Lowering Overall Cost of Care Using Master Claims Data Sets

October 5, 2017

continuum® HEALTH

Better Business. Better Care.

MEET TODAY'S PRESENTERS

David Kovel

Chief Information Officer

David Kovel leads the information systems technology department for Continuum. As Chief Information Officer, Mr. Kovel oversees all of Continuum's technology services, operations, and applications, while supervising strategic planning to ensure that Continuum and its healthcare clients are at the forefront of technological developments that maximize service and efficiency.

Tim Weldon

GM/SVP, Integrated Care

As Continuum's General Manager/Senior Vice President of Integrated Care, Mr. Weldon is responsible for the growth, development and operational support of the company's value-based care and practice transformation initiatives. Through skilled strategic planning and operational efficiency, Mr. Weldon leads his team to drive quality enhancement, effective utilization and improved outcomes for Continuum's customers. With over 20 years of experience, Mr. Weldon designs and implements business and clinical processes that support the success and scalability of Continuum's value-based care service offering.

LEARNING OBJECTIVES

- Learning Objective #1: Better understand the different types of data commonly used in managing quality and cost of care
- Learning Objective #2: Discover how to present actionable insights from claims data sets using MS Office and presentation applications
- Learning Objective #3: Impact clinical and financial goals using lessons from two sample cases

WHO BENEFITS FROM THIS PRESENTATION?

- Providers: You may receive summary reports from payers, but you may not know how (nor have the time) to sort through large data sets.
- Payers: While you already understand the value of claims data sets, you may not be aware of ways in which you can help providers or their management service organizations be more effective.
- ACO/CIN Executives: Your network can only benefit if you have a data driven strategy, know what data to focus on and understand how to leverage existing data sources.

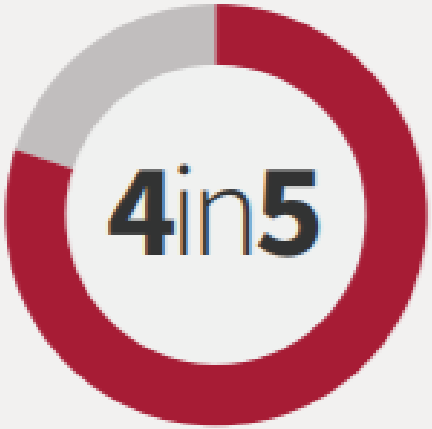
HEALTHCARE TECH SPENDING RISES…

- According to Markets & Markets, the global healthcare analytics market is expected to reach $24.55 Billion by 2021 from $7.39 Billion in 2016. Driving factors include:
  - use of analytics in precision and personalized medicine
  - increasing focus on value-based medicine and cloud-based analytics
  - increasing number of patient registries

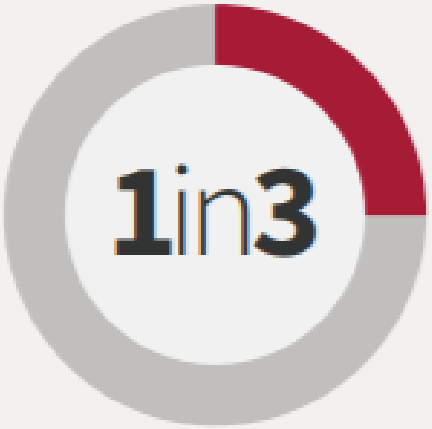
- Physician-owned practices spent between $2,000 and $4,000 more for technology per full-time physician last year than they did in 2015, according to June, 2016 Medical Group Management Association (MGMA) survey.
  - Those costs ranged from $14,000 to $19,000 per physician.

...BUT NO REAL DATA STRATEGY IN PLACE

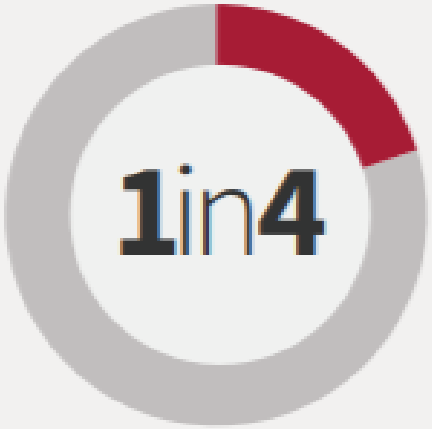
Lack of Effective Data Management Strategies



organizations surveyed do not have an integrated strategy for using analytics



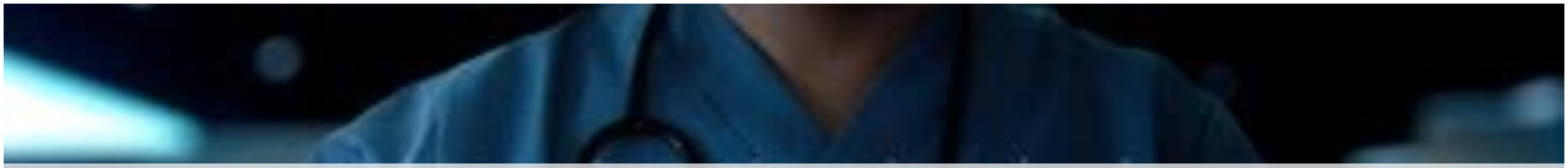
health systems report that they do not know their organization's total spending on analytics



health systems report that they do not have a data governance model in place

Source: Deloitte

WHERE TO BEGIN?



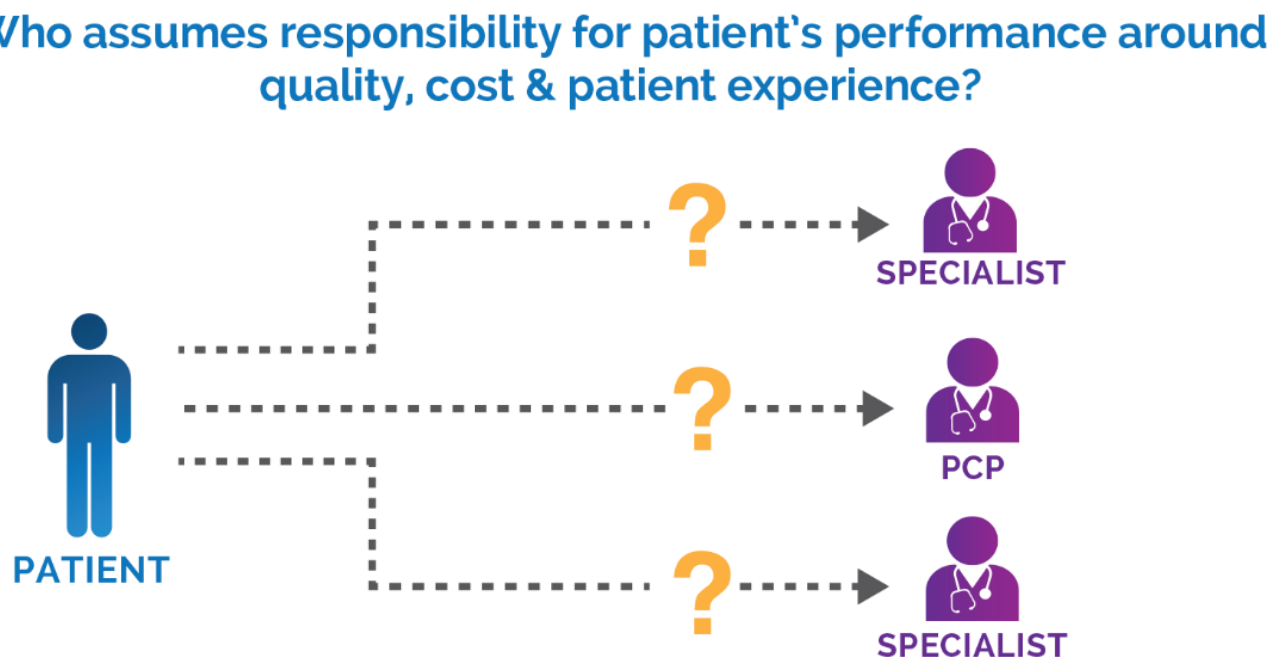
Before investing more money on technology, leverage the valuable insights available through claims data sets

CHALLENGES IN LEVERAGING CLAIMS DATA

Challenge	Solution
Data is not timely; lags 45-60 days after patient is seen	Optimize the RCM process to accelerate the claims submission and avoid preventable denials, so claims data can be prepared faster
Member attribution is inaccurate; incorrect provider-patient matches	Leverage all data resources including claims, attribution and eligibility files from payers as well as provider based billing systems (taker vs maker model)
Incomplete data from payer with important information often redacted	Work closely with payers to identify and collect missing information that could impact quality or cost of care strategy
Lack of in-house expertise or familiarity with data sets	Build team of experts with understanding of healthcare data and sources (use, limitations, nomenclature) or outsource this function to an experienced partner

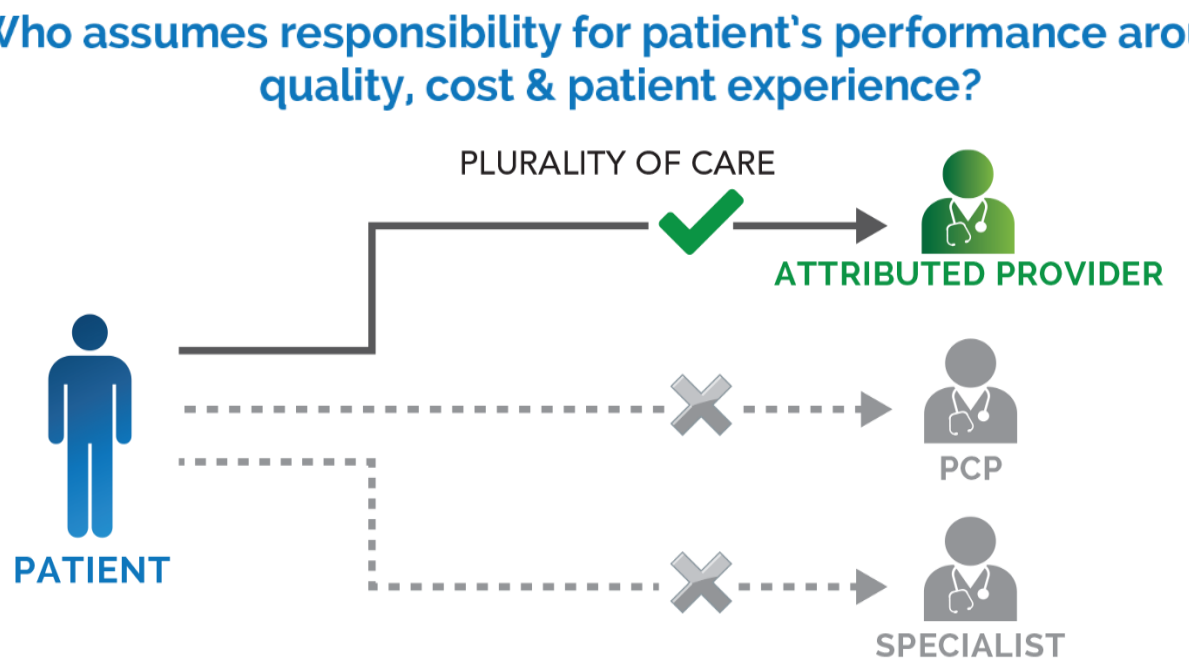
IMPROVE ATTRIBUTION: KNOW THY PATIENT

- Before you can think about focusing on care management for specific patient groups, you must understand the patients attributed to you:
  - Who are they?
  - Why were they attributed to you?



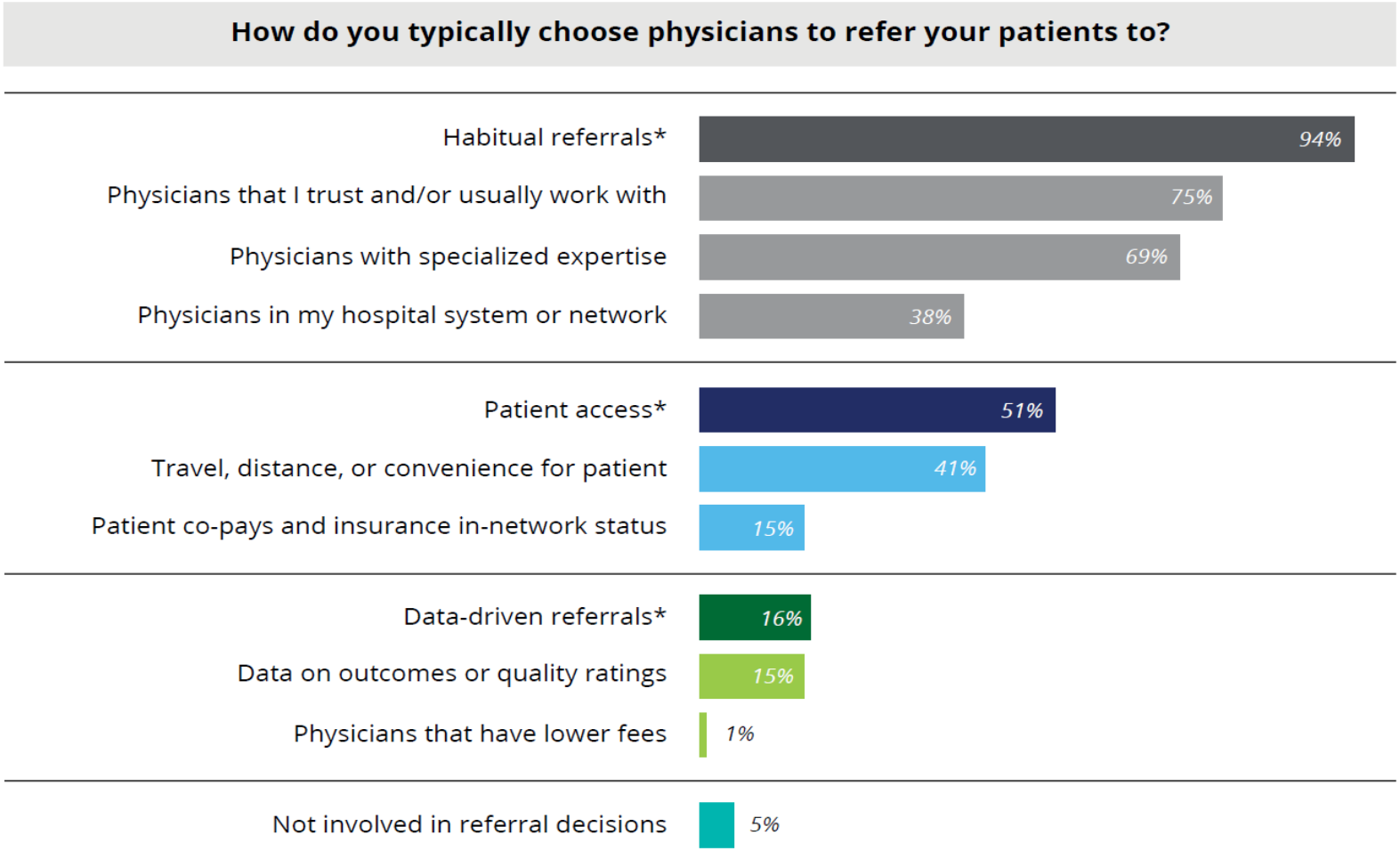
IMPROVE ATTRIBUTION: KNOW THY PATIENT

- Before you can think about focusing on care management for specific patient groups, you must understand the patients attributed to you:
  - Who are they?
  - Why were they attributed to you?



OBTAIN INCOMPLETE OR MISSING DATA

Figure 9. Physicians rarely use data on quality or cost in referral decisions.



Source: Deloitte 2016 Survey of US Physicians

HOW PAYERS CAN HELP

IMPLICATIONS

Many physicians are interested in using data on quality in their referrals; in its absence, they rely on habitual referrals. Given this interest and MIPS incentives tied to resource use measures, physicians may see value in referring patients to providers who routinely use low-intensity (or conservative) approaches. Additionally, if the current trend of increased patient cost sharing due to high deductibles continues, physician interest in cost-related information may grow, since many physicians are attuned to patient access considerations.

What should you consider?

- Organizations employing physicians, or working closely with physicians on value-based care efforts, may need to collaborate with payers in their markets around quality and cost transparency. This should enable the development of comprehensive reports that contain care pattern data both for internal and external physicians and facilities.
- Care pattern data to support referrals should contain information that referring physicians find relevant; the type of "referral destination" may suggest which information should be prioritized.

Source: Deloitte 2016 Survey of US Physicians

HOW PAYERS CAN HELP

- Payers have the opportunity to serve as a data and analytics resource for cost and referral information to support value based care:
  - Share information in real-time or nearly real time with providers, as this will impact their ability to act on it.
  - Invest in more ways to support independent physicians in remaining independent, helping maintain competitive pricing in the marketplace
  - Align quality and resource utilization measures with MIPS, relieving providers of additional quality reporting burdens

Source: Deloitte 2016 Survey of US Physicians

START WITH CLAIMS DATA SETS

- CMS and Commercial Payers maintain information on a variety of data points:
  - provider utilization and payment for various sites of service
  - patient Dx and Rx
  - lab and imaging data
- Claims sets represent the most empirical data on providers, ancillary health services and patients
- Claims also represents the final payment allocated, which has the greatest value to the entire network.

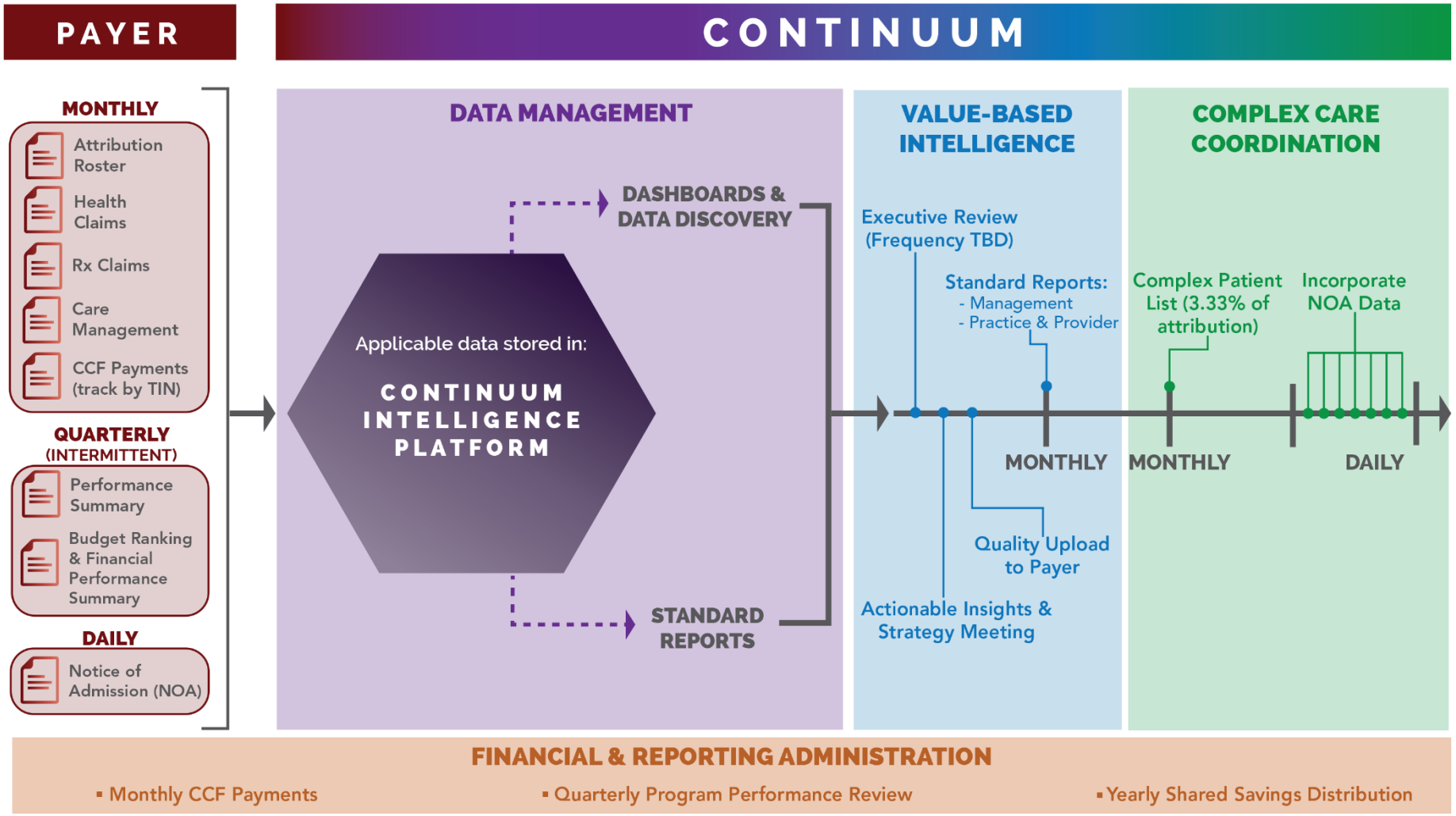
THERE'S GOLD IN THEM HILLS

Mapping Entity	Mapping Attribute	Table 1 - Claim Mapping: Medicare	Table 2 - Claim Mapping: Medicare	Table 3 - Claim Mapping: Medicare	Table 4 - Claim Mapping: Medicare	Table 5 - Claim Mapping: Medicare	Table 6 - Claim Mapping: Medicare	Table 7 - Claim Mapping: Medicare RX	Table 8 - Attri Medic
Health_Claim	Billing Type	CLM_TYPE_CD				CLM_TYPE_CD	CLM_TYPE_CD	CLM_TYPE_CD	
Health_Claim	Primary_Claim_ID	Natural Key Or CUR_CLM_UNIQ_ID				NaturalKey	NaturalKey	CUR_CLM_UNIQ_ID	
Health_Claim	Total_Paid_Amount					CLM_LINE_ALOWD_CHRG_A	CLM_LINE_ALOWD_CHRG_AMT		
Health_Claim_Diagnosis	Diagnosis_Code	PRNCPL_DGNS_CD, ADMTG_DGNS_CD			CLM_DGNS_CD	CLM_LINE_DGNS_CD,CLM_D	GNS_1_CD,CLM_DGNS_2_CD,CLM_DGNS_3_CD,CLM_DGNS_4_CD,CL		
Health_Claim_Diagnosis	Diagnosis_Code_Type	Calculate based on data			Calculate based on data	Computed			
Health_Claim_Diagnosis	Major_Diagnostic_Category_Code	Gap?							
Health_Claim_Diagnosis	Major_Diagnostic_Category_Desc	Gap?							
Health_Claim_Diagnosis	DRG_Grouper				Use OTHER unless it ties up	to the diags in CCLF1			
Health_Claim_Line	Liability_Amount								
Health_Claim_Line	Place_of_Service_Code	OSCAR_NU							
Health_Claim_Line	Rendering_Provider_ID								
Health_Claim_Line	Claim_LN_Rev_Code								
Health_Claim_Line	ServiceCode								
Health_Claim_Line	Date_of_Service								
Health_Claim_Line	ServiceMonetaryAmount								
Health_Claim_Procedure	Code								
Health_Claim_Procedure	CodeSystem								
Health_Claim_Procedure	Date								
Health_Insurance	Effective_Date								

	A	B	C	D	K
1	Source File	Elemer	Claim Field Label	Claim Field Name	T09.2a-CMS Medicare-CCLF #1
2	Table 6: Part A Claims Header File	1	CUR_CLM_UNIQ_ID	Current Claim Unique Identifier	CUR_CLM_UNIQ_ID
3	Table 6: Part A Claims Header File	2	PRVDR_OSCAR_NUM	Provider OSCAR	PRVDR_OSCAR_NUM
5	Table 6: Part A Claims Header File	3	BENE_HIC_NUM	Beneficiary HIC Number	BENE_HIC_NUM
7	Table 6: Part A Claims Header File	4	CLM_TYPE_CD	Claim Type Code	CLM_TYPE_CD
11	Table 6: Part A Claims Header File	5	CLM_FROM_DT	Claim From Date	CLM_FROM_DT
13	Table 6: Part A Claims Header File	6	CLM_THRU_DT	Claim Thru Date	CLM_THRU_DT
15	Table 6: Part A Claims Header File	7	CLM_BILL_FAC_TYPE_CD	Claim Bill Facility Type Code	CLM_BILL_FAC_TYPE_CD
22	Table 6: Part A Claims Header File	8	CLM_BILL_CLSFCTN_CD	Claim Bill Classification Code	CLM_BILL_CLSFCTN_CD
25	Table 6: Part A Claims Header File	9	PRNCPL_DGNS_CD	Principal Diagnosis Code	PRNCPL_DGNS_CD
					#N/A
					CLM_MDCR_NPMT_RSN_CD
					CLM_PMT_AMT
					CLM_NCH_PRMRY_PYR_CD
					PRVDR_FAC_FIPS_ST_CD
					BENE_PTNT_STUS_CD
					DGNS_DRG_CD
					#N/A
					FAC_PRVDR_NPI_NUM
					OPRTG_PRVDR_NPI_NUM
					ATNDG_PRVDR_NPI_NUM
					OTHR_PRVDR_NPI_NUM
					CLM_ADJSMT_TYPE_CD
					CLM_EFCTV_DT
					CLM_IDR_LD_DT
					BENE_EQTBL_BIC_HICN_NUM
					#N/A

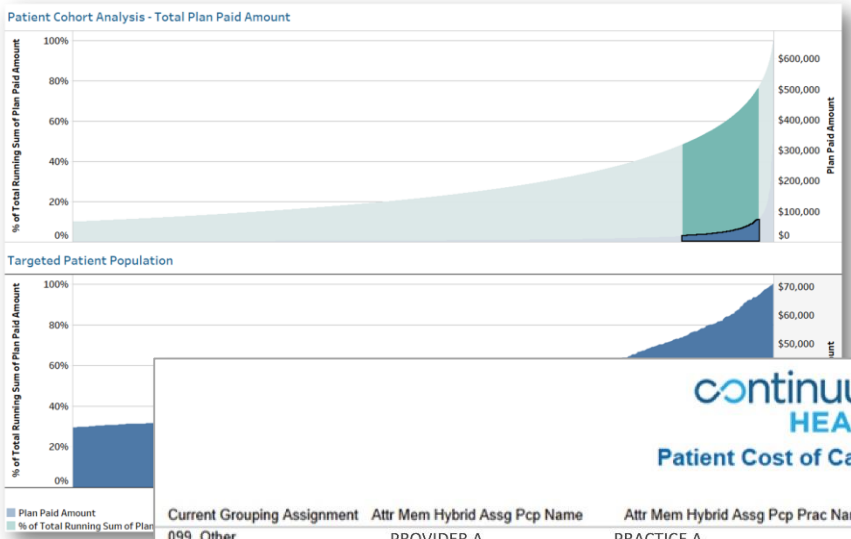
Claims Data Field	Claims Data Field Description	Business Reason
CLM_SRC_ID	Unique Claim Identifier, Represents a discrete bill (1500 or UB)	Part of Encounter Key, Claim Key, Procedure Key, Critical for Unit Based Metrics
CLM_LN_SRC_ID	Claim Line Identifier, represents a discrete claim line on a bill	Unique Claim ID
MAJ_PROD	Major Product Grouping	Member Benefit Type
MBR_ID	Unique Member Identifier	Helps Provide Linkage to Eligibility and Rx
PAT_FIRST	Patient First Name	Member Identifier Confirmation
PAT_LAST	Patient Last Name	Member Identifier Confirmation
PAT_RELAT	Patient Relation to Subscriber	Linkage within Family if possible
DOB	Patient DOB	Age/Gender Analysis, Clinical Metric Applicability
GEND	Patient Gender	Age/Gender Analysis, Clinical Metric Applicability
REND_TIN	Rendering Provider Tax ID Number	Rendering Provider Analysis and Patient Attribution
REND_NPI	Rendering Provider NPI	Rendering Provider Analysis and Patient Attribution
PRV_SPEC	Provider Specialty Code	Spending Analysis by Speciality of Rendering Provider
LN_STAT	Paid or Denied Status	Allows Exclusion of Denied Claims from certain analysis such as Discount Analysis
PAY_LVL	Network Payment Level Code (Same as In/Out Indicator)	Analysis by In-Network/Out of Network status
ADRINSTPROF	Institutional or Professional Claim	Identify whether bill form was 1500 or UB
POS_CD	Place of Service Code	Identify / Analyze Services by Place of Service / Location of Service
LN_FDOS	Service Start Date	Identify Incurred Period
ADMIT	Admit Date	Identify Date of Admission, Calculate Length of Stay
DISCH	Discharge Date	Identify Date of Discharget, Calculate Length of Stay
PROC_CD	Procedure Code	Identify / Analyze Services by Procedure
REVCD	UB Revenue Code	Identify / Analyze Inpatient Hospital Services at more granular level in the absence of proced
SURG1	ICD Procedure Code	Identify / Analyze Inpatient Hospital Procedures (unreliable and not transferable to ambula
DIAG_LN1	Primary Diagnosis	Identify / Analyze Services by Primary Diagnosis
DIAG_LN2	Diagnosis Code 2	Build Diagnosis / Condition Table for Patients
DIAG_LN3	Diagnosis Code 3	Build Diagnosis / Condition Table for Patients
LN_CHG	Provider Charge Amount	Identify / Analyze Discounting Patterns
ALLOW	Payor Allowed Amount	Identify / Analyze Total Cost of Care

AN ARCHITECTURE FOR MINING THE GOLD



LEVERAGE MS APPLICATIONS/PRESENTATION LAYER

Begin with a Member Cohort Analysis leading to….



…an attributed target patient list for intervention

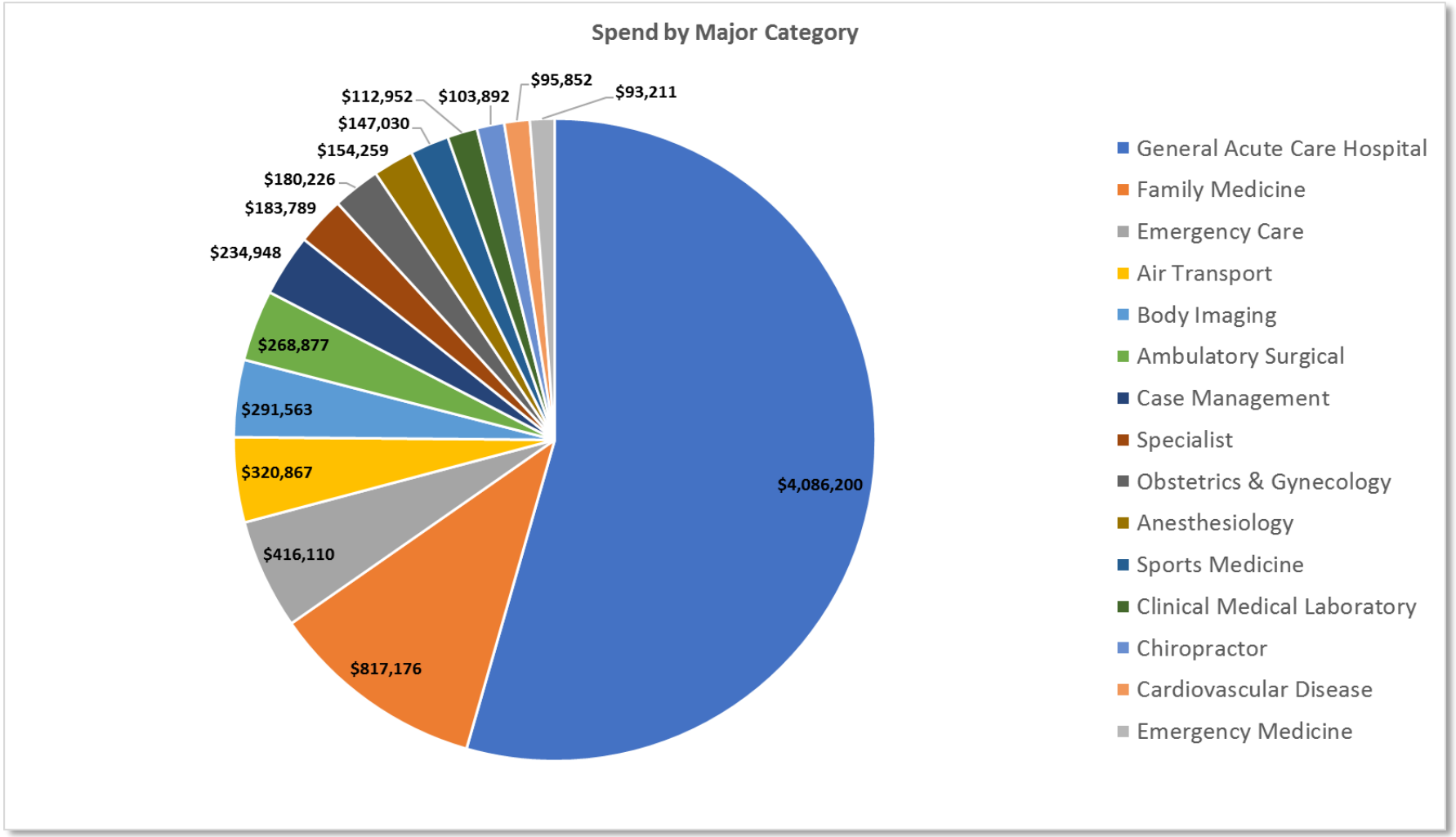
continuum HEALTH

Patient Cost of Care Detail

Current Grouping Assignment	Attr Mem Hybrid Assg Pcp Name	Attr Mem Hybrid Assg Pcp Prac Name	PMPY 2017_Q2	Benchmark_RiskAdj_PMPY 2017_Q2	SurplusDeficit_RiskAdj_PM.. 2017_Q2	HospAdmits 2017_Q2	R 2(
099_Other	PROVIDER A	PRACTICE A	$662,537	$24,149	($638,388)		
099_Other	PROVIDER B	PRACTICE B	$662,537	$40,186	($622,351)		
099_Other	PROVIDER C	PRACTICE C	$662,537	$40,186	($622,351)		
004_CHF_CAD	PROVIDER D	PRACTICE D	$422,716	$57,855	($364,860)	2	
002_CHF_CKD	PROVIDER E	PRACTICE E	$347,845	$56,323	($291,522)	9	
001_CHF_COPD_CKD_CAD	PROVIDER F	PRACTICE F	$287,520	$4,006	($283,514)	7	
003_CHF_COPD	PROVIDER G	PRACTICE G	$304,486	$50,427	($254,060)	5	
001_CHF_COPD_CKD_CAD	PROVIDER H	PRACTICE H	$350,894	$106,760	($244,133)	10	
003_CHF_COPD	PROVIDER I	PRACTICE I	$273,378	$39,768	($233,610)	5	
003_CHF_COPD	PROVIDER J	PRACTICE J	$294,891	$61,900	($232,990)	3	
002_CHF_CKD	PROVIDER K	PRACTICE K	$256,502	$26,502	($230,000)	5	
006_Complex Heart	PROVIDER L	PRACTICE L	$282,743	$62,848	($219,895)	9	
003_CHF_COPD	PROVIDER M	PRACTICE M	$256,747	$39,432	($217,315)	3	
001_CHF_COPD_CKD_CAD	PROVIDER N	PRACTICE N	$250,277	$42,602	($207,675)	12	
001_CHF_COPD_CKD_CAD	PROVIDER O	PRACTICE O	$245,375	$57,947	($187,428)	4	
001_CHF_COPD_CKD_CAD	PROVIDER P	PRACTICE P	$208,132	$20,949	($187,182)	8	
001_CHF_COPD_CKD_CAD	PROVIDER Q	PRACTICE Q	$193,457	$7,438	($186,019)	5	
001_CHF_COPD_CKD_CAD	PROVIDER R	PRACTICE R	$224,295	$38,389	($185,906)	5	

LEVERAGE MS APPLICATIONS/PRESENTATION LAYER

– MS Excel View: Sample Spend Associated with Specific Practice



LEVERAGE MS APPLICATIONS/PRESENTATION LAYER

– Tableau Presentation Layer: Practice and Provider Cost & Utilization

continuum HEALTH

Practice/Provider Key Performance Indicator Overview

Practice: Key Performance Indicator Overview

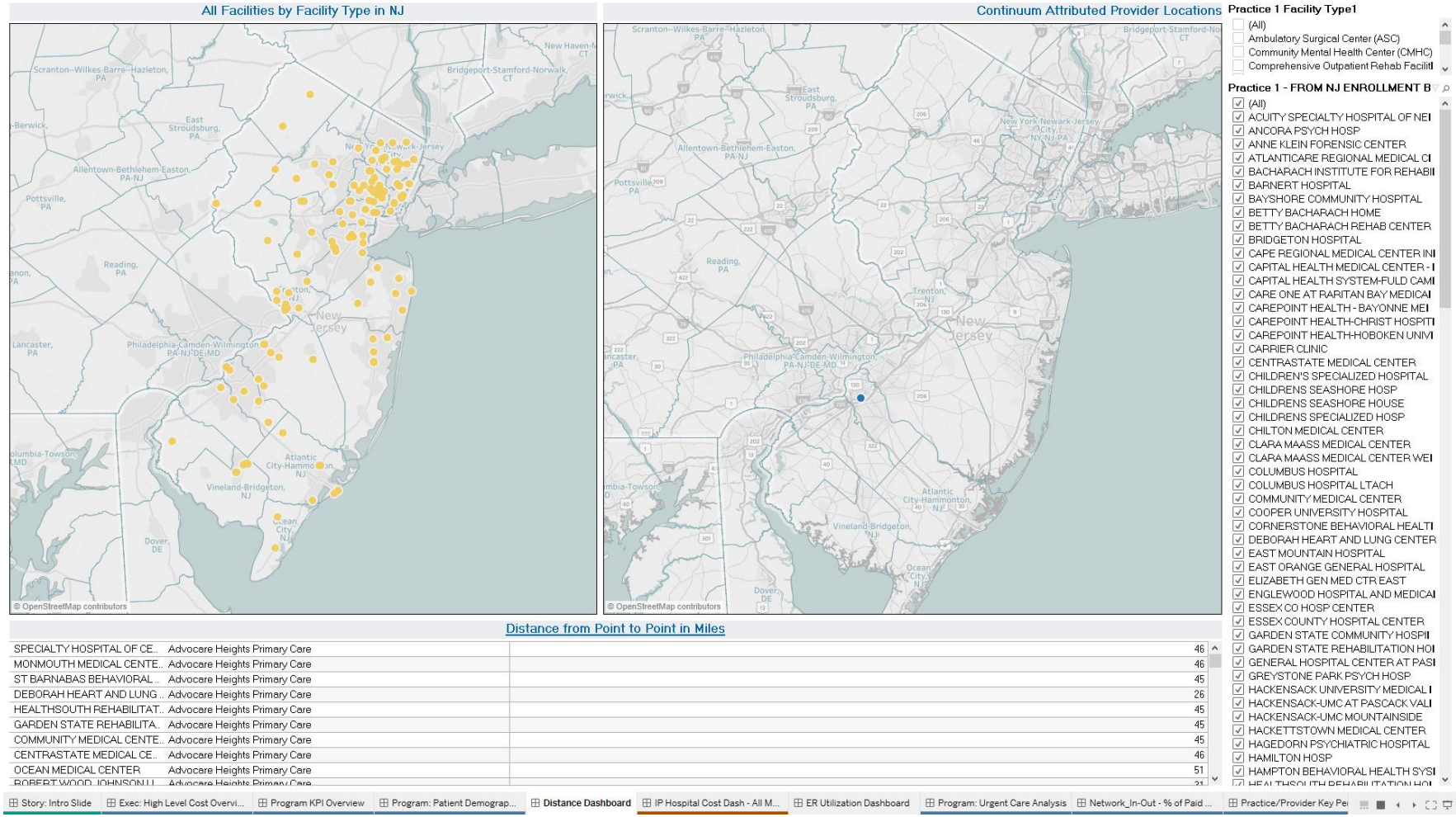
Attributed PCP Practice Hybrid	Unique Members	PMPM Adjusted	Benchmark Value Risk Adj PMPM	Surplus or (Deficit) Risk Adjusted PMPM	IP Hospital Admissions Per K	IP Hospital Admissions Avoidable	Readmissions 30 Days Percentage	Readmissions 30 Days	ER Visits Per K	ER Visits Avoidable
PRIMARY CARE PRACTICE A	2,576	$374.78	$370.20	($4.59)	81.2	4	27.4 %	17	106.1	19
Grand Total	2,576	$374.78	$370.20	($4.59)	81.2	4	27.4 %	17	106.1	19

Provider: Key Performance Indicator Overview

Attributed PCP Full Name Hybrid	Unique Members	PMPM Adjusted	Benchmark Value Risk Adj PMPM	Surplus or (Deficit) Risk Adjusted PMPM	IP Hospital Admissions Per K	IP Hospital Admissions Avoidable	Readmissions 30 Days Percentage	Readmissions 30 Days	ER Visits Per K	ER Visits Avoidable
*ATTRIBUTING PHYSICIA..	68	$434.36	$395.71	($38.65)					176.5	0
PRACTICE A	172	$131.06	$345.29	$214.22						
PRACTICE B	39	$504.00	$332.99	($171.01)					328.8	0
PRACTICE C	1		$138.66	$138.66						
PRACTICE D	891	$513.07	$412.53	($100.55)	118.3	1	35.7 %	5	118.3	3
PRACTICE E	546	$345.98	$316.56	($29.42)	96.9	1	0.0 %	0	19.4	0
PRACTICE F	509	$288.57	$317.75	$29.18	82.8	0	50.0 %	4	134.5	3
PRACTICE G	43	$148.71	$269.86	$121.15						
PRACTICE H	258	$379.04	$439.17	$60.13	61.4	0	66.7 %	2	245.7	1
PRACTICE I	217	$546.90	$425.43	($121.47)	134.0	1	28.6 %	2	57.4	1
PRACTICE J	425	$413.14	$369.93	($43.21)	62.2	1	0.0 %	0	111.9	3
PRACTICE K	402	$433.14	$349.44	($83.70)	90.1	0	0.0 %	0	77.3	1
PRACTICE L	4		$384.37	$384.37						
PRACTICE M	1,016	$328.55	$367.94	$39.39	92.6	0	30.8 %	4	128.2	7
PRACTICE N	179	$128.86	$400.35	$271.49					32.2	0
PRACTICE O	38	$22.35	$254.08	$231.74						
Grand Total	2,576	$373.80	$370.63	($3.18)	82.5	4	27.4 %	17	106.4	19

LEVERAGE MS APPLICATIONS/PRESENTATION LAYER

– Tableau Presentation Layer: Geo-Coding of Acute Care Facilities Relative to Practice Location for Efficient Network Referral

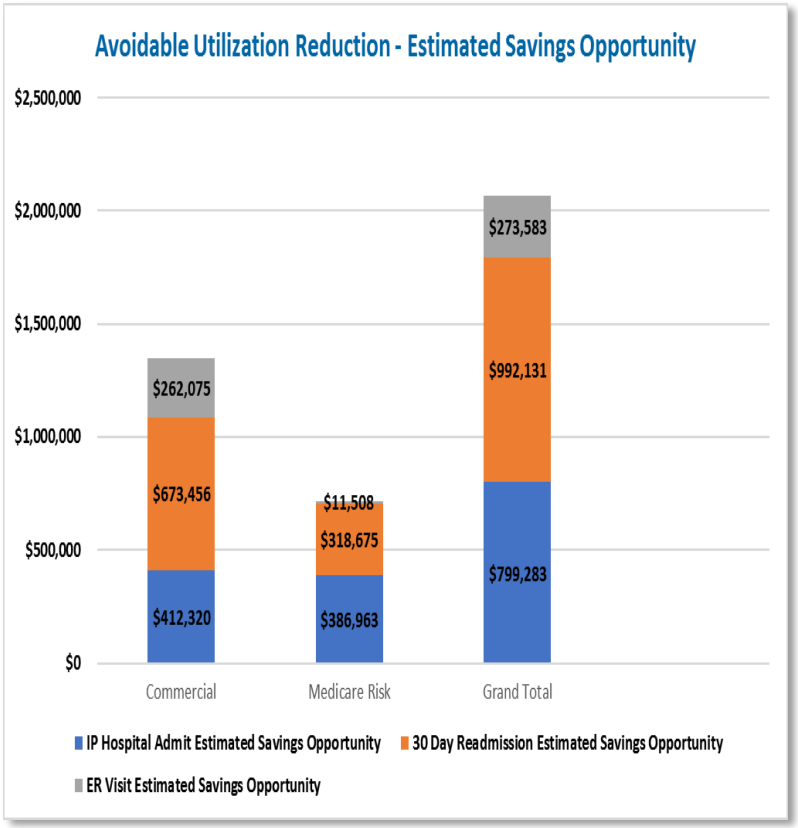


POPULATION OVERVIEW/PAID CLAIMS DATA ANALYSIS

Avoidable Utilization Savings Opportunity → Focus on Areas of Potential Impact

Avoidable Utilization - Targets and Estimated Savings based on Paid Claims				
IP Hospital Admissions Avoidable				
Attributed Product High Level Category	Payment per Hospital Admit	Current	Target	IP Hospital Admit Estimated Savings Opportunity
Commercial	$13,744	11.7%	7.5%	$412,320.00
Medicare Risk	$15,175	16.1%	10.0%	$386,963
Grand Total	**$14,283**	**13.3%**	**8.1%**	**$799,283**
30 Day Readmissions				
Attributed Product High Level Category	Payment per Hospital Admit	Current	Target	30 Day Readmission Estimated Savings Opportunity
Commercial	$13,744	21.8%	15.0%	$673,456
Medicare Risk	$15,175	25.1%	20.0%	$318,675
Grand Total	**$14,283**	**9.6%**	**16.4%**	**$992,131**
ER Visits Avoidable				
Attributed Product High Level Category	Payment per ER Visit	Current	Target	ER Visit Estimated Savings Opportunity
Commercial	$1,375	30.2%	20.0%	$262,075
Medicare Risk	$822	28.3%	20.0%	$39,456
Grand Total	**$1,244**	**29.8%**	**20.0%**	**$301,531**

→



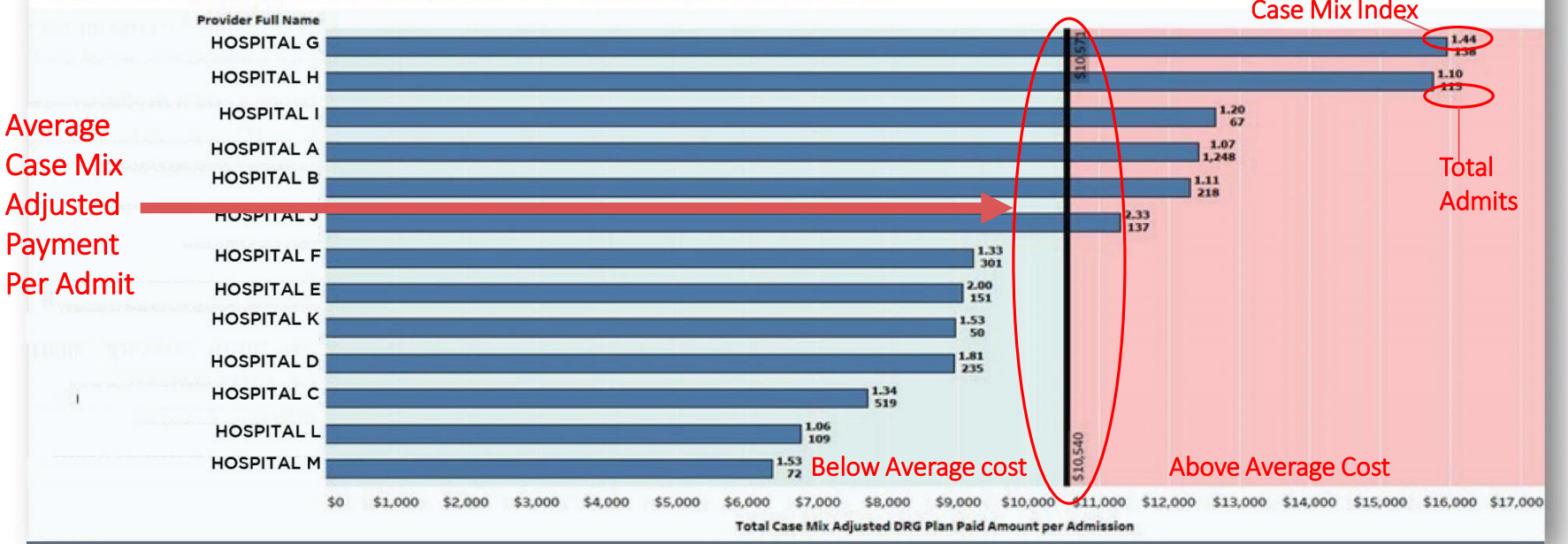
INPATIENT FACILITY REFERRAL OPPORTUNITIES

Inpatient Facility: Cost of Care and Utilization Comparison

Refer from Facility A & B to C

Provider Full Name	HOSPITAL A	HOSPITAL B	HOSPITAL C	HOSPITAL D	HOSPITAL E	HOSPITAL F
IP Hospital Admissions	1,248	218	519	235	151	301
IP Hospital Average Length of Stay	3.3	3.5	4.3	4.8	4.1	3.7
Readmissions 30 Days Percentage	6.7%	9.2%	11.8%	15.3%	19.9%	11.3%
IP Hospital Admissions Avoidable	66	13	37	8	10	14
IP Hospital Admissions Avoidable Percent of Admissions	5.3%	6.0%	7.1%	3.4%	6.6%	4.7%
Total Admissions DRG Case Mix Index	1.07	1.11	1.34	1.81	2.00	1.33
IP Hospital Plan Paid Amount Per Admission	$13,290	$13,695	$10,333	$16,230	$18,166	$12,316
Severity Adjusted DRG Plan Paid Amount per Admission	$12,414	$12,298	$7,709	$8,949	$9,061	$9,239
Total Admission DRG Price Index	1.10	1.12	0.75	0.86	0.91	0.86
Severity Plan Paid per Admission DRG Price Index	$14,635	$15,332	$7,764	$13,992	$16,516	$10,547
Total Admissions DRG Adjusted Variance	$1,523,770	$318,745	($1,775,158)	($609,889)	($273,939)	($622,756)

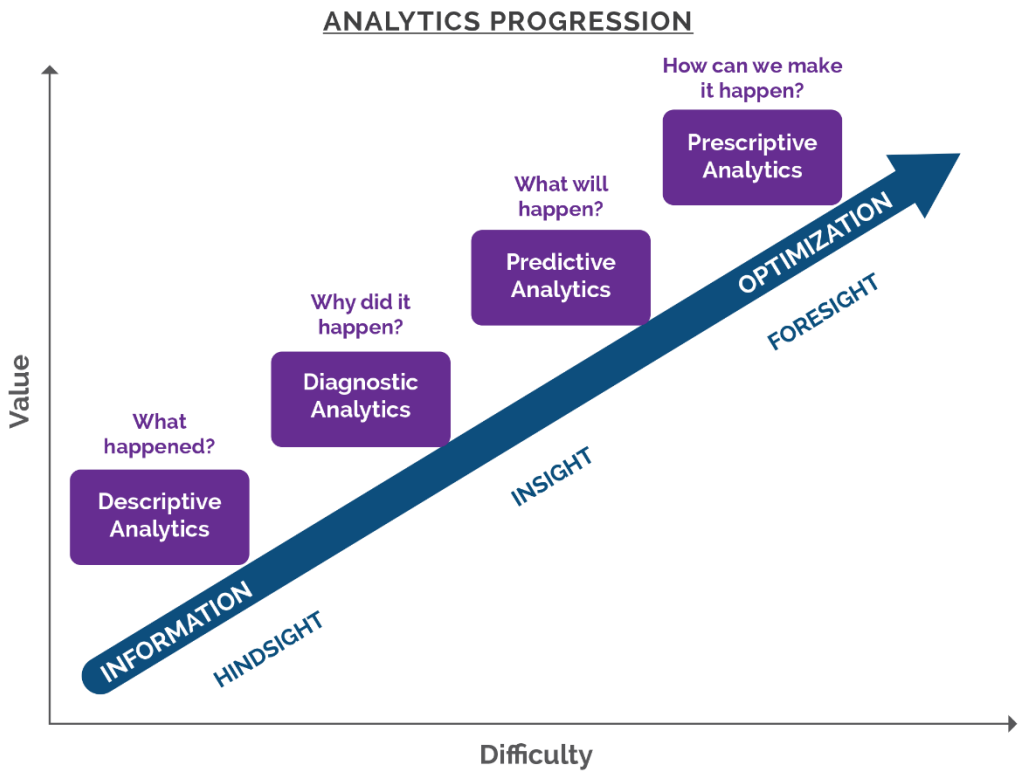
Inpatient Facility: Cost of Care Comparison - Case Mix Adjusted Payment per Admission



Key Takeaway: Opportunities exist for increasing referrals to lower cost facilities

CLAIMS MASTERY LEADS TO NEW DATA COMPETENCIES

- Once you have a platform and data architecture, you have the ability to analyze, interpret and take action
- Mastery of descriptive analytics provides valuable lessons and capabilities for adopting more advanced methodologies that drive higher performance
- Commit to building a data-driven culture within your practice or organization



SOURCE: Gartner

Q & A DISCUSSION

Thank You!

continuum® HEALTH

Better Business. Better Care.

402 Lippincott Drive | Marlton, NJ 08053

Phone: 856.782.3300 | Fax: 856.762.1785

www.continuumhealth.net