding an organization's needs.

- Categories of data: Financial, Operational, Administrative, and Survey data sources

The Growth of Available Data

In 2013, 153 exabytes of healthcare data existed. This increased to **2,341** exabytes by 2020.

Let's talk about leveraging data for decision making.

How Reliable is Open Payments Data?

A study released by the OIG in August of 2018 stated,

" **Of 11.9 million records published on the Open Payments website for 2015, less than 1 percent were missing required data elements.** "

Open Payments

- Does the organization have a procedure for reviewing the CMS Open Payment Registry and does it include the following?

  - Frequency of review (upon hire, upon contract initiation, upon credentialing, etc.)

  - Dollar threshold for review (e.g., $5,000; $10,000; etc.)

  - Analysis of potential conflicts, such as serving in a decision-making capacity related to the drug or device manufacturer

  - Monitoring of OIG/DOJ enforcement activities related to drug or device manufacturers and relationships with current employees, contractors, medical staff, etc.
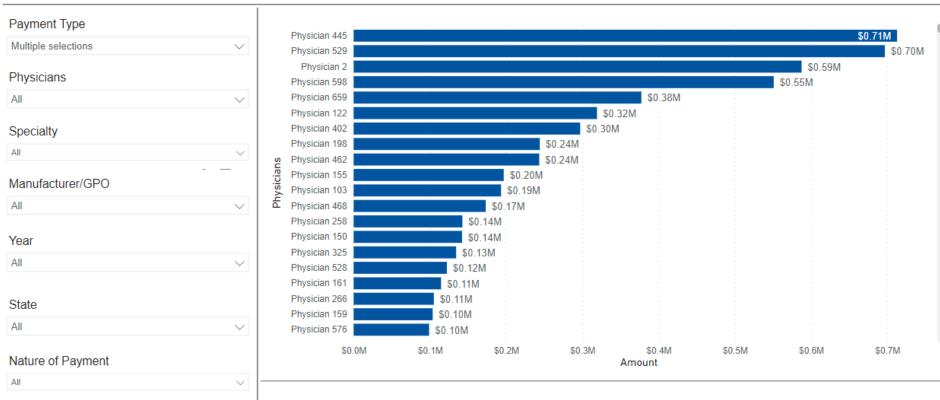
Open Payments Review

- Has an inventory of physician relationships with vendors (per the Open Payment Registry) been compared with the vendor listing to determine if any physicians, either on medical staff or employed, have existing arrangements with vendors utilized by the health system?

  - Is the proportion of time spent speaking, traveling, etc., appropriate?

  - Are these activities provided for in existing employment agreements?

  - Should any of the consulting fees/honoraria have been paid to the health system?

Open Payments

Open Payments by Physician (2016 - 2019)

Price Transparency

- The data shows how negotiated rates vary across markets and within a hospital or across a single system

- Allows for the identification of lower-priced providers (useful for employers, consumers, insurers, etc.)

  - 70 services required by all hospitals; 230 others selected by each hospital

- Based on negotiated rates in your market, what opportunities are presented to your hospital?

  - Payer negotiations

  - Marketing initiatives

  - Understanding new service offerings

Price Transparency

HCRIS – Hospital Cost Report Information System

- Data can be synthesized to analyze trends across a particular provider for multiple years and/or a peer group of providers based on specific attributes.

- The information can be used for modeling, competitive analysis, due diligence, and even prospecting by vendors.

- Most successful use of the data will be achieved by a collaborative partnership between the data scientists and reimbursement professionals that understand where the data is derived and how it is used in the cost reporting process

- The cost report contains facility characteristics, utilization data, cost and charges by cost center, and financials statement data

Hospital Financial Metric Comparison – HCRIS

Source Metric	Hospital		
	FY18	FY19	FY20
A - Cash	$47,375,732	$74,019,320	$133,131,336
B - Current Assets	$210,632,498	$221,739,432	$280,359,161
C - Current Liabilities	$165,316,292	$167,902,611	$227,811,701
D - Depreciation & Amortization	$30,021,896	$29,358,711	$29,640,134
E - Excess Revenues over Expenses	($49,099,075)	$8,208,477	($13,241,857)
F - Interest Expense	$8,007,167	$7,781,823	$7,679,342
G - Long-Term Debt			
H1 - Net Assets-Total Assets	$263,608,237	$247,650,109	$221,616,002
H2 - Net Assets-Total Liabilities			
I - Net Fixed Assets	$253,145,764	$247,243,828	$240,319,309
J - Net Patient Accounts Receivable (Including Due From)	$112,053,466	$96,855,630	$99,992,705
K - Net Patient Revenue	$1,007,213,503	$994,101,579	$910,540,662
M - Other Revenue	($1,509,867)	($1,232,584)	($1,406,036)
N - Short-Term Investments	$1,644,087	$2,198,637	$2,095,686
O - Total Assets	$868,627,368	$880,332,917	$1,038,791,465
P - Total Expense	$1,159,571,767	$1,142,634,435	$1,151,897,241
Q2 - Total Revenue-Gross Charges	$1,131,209,810	$1,146,403,140	$1,123,844,930
R1 - Unrestricted Long-Term Investments	$123,418,947	$125,308,928	$132,384,151
R2 - Long-Term Investments			
S - Capital-Related Expense			
T - Salaries	$680,531,089	$700,281,411	$691,085,608
U - Average Hourly Wage			
V - Benefits as Percentage of Salary			
W - Nursing Cost Per Patient Per Day			
W1 - Patients per Day			
X - Accumulated Depreciation	($522,829,281)	($508,647,985)	($535,215,821)

Hospital to Hospital Comparison

Name	Operating Margin	Return on Equity	Return on Total Assets	Total Asset Turnover
Hospital A	3.0%	12.1%	6.0%	2.0
Hospital B	1.9%	6.4%	3.1%	1.7
Hospital C	-3.6%	-11.5%	-4.0%	1.1
Hospital E	0.9%	0.4%	0.3%	0.3
Hospital F	-9.1%	-128.0%	-18.6%	2.1
Hospital G	1.3%	6.6%	1.5%	1.1
Hospital H	-26.6%	-187.4%	-23.3%	0.9

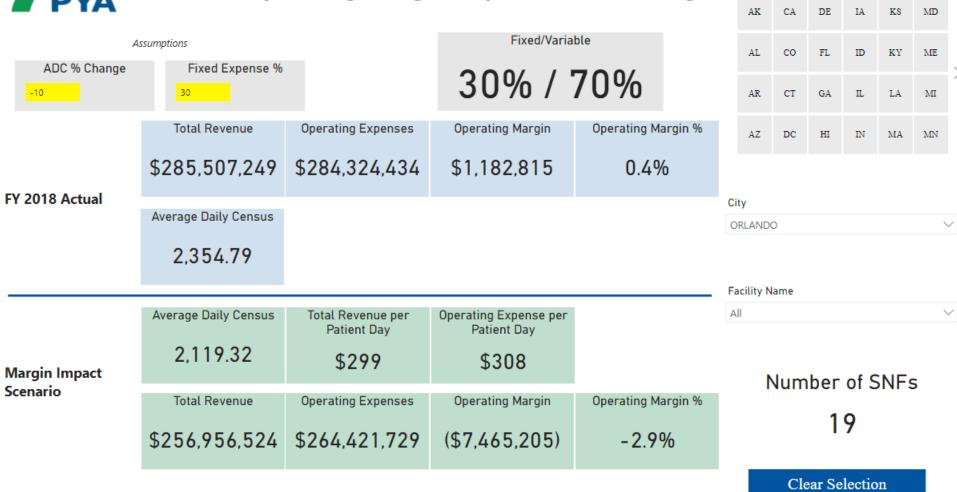# Skilled Nursing Facility Financial Risk Assessment

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- In April 2020, PYA performed a financial risk assessment of all Skilled Nursing Facilities (SNFs) nationally to understand the ensuing impact of a change in average daily census

- If-then analyses allowed operators to project financial health throughout the early days of the COVID pandemic

Survey Data

- Physician benchmark survey data is used to help determine appropriate compensation for physicians' services agreements. PYA uses benchmark data to measure various components of an arrangement such as:

  - Proposed or Historical Total Compensation

  - Professional Collections

  - Personally Performed Work Relative Value Units

  - Compensation per wRVU

  - Compensation to Collection Ratios

Survey Data Utility

- Physician benchmark data is used in several different types of projects:

  - Financial Assistance Calculations

  - Budget Projections

  - Compensation Plan Design

  - Provider Risk Assessments

  - Employed Physician Dashboards

Survey Data

Specialty: All | A B C D E F G H I L M N O P Q R S T U V

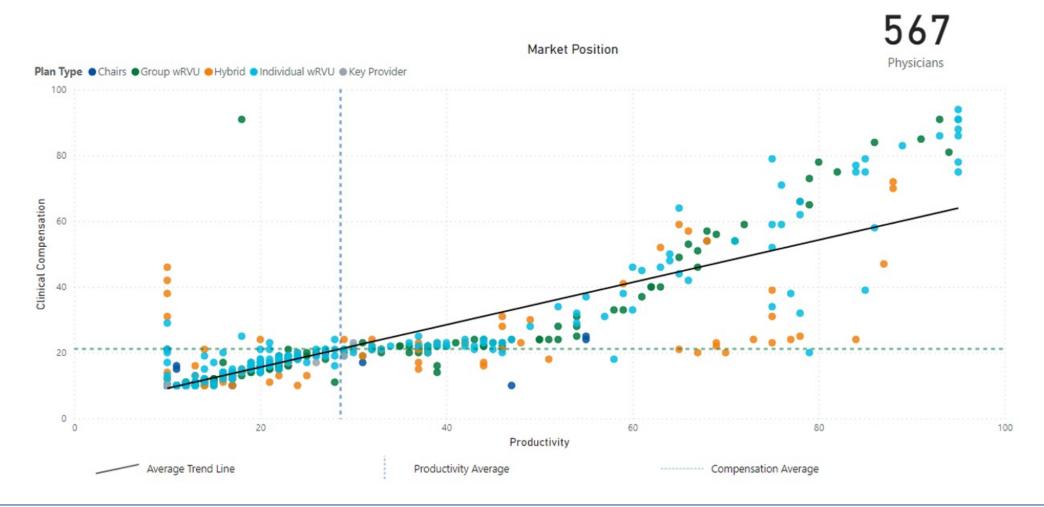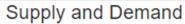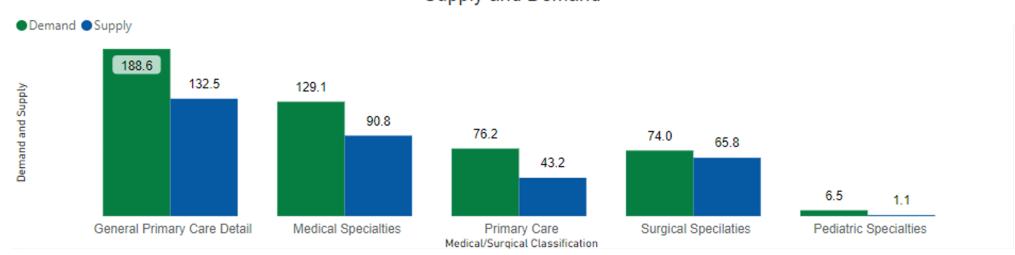| Specialty	25th	50th	Mean	75th	90th
Addictive Medicine	$254,790	$279,330	$279,140	$309,200	$340,750
Allergy/Immunology	$258,757	$314,889	$347,135	$406,184	$528,020
Anesthesia Assistant	$167,534	$185,013	$183,580	$205,956	$229,401
Anesthesiology	$373,509	$438,287	$445,934	$505,753	$588,289
Anesthesiology (Pediatric)	$389,576	$431,908	$436,973	$483,310	$542,118
Anesthesiology: Pain Management	$403,215	$475,726	$526,815	$583,486	$806,161
Audiology	$79,518	$95,040	$104,404	$114,510	$148,277
Bariatrics (Nonsurgical)/Obesity Medicine	$196,692	$237,880	$261,966	$279,915	$453,152
Breast Oncology	$276,324	$347,439	$360,671	$433,271	$503,137
Cardiology – Transplant and Advanced Heart Failure	$454,888	$571,288	$583,546	$658,853	$797,248
Cardiology: Echo Lab/Nuclear	$411,658	$505,921	$524,142	$654,282	$754,154
Cardiology: Electrophysiology	$526,031	$642,344	$678,914	$789,817	$993,385
Cardiology: Invasive	$479,821	$588,085	$620,679	$709,696	$909,126
Cardiology: Invasive/Interventional	$523,879	$647,680	$686,487	$789,278	$1,007,953
Cardiology: Non-Invasive	$401,667	$511,665	$529,792	$622,077	$767,258
Cardiovascular – Anesthesiology	$436,600	$488,255	$494,261	$516,550	$565,789
Chiropractor	$110,688	$130,518	$145,882	$156,455	$232,621
Clinical Nurse Specialist	$94,148	$119,195	$121,235	$139,374	$159,553
Clinical Nutrition and Bariatric Medicine	$252,531	$266,693	$297,452	$325,741	$410,048
Concierge Medicine	$320,252	$372,472	$393,654	$486,819	$490,451
Critical Care/Intensivist	$358,055	$419,018	$438,231	$490,700	$585,689
CRNA	$178,417	$197,861	$197,906	$214,548	$235,415
Dentistry	$162,409	$186,112	$203,205	$235,484	$290,710

NPI Database and Physician Needs Assessment

- National Provider Identifier is a HIPAA standard that helps identify each physician by a unique number
  - Providers within a Stark-defined service area.
  - Provider inventory can be put together to represent provider supply.

- A physician needs assessment helps determine the provider complement required in a defined service area by estimating provider needs for a population and determining the appropriate number of providers to meet those needs.

- It is an important component of a hospital or health system's strategic planning process and supports compliant provider recruitment activities under applicable federal and state laws and requirements.

Physician Needs Assessments

Supply and Demand

Medical/Surgical Classification	Demand	Supply	APP FTEs	APP % of Supply	FTE Difference #	Surplus/Deficit Range	Relative Need
Surgical Specialties	**74.0**	**65.8**	**7.74**	**12%**	**-8.31**	**-7.9 : -8.7**	**11%**
Vascular Surgery	2.6	0.9	0.00	0%	-1.69	-1.6 : -1.8	65%
Urology	7.1	5.5	0.81	15%	-1.71	-1.6 : -1.8	24%
Thoracic Surgery	3.2	1.5	0.00	0%	-1.69	-1.6 : -1.8	53%
Sports Medicine (Orthopedic Surgery)	0.6	0.0	0.00	0%	0.00	-0.6 : -0.6	100%
Plastic Surgery	5.1	1.1	0.00	0%	-4.02	-3.8 : -4.2	79%
Otolaryngology	6.7	4.6	0.36	8%	-2.13	-2 : -2.2	32%
Orthopedic Surgery	14.2	15.4	3.87	25%	1.21	1.2 : 1.3	
Oral & Maxillofacial Surgery	0.4	4.0	0.00	0%	3.57	3.4 : 3.8	
Ophthalmology	12.7	12.3	0.00	0%	-0.44	-0.4 : -0.5	3%
Neurological Surgery	3.9	5.3	1.50	28%	1.37	1.3 : 1.4	
General Surgery	17.6	15.4	1.20	8%	-2.19	-2.1 : -2.3	12%

Questions?