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Revenue Portfolio Design and Care Transformation: or How I Learned to Love Bundles

HFMA
South Texas Chapter
Austin, Texas

January 20, 2017

Its Friday so…

This will be low stress…

Goals of Our Session

In this session we will introduce the concept of “Revenue Portfolio Design” and it’s importance in Transformational Strategy Development. We will introduce the concept of “Risk Capability” and we will examine the results of clients currently managing under one or more EPM.

Agenda

- “Risk Capability”
- “Revenue Portfolio Design”
- Overview of Cardiac EPM Bundles
  - Spend By Settings
  - Discharge Trends
  - Readmissions
  - Post Acute Providers
  - Case Mix
- Overview of Other Clinical Episodes
- Next Steps to Analyze Episodic Spend
  - UPDATED Super Bundler data
  - Using other data sources to get more timely claims data (MSSP CLFF Files)

Risk Capability

CORE ELEMENTS

- Enterprise Intelligence
- Revenue Transformation
- Clinical Enterprise Maturity

FOUNDATIONAL CATALYSTS

- Innovation Acceleration
- Clinical Assets
- New Infrastructure
- Population Health
- Scenario Planning & Dynamic Financial Modeling
- Leadership & Culture
- Governance

THE RISK CAPABLE ORGANIZATION

Our clients share the common challenge of successfully navigating the unprecedented transition associated with the journey to higher quality at lower cost. The Risk Capable organization is proactively positioned to responsibly plan and confidently respond to the demands of that journey.

CORE ELEMENTS + FOUNDATIONAL CATALYST = RISK CAPABLE FUTURE STATE

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“Why the Need for Risk Capability: An Industry in Transformation”

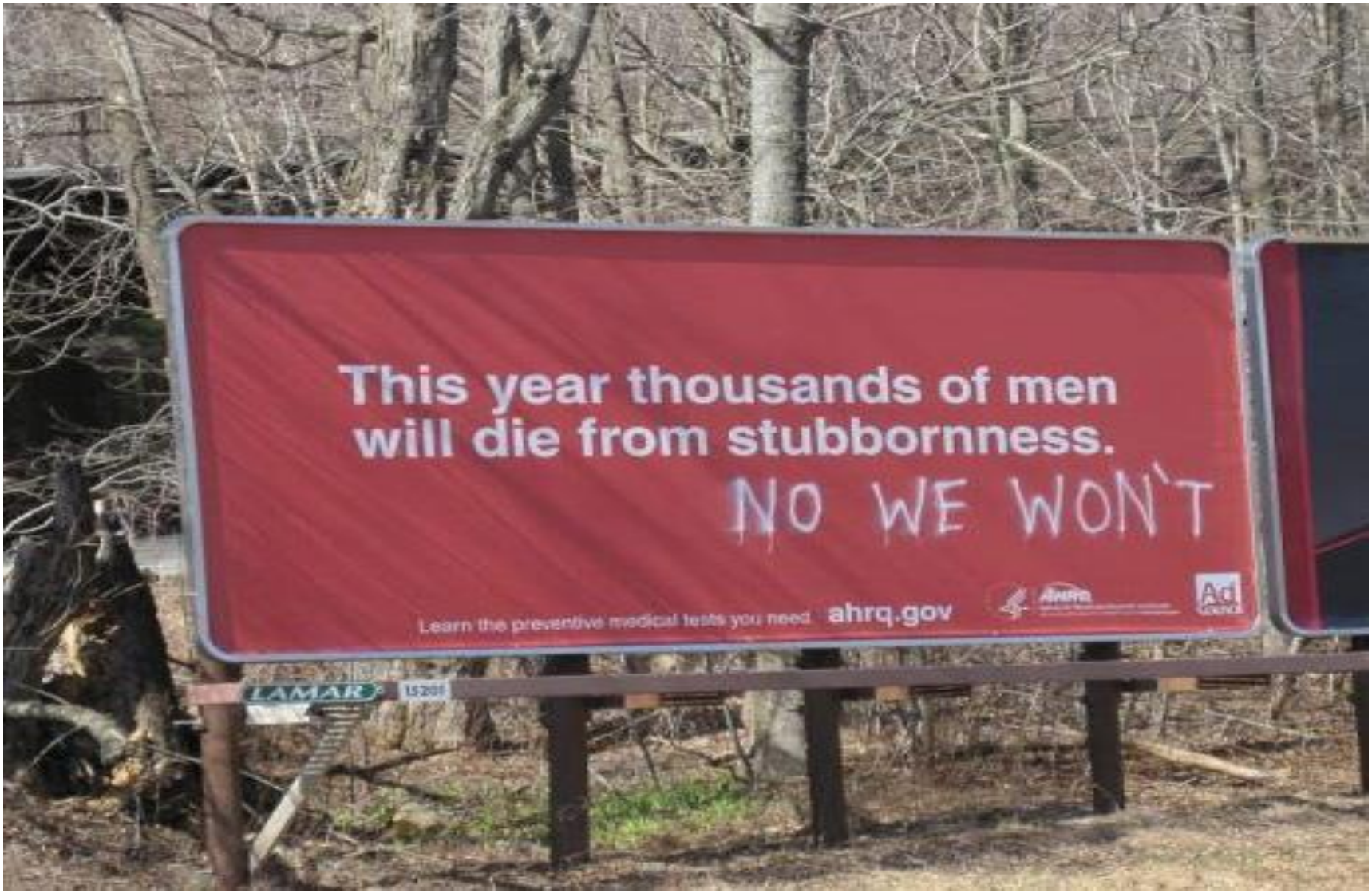
Some Truths

- The market is transforming rapidly and at an ever accelerating pace.
- This transformation, while real, is local market specific.
- The ability to effectively manage population health is fundamental to success under Alternative Payment Models.
- It is prudent to initiate significant planning efforts for APM/PHM, including building related supporting infrastructure, before the market compels it.
- The transition to APMs requires a measured and parallel transformation of clinical processes.

Some Truths

- There is increased institutional value when organizations explicitly create critical infrastructure or “risk capability”, to confidently and responsibly accept risk based payment contracts.
- There may be no better opportunity to achieve risk capability than at the present, before the shift to non fee for service payment models require it.
- New payment models and new models of care will require a fresh look at governance.
- Change leadership and pace of change is crucial.

Some People Don't Agree



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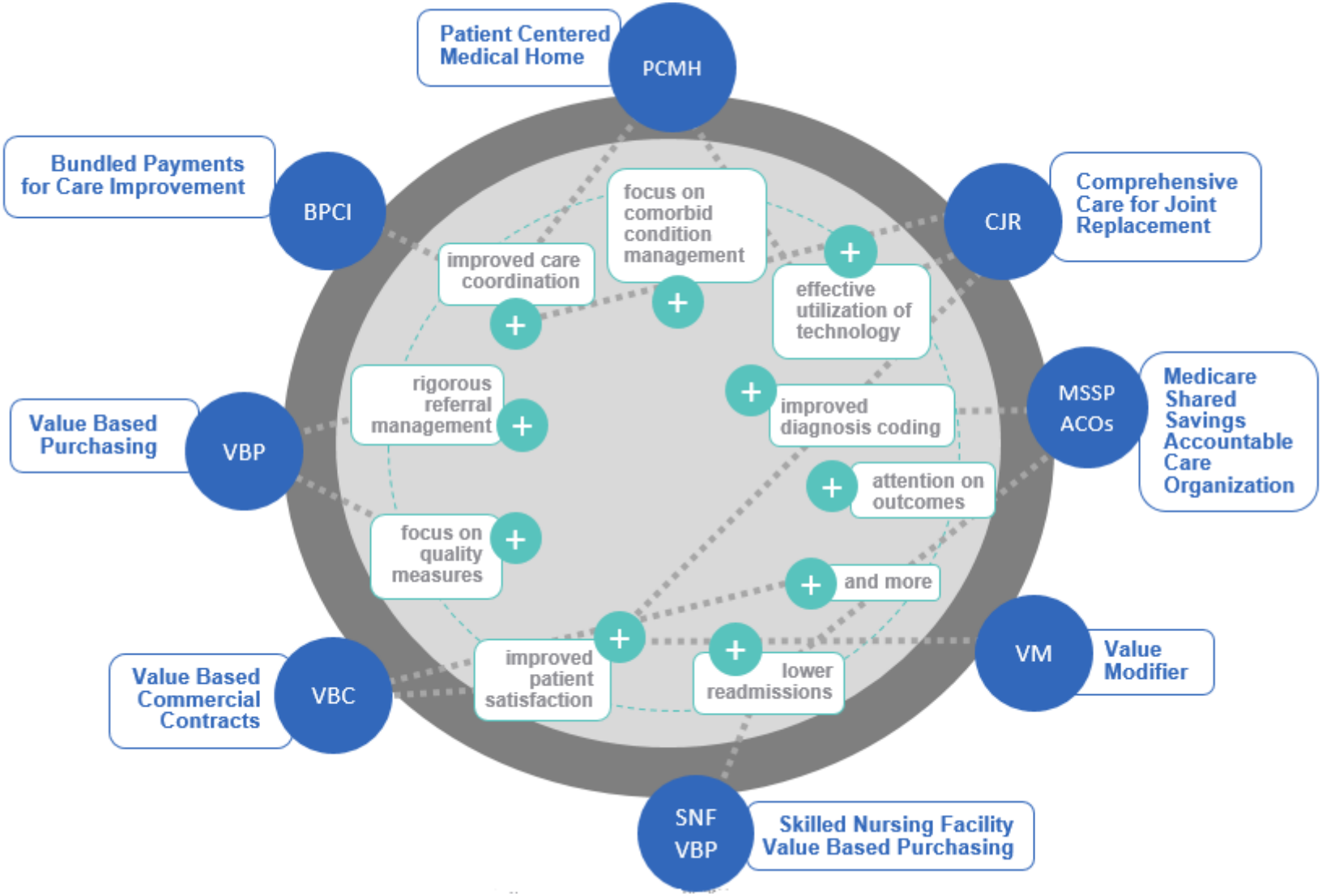
“Risk Capability and Revenue Transformation”

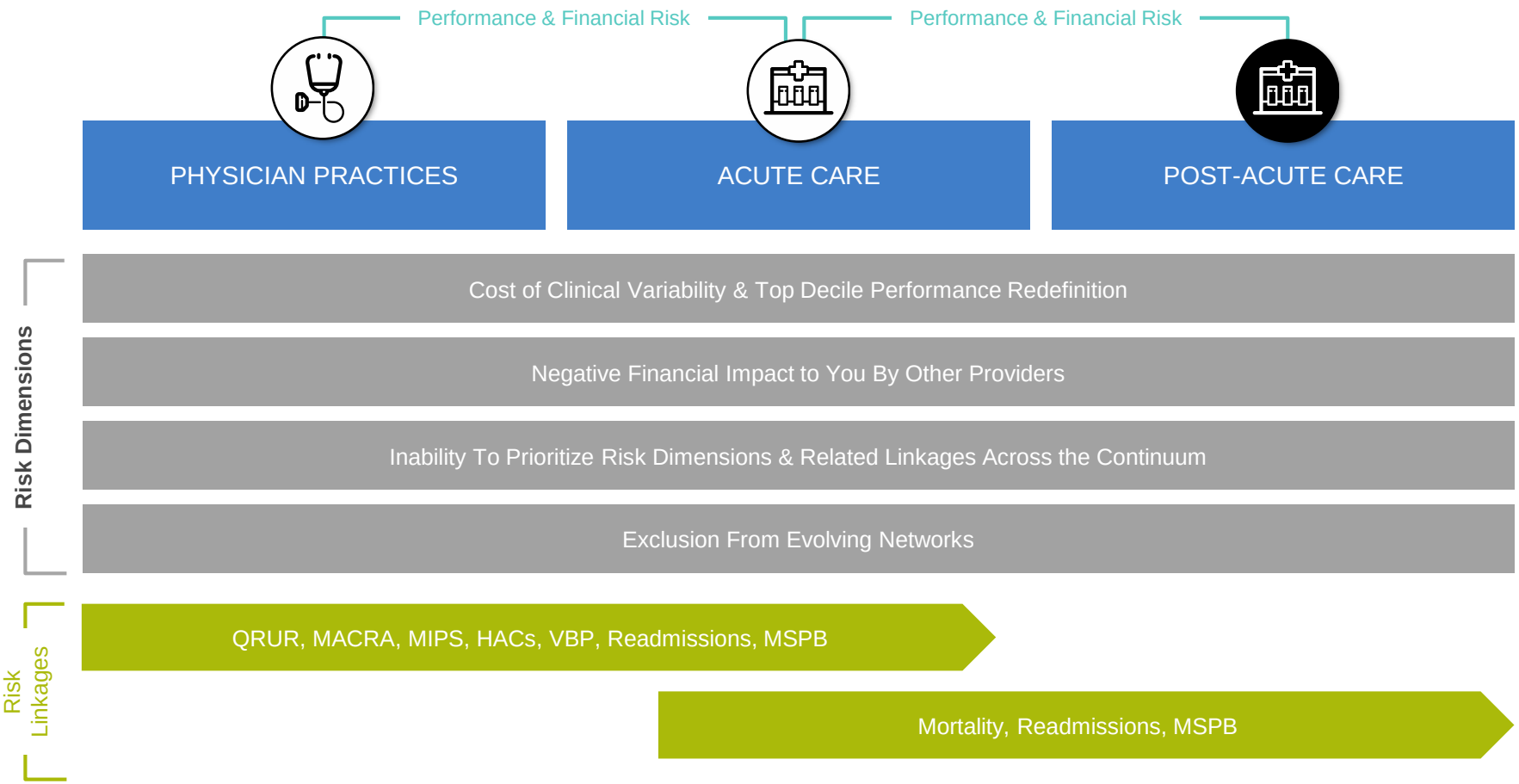
Alphabet Soup Of Alternative Payment Models

Connecting the APM Dots – Each Program Impacts the Other

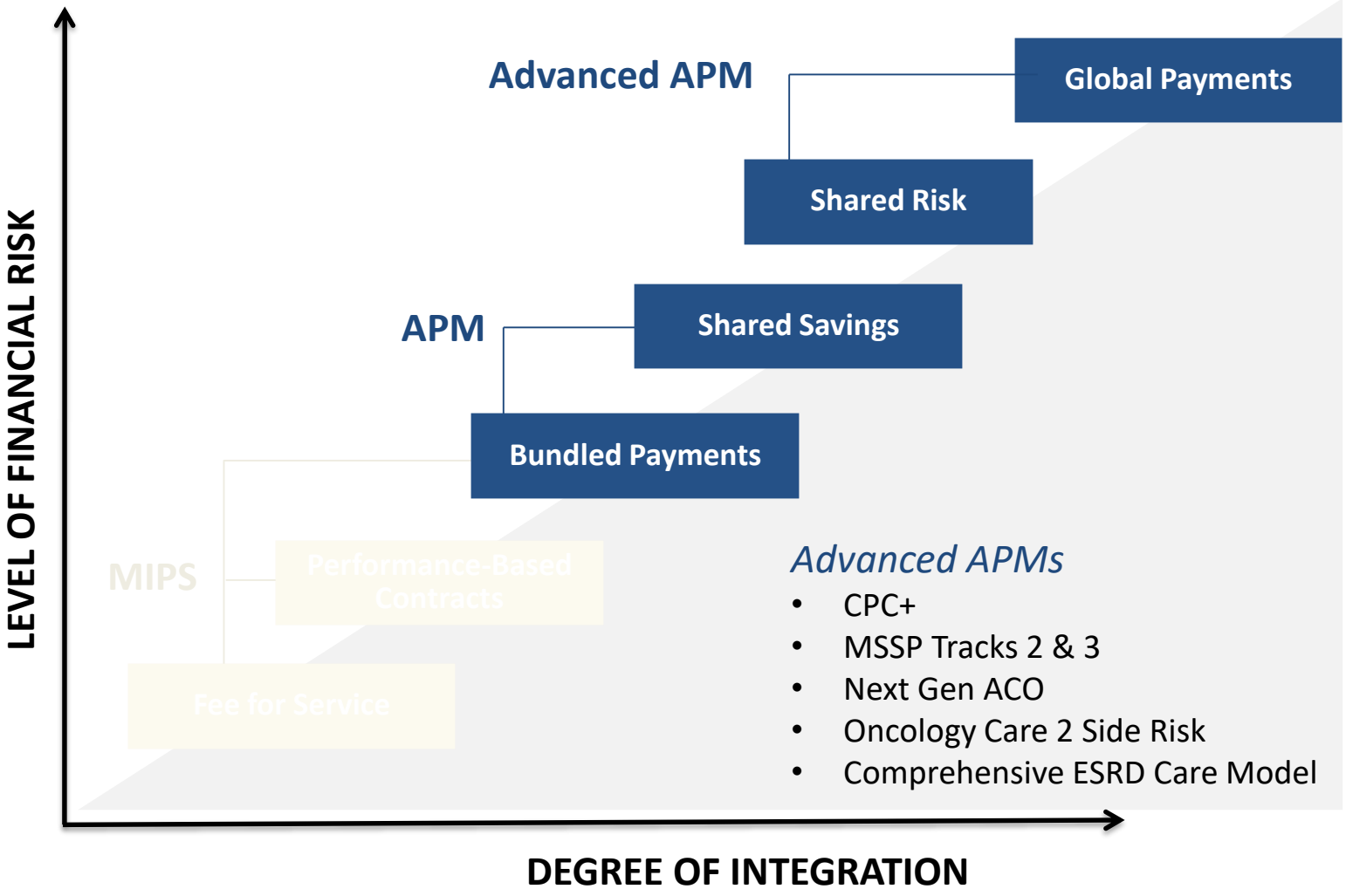


Managing Enterprise Risk Under APMs

Future State Design Must Embrace the Full Continuum Care Model



Pulling it all Together: Value Based Future



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“Revenue Portfolio Design”

Risk Capability

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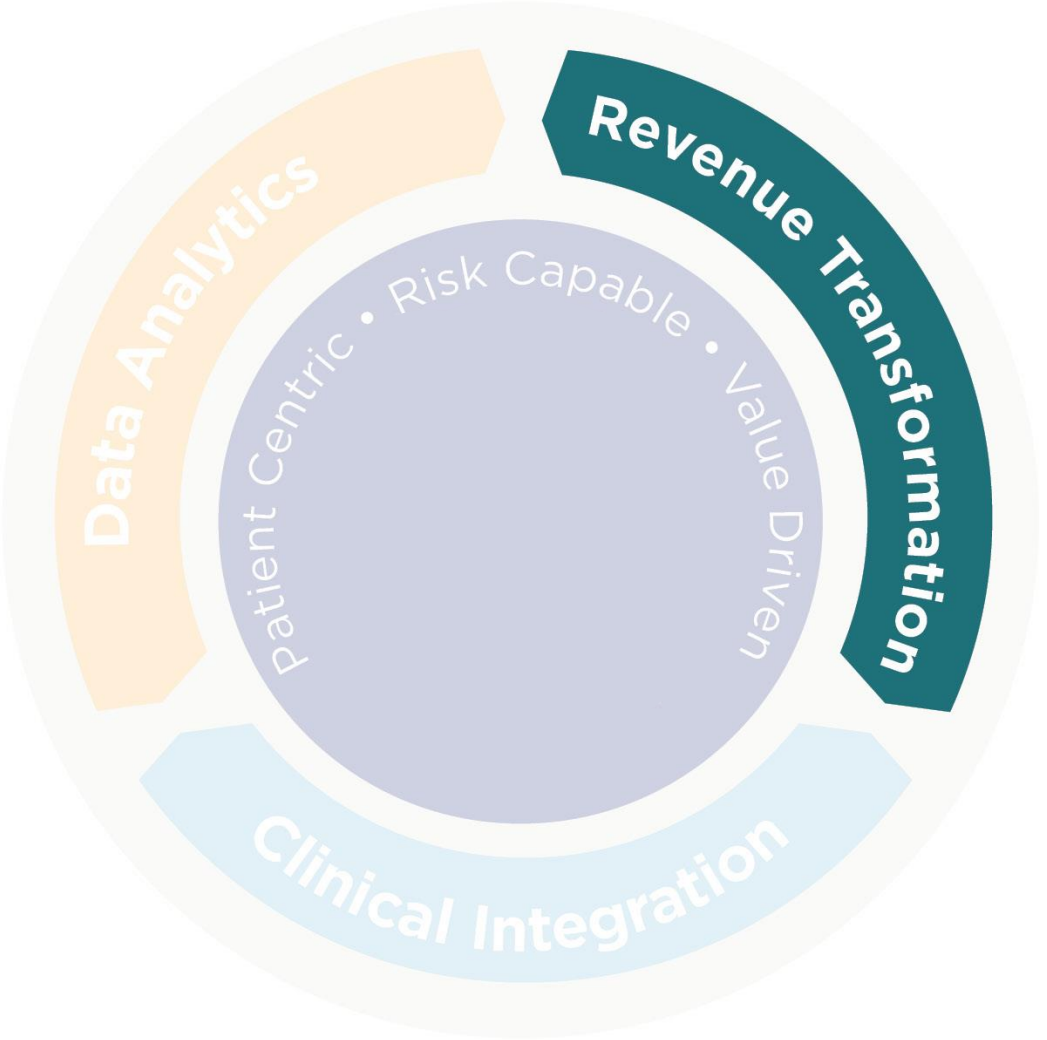
CORE ELEMENTS + FOUNDATIONAL CATALYST = RISK CAPABLE FUTURE STATE

Risk Capable: Revenue Transformation

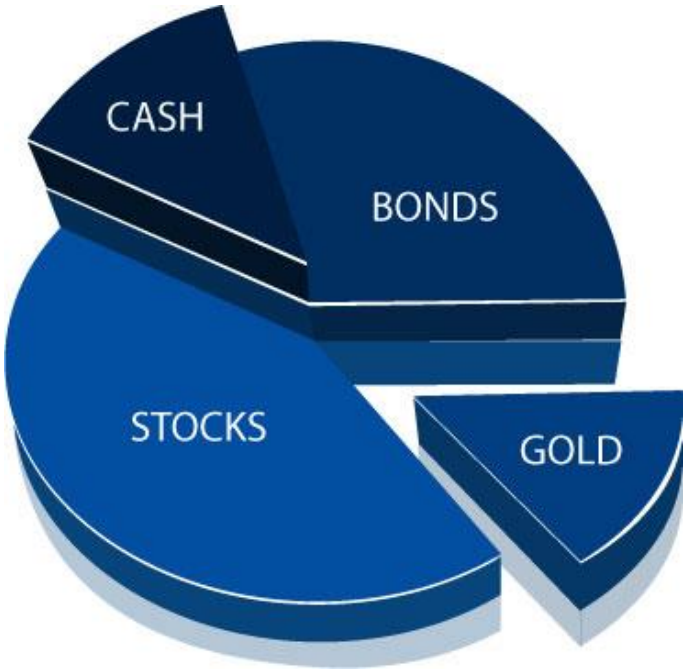
Managed **Revenue Transformation** emphasizes the need for a “next-gen” revenue management platform focused on a portfolio perspective, reimbursement across multiple revenue models, and aligned model funds distribution.



Future State Revenue Portfolio

- Continued transition from traditional fee-for-service to APMs requires providers to redesign their revenue portfolio to effectively manage net revenue across an increasingly complex portfolio of models and payment methods
- Healthcare leaders must take a proactive approach in the development and design of their revenue portfolios

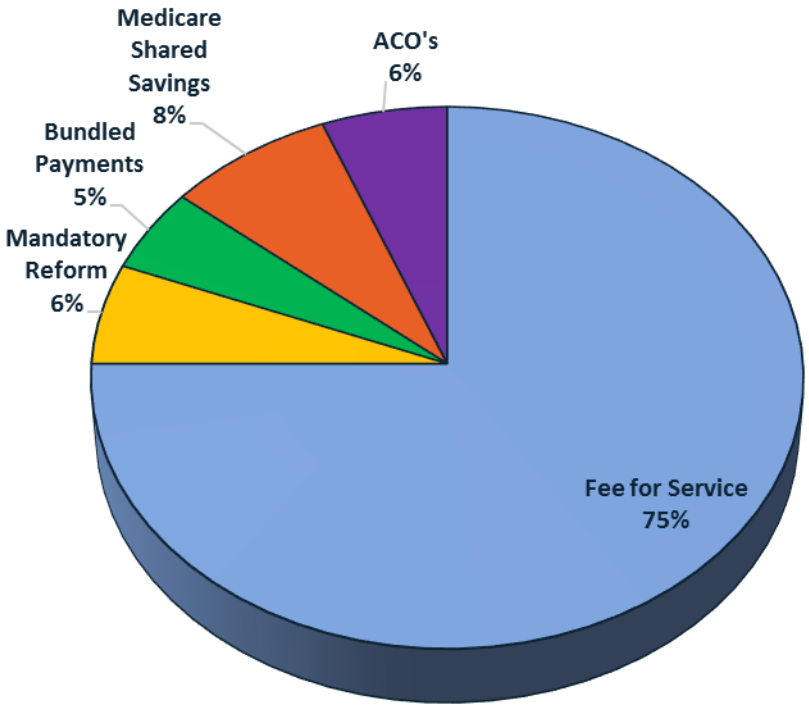
Revenue Portfolio Design -- Think Investment Portfolio



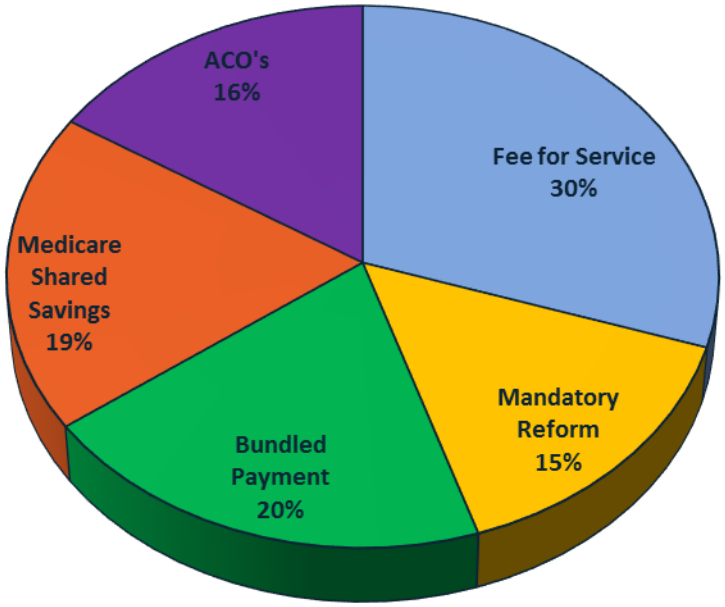
Difficult to predict the future

“Revenue Portfolio Design”

Current State



Future State??



Revenue Portfolio Design Factors and Drivers

Each of the following factors have a significant impact on an organization's revenue portfolio design.

Networks	Contracts	Governance Capability and Function	Clinical Quality
Across the continuum, considering ACOs and CINs	Managed care and direct employer opportunities	Proactively managing design and execution risk	Impact on revenue at risk, clinical variability

Data Management and Governance	Clinical Documentation	Physician Alignment	Post-Acute Strategy
Aggregation, reporting and usage	Program maturity, impact on revenue at risk	Clinical excellence, care coordination and reporting	Care transition program, network breadth, performance management and reporting

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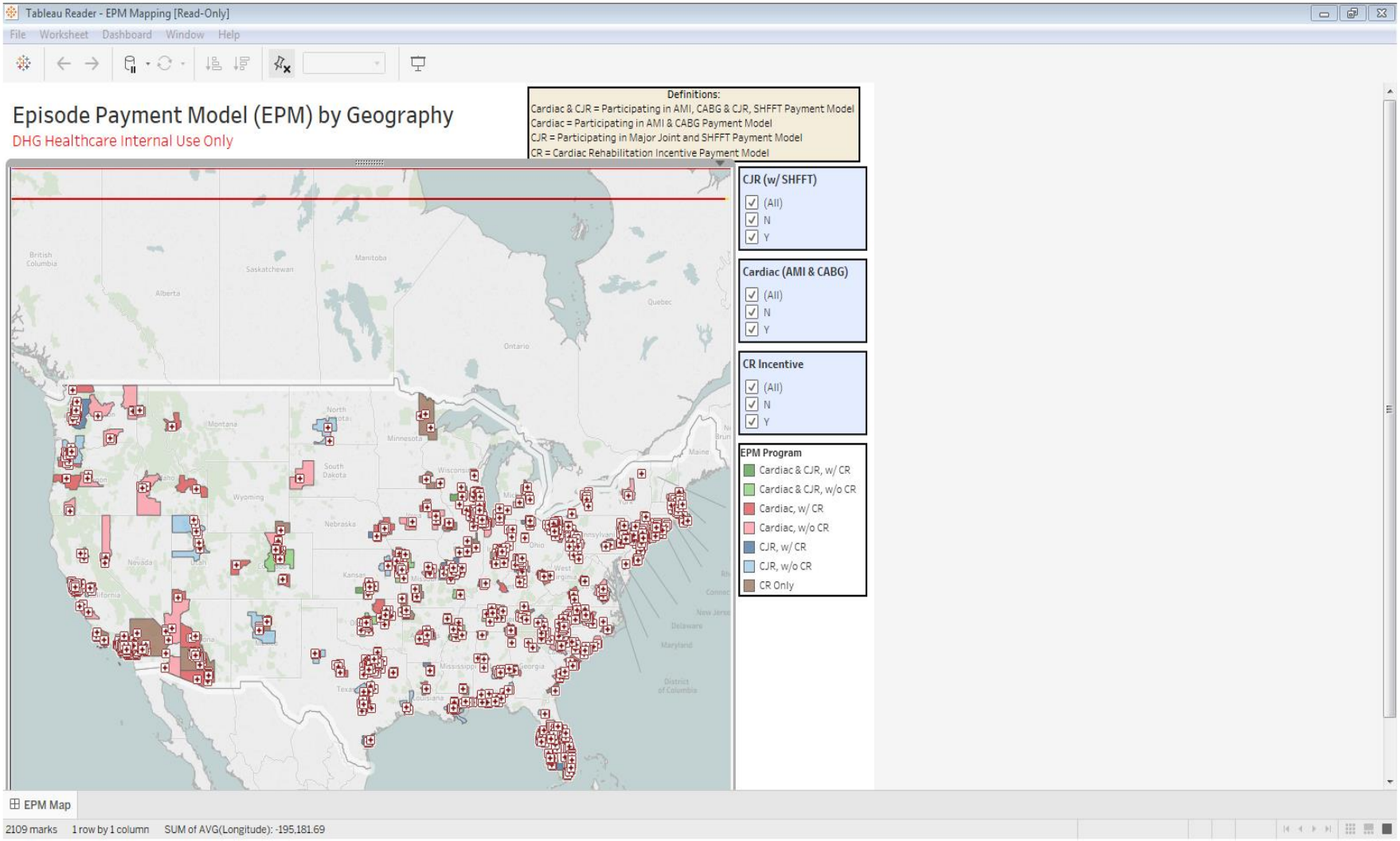
“Episodic Payment Models”

EPMs by Geography



Episodic Programs

	Bundle Holder	Duration of Episode	Mandatory/ Voluntary	Financial Risk
BPCI Model 2	Hospital, PGP	30-60-90 days	Voluntary	2-3% Discount
BPCI Model 3	Post-Acute Care Provider, PGP	30-60-90 days	Voluntary	3% Discount
CJR / SHFFT	Acute Hospital	90 days	Mandatory	1.5-3% Discount
Oncology Care Model	PGP	6 months	Voluntary	PMPM Payment; 2.75-4% Discount
Cardiac EPM (incl. AMI & CABG)	Acute Hospital	90 days	Mandatory (Proposed)	1.5%-3% Discount

Common Across All Models:

- Encourage and increase care coordination
- Reduce excessive care/spending while maintaining high quality
- Align incentives of providers with achieving better outcomes

Increased Complexity: Target Prices

Bundled Payment for Care Improvement (BPCI)

DRG 469	Target Price 1
DRG 470	Target Price 2

Comprehensive Joint Replacement (CJR)

	With Fracture	**Without Fracture**
DRG 469	Target Price 1	Target Price 2
DRG 470	Target Price 3	Target Price 4

EPM Cardiac Bundles

50+ Different Target Prices!

Oncology Care Model

Episode Specific based on multiple co-variate inputs to a prediction model

EPM Final Rule

FEDERAL REGISTER

Public Inspection :: Tomorrow's Documents Today

Public Inspection :: Rule

Medicare Program: Advancing Care Coordination through Episode Payment Models; Cardiac Rehabilitation Incentive Payment Model; Changes to the Comprehensive Care for Joint Replacement Model

An **unpublished** Rule by the Centers for Medicare & Medicaid Services on 01/03/2017

Stay Tuned!

…Building on the BPCI initiative, the [CMS] Innovation Center intends to implement a new voluntary bundled payment model for CY 2018 where the model(s) would be designed to meet the criteria to be an Advanced APM [for APM qualification in MACRA.]

(p.147 of EPM final rule)

An Approach To Using Data

A standardized method of transforming raw claims data into meaningful analysis that helps to drive strategic initiatives.

PROGRAM SPECIFIC CLAIMS FILES PROVIDED BY CMS TO PARTICIPANT ON A RECURRING BASIS

- Inpatient
- Outpatient
- SNF
- Home Health
- Physician (Part B)
- IRF
- LTCH
- Drugs (Part D)
- DME (Part B)
- Hospice
- Beneficiary

Apply Episode Creation Specifications

Apply Inclusion/Exclusion Criteria

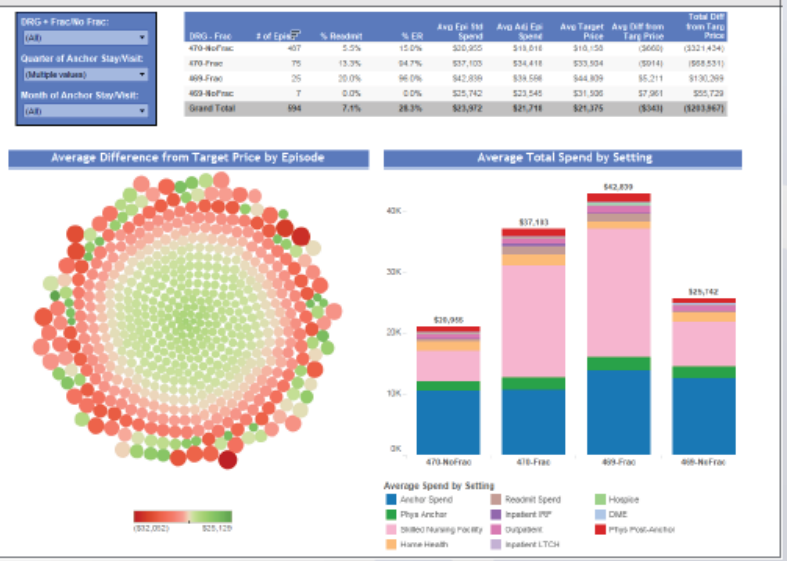
ACTIONABLE EPISODIC DASHBOARD

Performance Summaries

Trended Key Performance Indicators

Episode Line Item Detail

Performance Snapshots – Physician Performance, Post-Acute Performance, Readmission/Admissions, Beneficiary Characteristics



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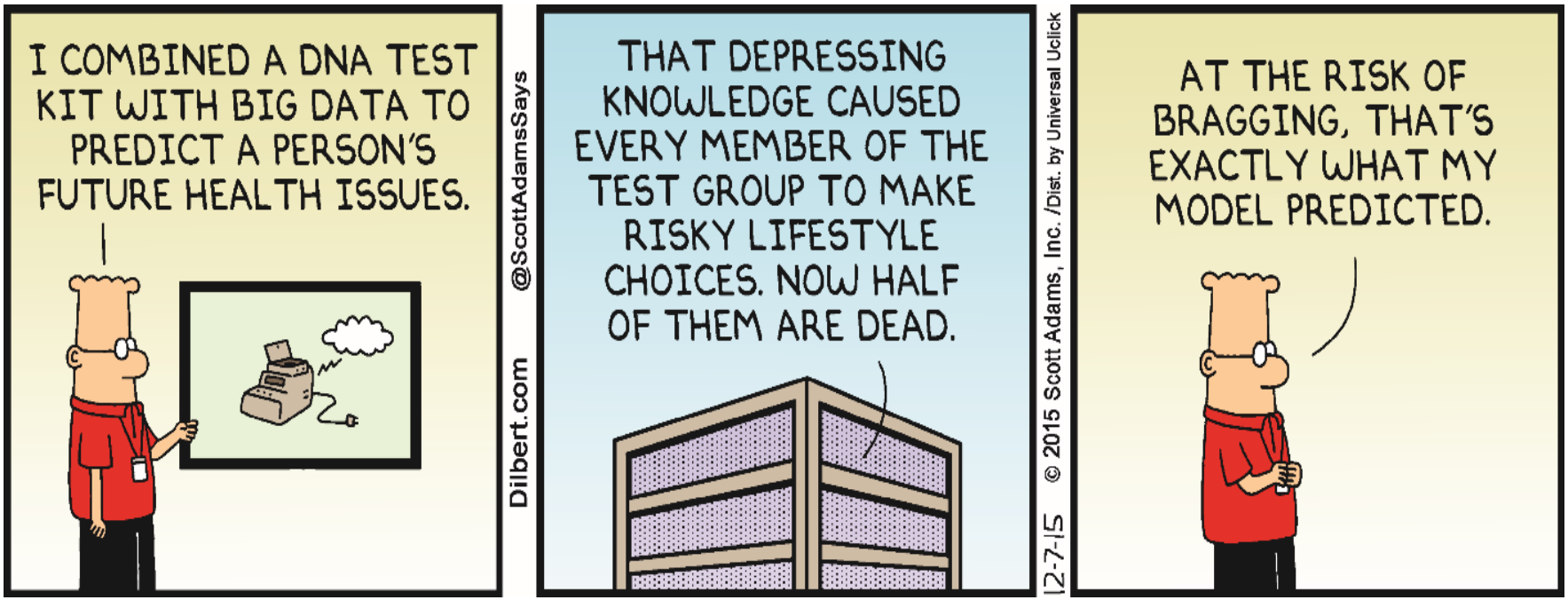
“Cardiac EPMs”

EPM Spreadsheet

Latitude	Longitude	CBSA Code	CBSA	Definitive ID
32.889091	-97.15114	19100	19100 - Dallas-Fort Worth-Arlington TX	764509
32.928464	-97.25466	19100	19100 - Dallas-Fort Worth-Arlington TX	764506
32.596779	-97.144867	19100	19100 - Dallas-Fort Worth-Arlington TX	764510
33.012202	-96.624275	19100	19100 - Dallas-Fort Worth-Arlington TX	764507
32.729731	-97.345167	19100	19100 - Dallas-Fort Worth-Arlington TX	841709
32.729548	-97.345547	19100	19100 - Dallas-Fort Worth-Arlington TX	553314
32.79017	-96.780442	19100	19100 - Dallas-Fort Worth-Arlington TX	553312
30.27092	-97.795894	12420	12420 - Austin-Round Rock TX	4161
33.112438	-96.801709	19100	19100 - Dallas-Fort Worth-Arlington TX	575751
32.963287	-96.745163	19100	19100 - Dallas-Fort Worth-Arlington TX	858508
32.781445	-97.419798	19100	19100 - Dallas-Fort Worth-Arlington TX	840511
33.161295	-96.637089	19100	19100 - Dallas-Fort Worth-Arlington TX	840622
32.975365	-96.72738	19100	19100 - Dallas-Fort Worth-Arlington TX	841697
30.523273	-97.81995	12420	12420 - Austin-Round Rock TX	551505
32.956969	-97.14587	19100	19100 - Dallas-Fort Worth-Arlington TX	579944
30.331676	-97.970377	12420	12420 - Austin-Round Rock TX	542250
30.563087	-97.684849	12420	12420 - Austin-Round Rock TX	4192
32.897235	-97.312839	19100	19100 - Dallas-Fort Worth-Arlington TX	583173
33.03158	-96.854109	19100	19100 - Dallas-Fort Worth-Arlington TX	575808

The Data



About the Data

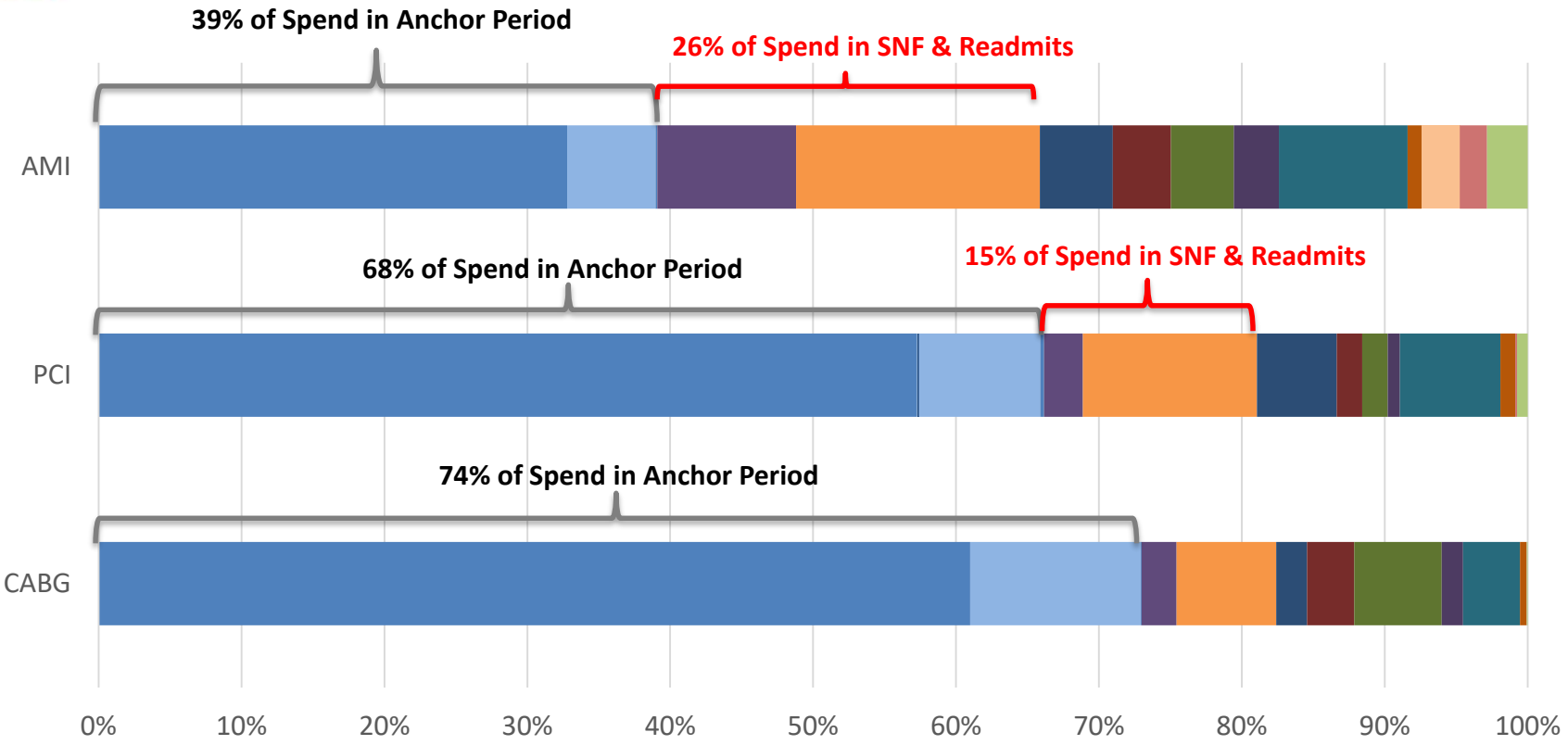
Medicare 100% LDS files for 2012 through 2015 to construct EPM episodes beginning on or after October 1, 2012 and on or before September 30, 2015(Federal Fiscal 2013-2015, 3 Years) – Part B imputed from 5% sample of beneficiaries

- Identify eligible hospitals for EPM models
- Identify potential anchor hospital stays
  - Criteria for initiating an EPM episode
- Beneficiary exclusions
  - Beneficiary is not in Part A and B during the episode period
  - Beneficiary is enrolled in MA plan during the episode period
  - Beneficiary is ESRD as main reason for entitlement
  - Medicare is secondary payer anytime during episode period
  - Patient dies during anchor hospital stay
- Handling of overlapping episodes
  - If overlapping readmission is included readmission for current EPM model, continue original episode, if overlapping readmission is excluded and could trigger another EPM model, cancel the first episode and begin new episode.
- Special handling of transfer cases for AMI and CABG
  - If transferring hospital DRG is AMI, PCI or CABG and receiving hospital DRG is AMI, PCI (with or without AMI Dx) or CABG:
  - Transferring hospital is anchor, model is determined by the DRG of the transferring hospital, price is determined by DRG from transferring or receiving hospital with the highest relative weight
  - If transferring hospital DRG is AMI, PCI or CABG and receiving hospital DRG is not AMI, PCI or CABG: Episode is cancelled

About the Data

- Constructing episodes
  - Anchor hospital period
    - Acute hospital stay – Includes operating, capital and outlier payments. Excludes DSH, IME, new technology, value based purchasing, readmission reduction penalties
  - Post-discharge period
    - Acute hospital readmissions – exclusion lists applied
    - HHA, SNF, LTCH, IRF, Hospice
    - Hospital Outpatient, Part-B, DME – Part B exclusion lists applied
- Calculating Standardized Episode Spending
  - remove effects of wage index and special payment adjustments
- Trending Episode Spending
  - Trend forward the earlier 2 years of baseline data (FFY 2012 and 2013) to the most recent baseline data year (FFY 2014) by Model
- Apply High Episode Payment Winsorization
  - Calculate high episode payment thresholds by EPM Model
  - Cap (winsorize) high cost episodes at these thresholds

Spend By Setting and Model



Key Takeaways:

- CABG & PCI have a larger portion of their spend during the anchor period than AMI. For this reason, AMI may have the most "impactable" spend after the discharge from the acute anchor stay

Spend By Setting and Model

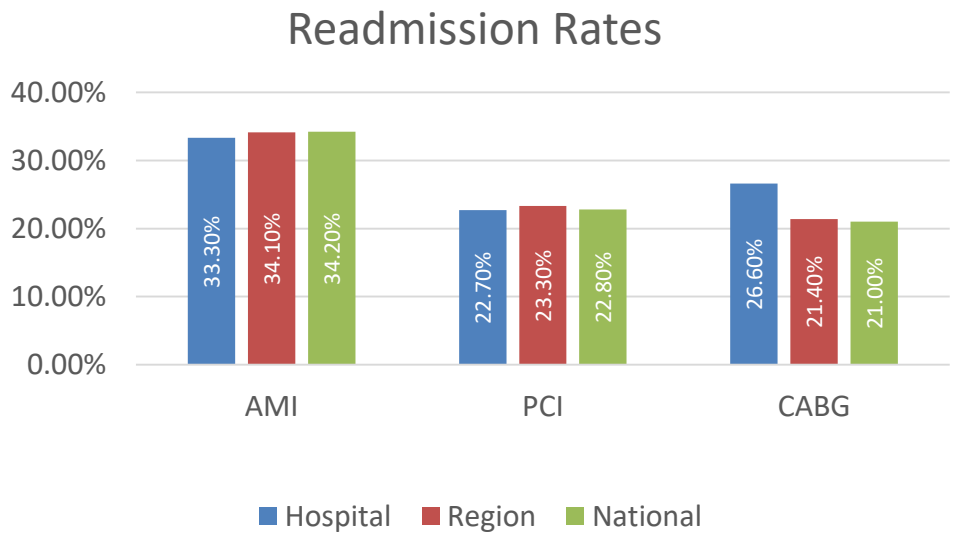
Spend By Setting & Period	Sample Hospital				5 South Atlantic				National			
	AMI	PCI	CABG	Total	AMI	PCI	CABG	Total	AMI	PCI	CABG	Total
Epi Count per Hsp	279	370	391	1040	134	118	86	327	115	101	74	275
Anchor Hospitalization	$7,873	$13,367	$29,393	$17,918	$7,668	$13,177	$28,256	$14,501	$7,751	$13,162	$28,400	$14,487
Transfers (Chained Hospitalizations	$0	$31	$0	$11	$159	$576	$1,316	$581	$159	$612	$1,168	$555
Anchor Part B Physician	$1,483	$1,982	$5,755	$3,267	$1,484	$2,008	$5,780	$2,688	$1,417	$1,905	$5,649	$2,579
Anchor Part B DME	$29	$61	$31	$41	$29	$63	$33	$42	$25	$38	$29	$30
Total Anchor Period	***$9,664***	***$15,811***	***$35,570***	***$22,277***	***$9,474***	***$15,942***	***$35,471***	***$18,139***	***$9,467***	***$15,818***	***$35,320***	***$17,926***
% of Episode Spend	***40.3%***	***67.7%***	***73.8%***	***67.8%***	***39.4%***	***64.5%***	***75.3%***	***60.9%***	***38.7%***	***63.8%***	***74.8%***	***59.9%***
SNF	$2,334	$634	$1,178	$1,295	$3,762	$1,233	$2,232	$2,504	$4,110	$1,331	$2,346	$2,720
Readmissions (excl CABG in AMI)	$4,092	$2,841	$3,361	$3,372	$4,571	$2,864	$2,552	$3,488	$4,576	$2,834	$2,558	$3,491
Outpatient	$1,228	$1,306	$1,033	$1,183	$1,004	$1,312	$1,144	$1,146	$1,071	$1,524	$1,309	$1,286
HHA	$974	$416	$1,598	$1,010	$1,013	$588	$1,711	$1,028	$950	$550	$1,553	$951
IRF	$1,056	$418	$2,942	$1,538	$539	$351	$1,731	$755	$520	$355	$1,689	$735
LTCH	$761	$195	$727	$547	$301	$149	$374	$264	$478	$214	$578	$409
Post Anchor Part B Physician	$2,161	$1,644	$1,923	$1,887	$2,117	$1,722	$1,751	$1,890	$2,092	$1,648	$1,675	$1,838
Post Anchor Part B DME	$234	$241	$217	$230	$205	$232	$201	$214	$176	$205	$174	$186
CABG Readmission (AMI Episodes)	$644	$0	$0	$173	$420	$278	$0	$270	$433	$255	N/A	$270
Other IP	$457	$30	$4	$135	$101	$50	$32	$66	$161	$83	$63	$110
Hospice	$680	$172	$30	$255	$702	$114	$17	$332	$564	$82	$14	$266
Total Post Acute Period	***$14,621***	***$7,897***	***$13,013***	***$11,625***	***$14,735***	***$8,893***	***$11,745***	***$11,957***	***$15,131***	***$9,081***	***$11,959***	***$12,262***
% of Episode Spend	***60.9%***	***33.8%***	***27.0%***	***35.4%***	***61.2%***	***36.0%***	***24.9%***	***40.2%***	***61.8%***	***36.6%***	***25.3%***	***41.0%***
Payment Total	$24,005	$23,338	$48,192	$32,861	$24,074	$24,717	$47,130	$29,769	$24,483	$24,798	$47,205	$29,912
Payment Total Trended	$24,246	$24,033	$49,151	$33,533	$24,335	$25,507	$48,134	$30,394	$24,749	$25,589	$48,204	$30,534
Payment Total Trended & Winsorized	$23,238	$23,501	$47,046	$32,283	$23,435	$24,587	$46,851	$29,396	$23,812	$24,664	$46,896	$29,515

Key Takeaways:

- Readmission spend is a potential target for improvement
- CABG Post Anchor Spend is higher than regional and national averages

Key Metrics

	Sample Hospital				5 South Atlantic				National			
	AMI	PCI	CABG	Total	AMI	PCI	CABG	Total	AMI	PCI	CABG	Total
Coefficient of Variation	73.2%	55.2%	40.0%	62.1%	70.8%	54.8%	38.0%	63.4%	70.9%	55.6%	39.5%	64.0%
% Episodes w Readmit	33.3%	22.7%	26.6%	27.0%	34.1%	23.3%	21.4%	27.3%	34.2%	22.8%	21.0%	27.1%
Total Readm Count/Total Episodes	50.5%	28.9%	35.8%	37.3%	50.3%	32.9%	28.6%	39.0%	49.9%	32.1%	27.8%	38.5%
Chained %	0.0%	0.3%	0.0%	0.1%	2.1%	4.3%	4.4%	3.4%	2.1%	4.5%	3.8%	3.4%
Chained Episode Spend	$0	$22,399	$0	$22,399	$28,538	$30,478	$54,128	$37,160	$29,422	$31,149	$55,907	$37,300
Anchor ALOS	5.1	4.0	9.3	6.3	4.8	3.8	8.8	5.4	4.7	3.7	8.6	5.3



Key Takeaways:

- Readmission rates are favorable in AMI & PCI
- Potential for improvement in CABG readmission rates

First Readmission Analysis

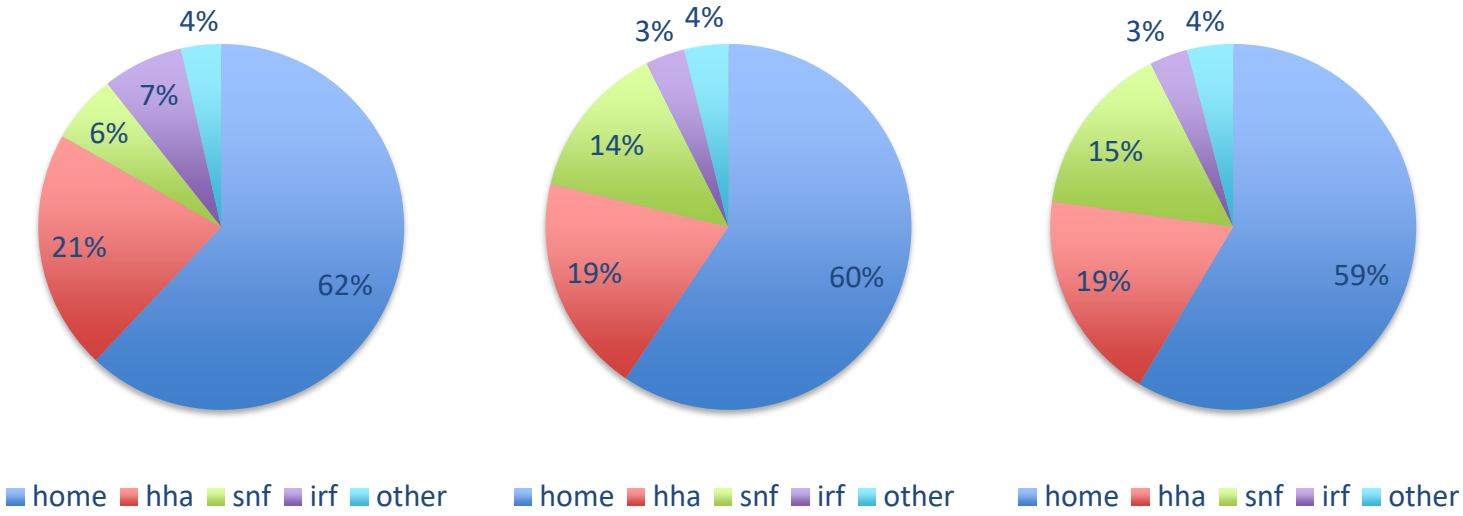
Readmission DRG & Description	% of First Readmissions	Avg. Days from Discharge	% Readmit to Index
Congestive heart failure	12.1%	25	85.3%
Percutaneous coronary intervention	7.8%	34	81.8%
Acute myocardial infarction	5.7%	21	75.0%
Renal failure	5.3%	22	73.3%
Chronic obstructive pulmonary disease, bronchitis, asthma	3.6%	46	70.0%
Gastrointestinal hemorrhage	3.2%	28	44.4%
Cardiac arrhythmia	2.8%	26	50.0%
Other respiratory	2.8%	32	87.5%
Esophagitis, gastroenteritis and other digestive disorders	2.5%	26	85.7%
Sepsis	2.5%	31	71.4%
Urinary tract infection	2.5%	32	57.1%
Chest pain	2.1%	36	66.7%
Coronary artery bypass graft	1.8%	32	100.0%
Major cardiovascular procedure	1.8%	40	100.0%
Red blood cell disorders	1.8%	34	60.0%
Medical non-infectious orthopedic	1.4%	33	50.0%
Other vascular surgery	1.4%	45	75.0%
Pacemaker	1.4%	69	100.0%

Key Takeaways:

- Top reasons for readmissions are CHF, PCI & AMI
- CHF patients primarily come back to anchor hospital for care while AMI and Renal Failure readmissions may be seen in other acute hospitals
- Average days from discharge indicates most readmissions occur 20+ days from discharge

Discharge Trends

Discharge Trends		Sample Hospital				5 South Atlantic				National			
		AMI	PCI	CABG	Total	AMI	PCI	CABG	Total	AMI	PCI	CABG	Total
Discharge Destination (% Episodes)	home	64.5%	84.1%	39.4%	62.0%	58.6%	79.5%	31.3%	59.5%	55.8%	78.6%	33.6%	58.6%
	hha	14.7%	7.3%	39.1%	21.3%	15.2%	10.0%	40.2%	19.3%	15.4%	10.2%	37.1%	18.7%
	snf	10.0%	4.1%	5.1%	6.1%	18.5%	6.1%	17.3%	13.8%	21.1%	6.8%	18.0%	15.3%
	irf	4.3%	1.4%	14.6%	7.1%	1.9%	1.3%	9.4%	3.5%	1.8%	1.3%	9.2%	3.4%
	other	6.5%	3.2%	1.8%	3.6%	5.8%	3.1%	1.8%	3.9%	6.0%	3.1%	2.2%	4.1%



Key Takeaways:

- High IRF utilization across all model types

Discharge Trends

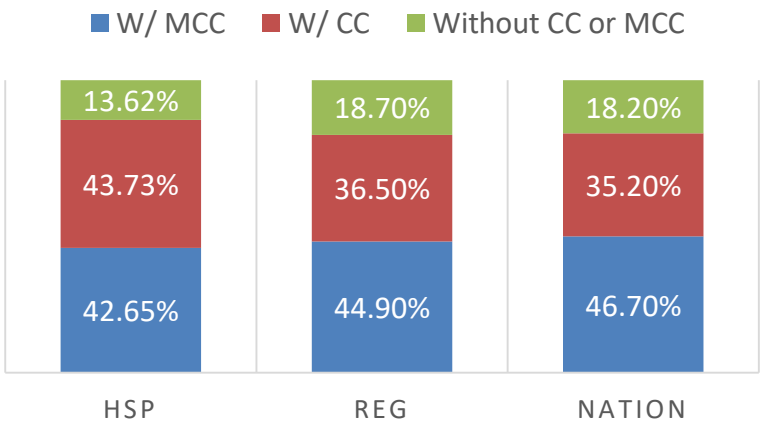
Discharge Trends		Sample Hospital				5 South Atlantic				National			
		AMI	PCI	CABG	Total	AMI	PCI	CABG	Total	AMI	PCI	CABG	Total
% Episodes w/ Readmission by Disch Dest	home	30.6%	18.0%	18.2%	21.6%	26.6%	17.4%	14.7%	20.8%	27.4%	17.2%	14.1%	20.8%
	hha	36.6%	37.0%	25.5%	29.0%	38.6%	33.6%	17.7%	27.3%	38.1%	31.3%	17.5%	27.2%
	snf	35.7%	40.0%	40.0%	38.1%	43.9%	43.6%	31.4%	40.1%	41.1%	41.7%	30.2%	38.2%
	irf	25.0%	40.0%	38.6%	36.5%	46.6%	50.5%	31.1%	37.1%	45.3%	43.5%	30.3%	35.5%
	other	55.6%	83.3%	100.0%	73.0%	63.0%	90.0%	77.3%	72.2%	60.3%	87.1%	69.3%	68.7%
Episode Spend as % of Target Price	home	85.2%	94.0%	89.9%	90.4%	80.1%	92.3%	90.9%	88.0%	80.1%	92.1%	90.7%	87.9%
	hha	106.9%	103.9%	96.7%	98.5%	98.9%	110.1%	93.1%	97.3%	95.6%	107.9%	93.1%	96.3%
	snf	154.2%	151.3%	128.6%	141.5%	150.4%	152.3%	120.2%	138.4%	143.3%	149.9%	119.0%	135.1%
	irf	163.4%	190.9%	145.6%	149.5%	177.6%	174.2%	134.0%	144.7%	173.5%	169.6%	131.7%	142.2%
	other	131.8%	161.4%	127.9%	139.6%	134.9%	148.2%	137.3%	139.3%	136.7%	153.1%	143.2%	142.6%

Key Takeaways:

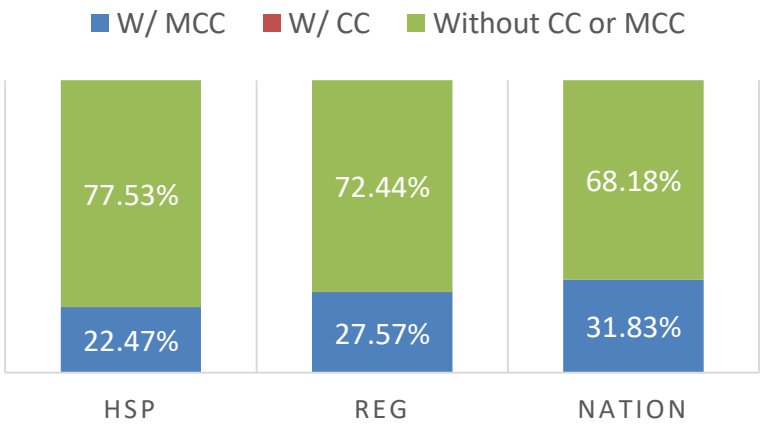
- CABG Episodes discharged to SNF & HHA have a high readmission rates compared to Region and National Averages
- PCI Episodes discharged to IRF or SNF have high episodic spend in relation to target price compared to Region and National Averages in the same discharge settings

Case Mix / Coding

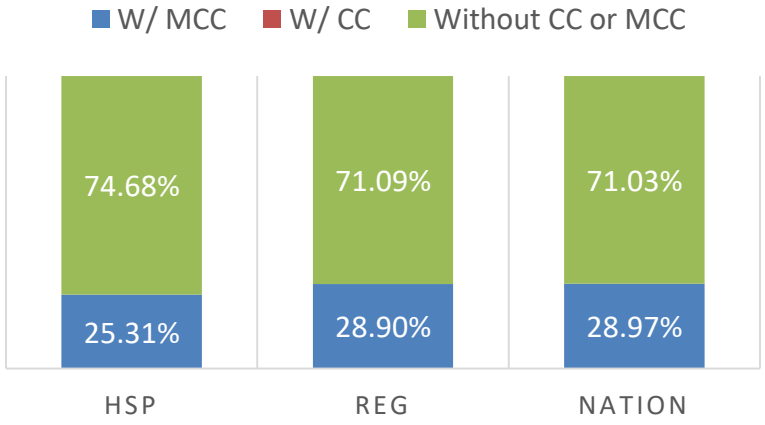
AMI DRGS



CABG DRGS



PCI DRGS



Key Takeaways:

- Case Mix contains less DRGs with MCCs than regional and national averages in CABG & PCIs

Estimated 1 Year Financial Impact

	Cardiac Episode Price DRG			
Per Episode	AMI	PCI	CABG	Cardiac Total
Epi Count	148	142	168	
Avg Episode Payment	$25,909	$28,670	$55,889	
Winsorized Payment	$24,534	$27,055	$54,669	
Estimated Target Price	$23,985	$26,210	$52,083	
Estimated NPRA per Episode	**($549)**	**($845)**	**($2,586)**	

Aggregate	AMI	PCI	CABG	
Epi Count	148	142	168	458
Total Episode Payment	$3,834,532	$4,071,140	$9,389,352	$17,295,024
Total Winsorized Payment	$3,631,032	$3,841,810	$9,184,392	$16,657,234
Total Aggregate Target Price	$3,549,712	$3,721,827	$8,749,920	$16,021,459
Estimated Total Uncapped NPRA	**($81,320)**	**($119,983)**	**($434,472)**	**($635,775)**
% Spend of Target	***102.3%***	***103.2%***	***105.0%***	***104.0%***

	AMI MODEL	CABG MODEL	
Stop Gain/Loss	***5.0%***	*5.0%*	
Stop Gain/Loss Threshold	$363,577	$437,496	
Total Uncapped NPRA	($201,303)	($434,472)	
Estimated Total Capped NPRA	**($201,303)**	**($434,472)**	**($635,775)**

Estimated Target Price Components	AMI	PCI	CABG
Hosp TP (Pre Discount)	$24,820	$27,569	$54,825
Region TP (Pre Discount)	$24,539	$25,924	$51,431
Blended (if min. volume met)	$24,726	$27,021	$53,694
Discount	**3.0%**	3.0%	3.0%
Target Price	$23,985	$26,210	$52,083

*Modeled as if 2015 was a performance year with downside risk

DHG healthcare

Cardiac Rehab Incentive Model

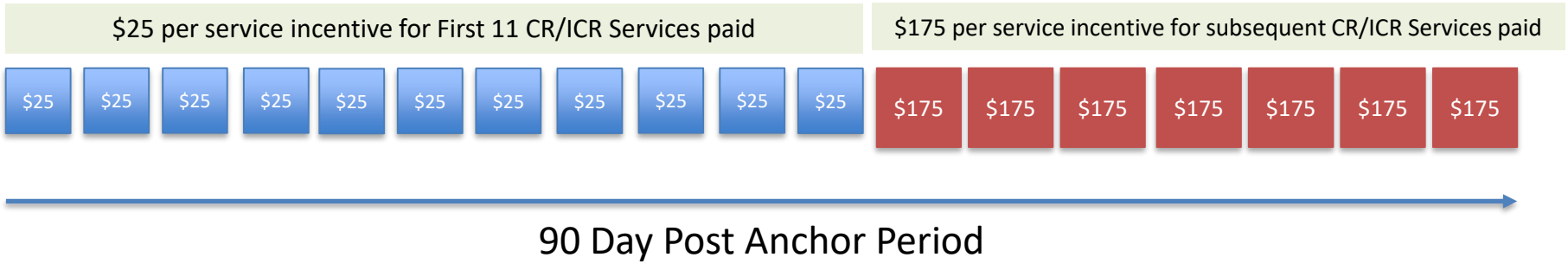
CR Incentive Overview

"Considering the evidence demonstrating that CR/ICR services improve long-term patient outcomes, …… we believe that there is a need for improved long-term care management and care coordination for beneficiaries that have had an AMI or a CABG and that incentivizing the use of CR/ICR services is an important component of meeting this need. "

-EPM Final Rule

HCPCS codes for CR/ICR services in the CR performance year when those CR/ICR services are paid under the OPPS or to supplier reporting place of service code 11 on a PFS claim

HCPCS Code	Descriptor
93797	Physician services for outpatient cardiac rehabilitation; without continuous ECG monitoring (per session)
93798	Physician services for outpatient cardiac rehabilitation; with continuous ECG monitoring (per session)
G0422	Intensive cardiac rehabilitation; with or without continuous ECG monitoring with exercise, per session
G0423	Intensive cardiac rehabilitation; with or without continuous ECG monitoring; without exercise, per session



CR Incentive Overview

TABLE 52: CR MSA SELECTION GROUP DEFINITION AND NUMBER OF MSAS TO BE SELECTED.

CR Selection Group #	# hospitals billing for CR	% of Eligible Medicare FFS patients starting CR	% of patients starting CR completing 25 sessions	# Selection Eligible MSAs	# Cardiac EPM MSAs	# of EPM-CR and FFS-CR MSAs to be selected from group (0.46 x # EPM)
1	1	< 20%	Any	40	4	2
2	1	20% +	Any	35	16	7
3	2 +	< 20%	Any	67	17	8
4	2 +	20-30%	< 60%	34	13	6
5	2 +	20-30%	60% +	52	19	9
6	2 +	30% +	< 60%	37	15	7
7	2 +	30% +	60% +	28	14	6
Total				293	98	45

Example Scenarios:

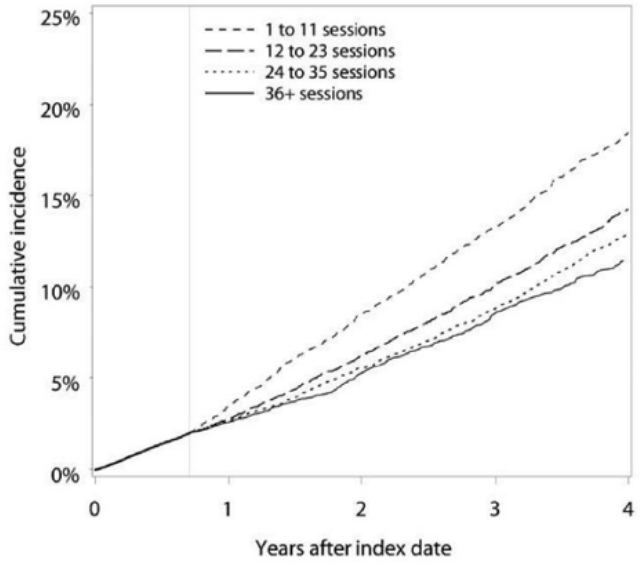
CR Selection Group #	Hospital	AMI/CABG Volume	% of Eligible Medicare FFS patients starting CR	% of patients starting CR completing 25 sessions	Incentive Payments from patients completing 25 sessions	Incentive Payments from patients starting but completing <25 sessions (average 11 visits)	Total Incentive Payment
1	Hospital A	50	15%	20%	$ 4,088	$ 1,650	$ 5,738
2	Hospital B	75	30%	80%	$ 49,050	$ 1,238	$ 50,288
3	Hospital C	100	15%	50%	$ 20,438	$ 2,063	$ 22,501
4	Hospital D	125	25%	45%	$ 38,320	$ 4,727	$ 43,047
5	Hospital E	150	25%	60%	$ 61,313	$ 4,125	$ 65,438
6	Hospital F	175	40%	25%	$ 47,688	$ 14,438	$ 62,126
7	Hospital G	200	50%	75%	$ 204,375	$ 6,875	$ 211,250

CR Incentive Overview

"We set the proposed service utilization benchmark based on evidence from the literature that shows reduced mortality for Medicare beneficiaries that complete at least 12 CR sessions relative to Medicare beneficiaries who complete 1-11 CR sessions. "

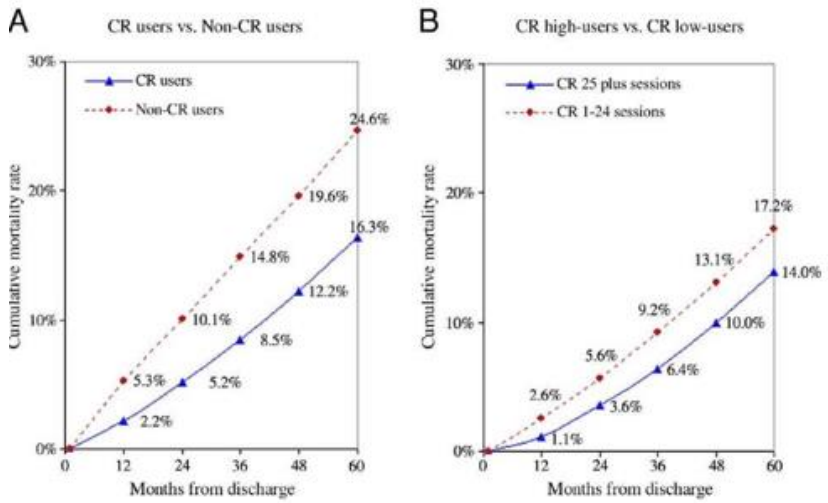
- EPM Final Rule

FIGURE 6: CUMULATIVE INCIDENCE OF MORTALITY BY NUMBER OF CARDIAC REHABILITATION SESSIONS ATTENDED



A study by Hammill et al found that over a 4-year follow-up period beneficiaries who completed 12-23 CR sessions had lower mortality compared to beneficiaries who completed 1-11 CR sessions and that beneficiaries who completed 24 or more CR sessions had lower mortality compared to beneficiaries that completed 12-23 sessions.

FIGURE 7: ESTIMATES OF CUMULATIVE MORTALITY RATES FOR PROPENSITY-BASED MATCHED GROUPS OF CR USE

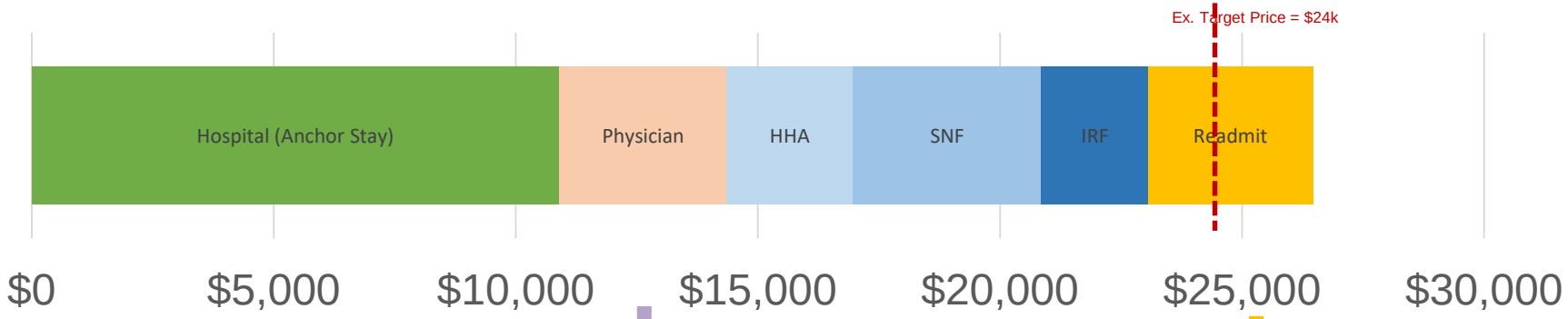


Another study by Suaya *et al.* showed that over a 5-year period beneficiaries who were hospitalized for coronary conditions or cardiac revascularization procedures and completed 1-24 CR sessions had lower mortality compared to beneficiaries who were probable candidates for CR but completed 0 CR sessions and that beneficiaries who completed 25 or more CR sessions had lower mortality compared to beneficiaries who completed 1-24 CR sessions

DHG healthcare

“Additional Clinical Episodes”

Identifying Opportunities in Other Clinical Episodes



1. 50-60% of spending is outside of hospital

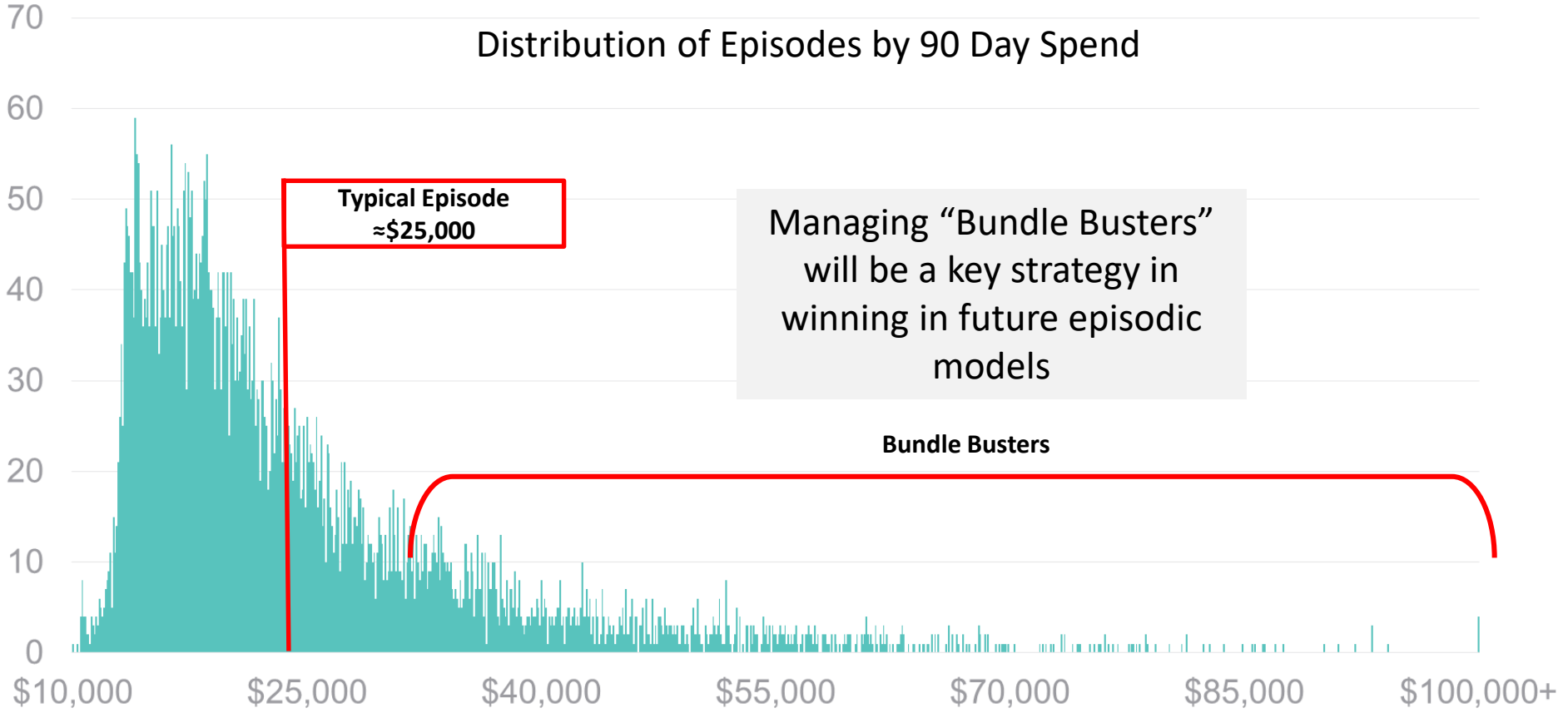
2. Physicians influence post acute spending, with wide variations

3. PAC Setting vitally important to manage
   - Discharge status
   - Picking PAC partners
   - PAC LOS

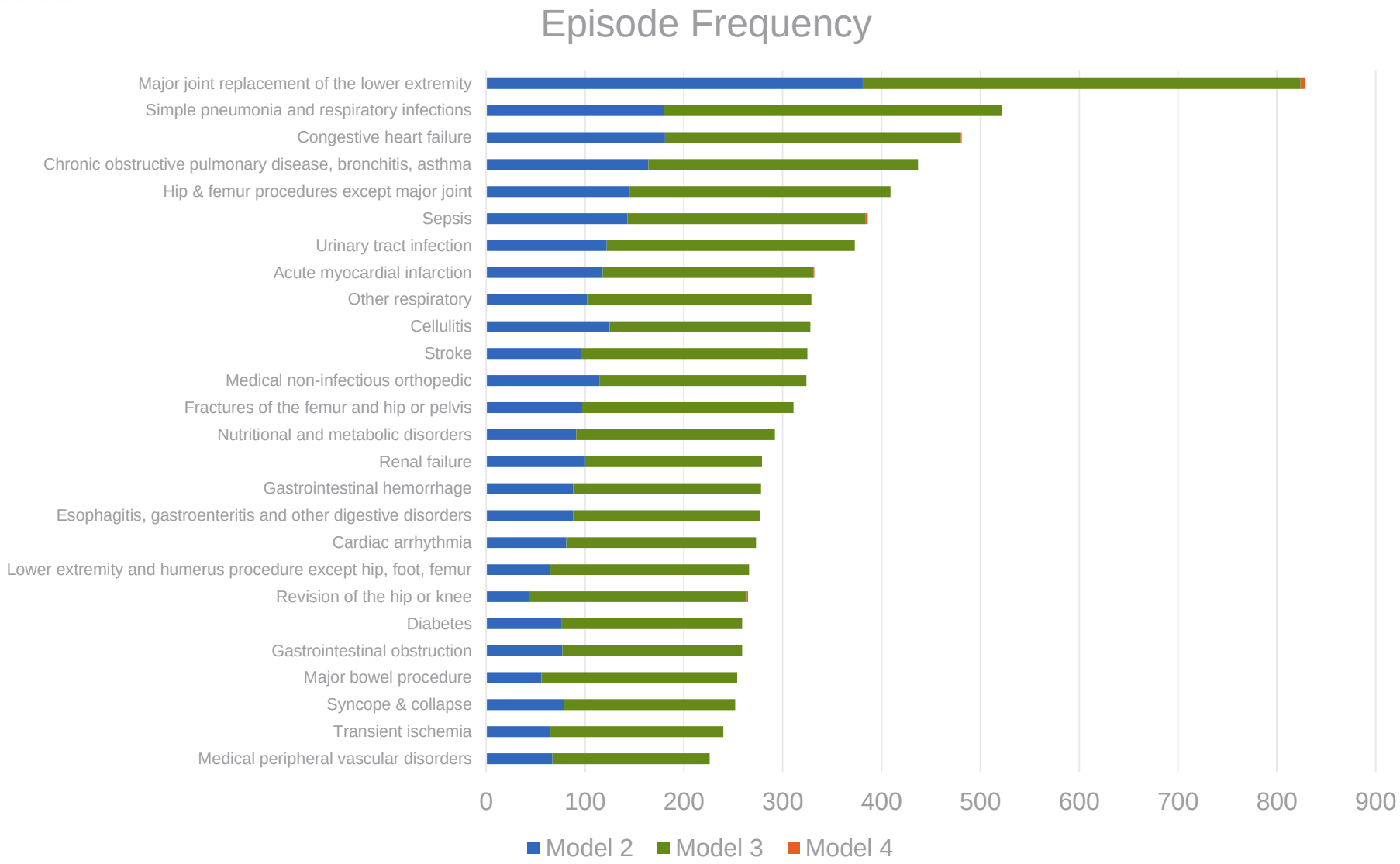
4. Readmission often is over 2x the "spend" of non-readmitted patient

"Impactable Spend"

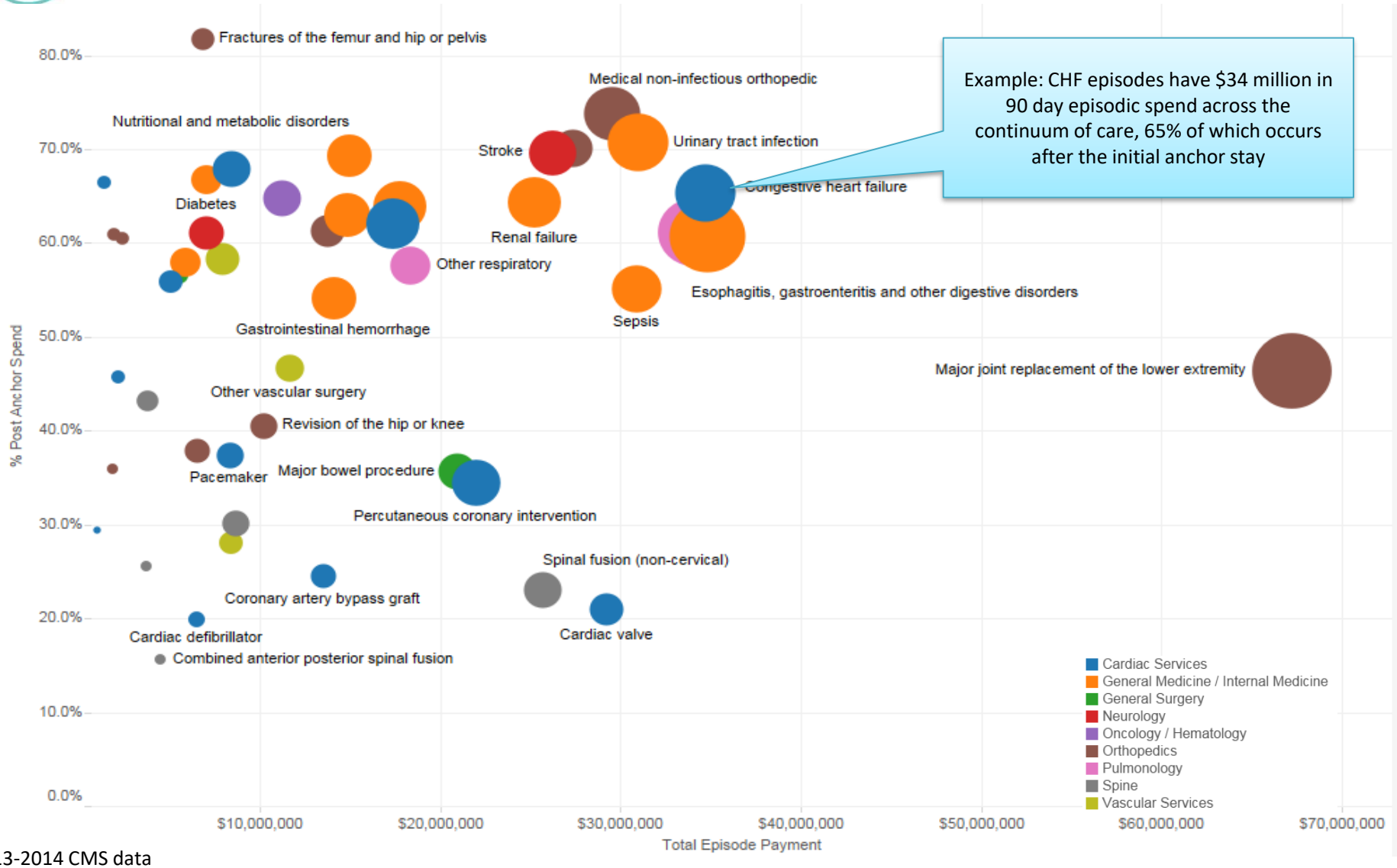
Winning" at Episodic Payments



Current Episodes Being Tested in BPCI



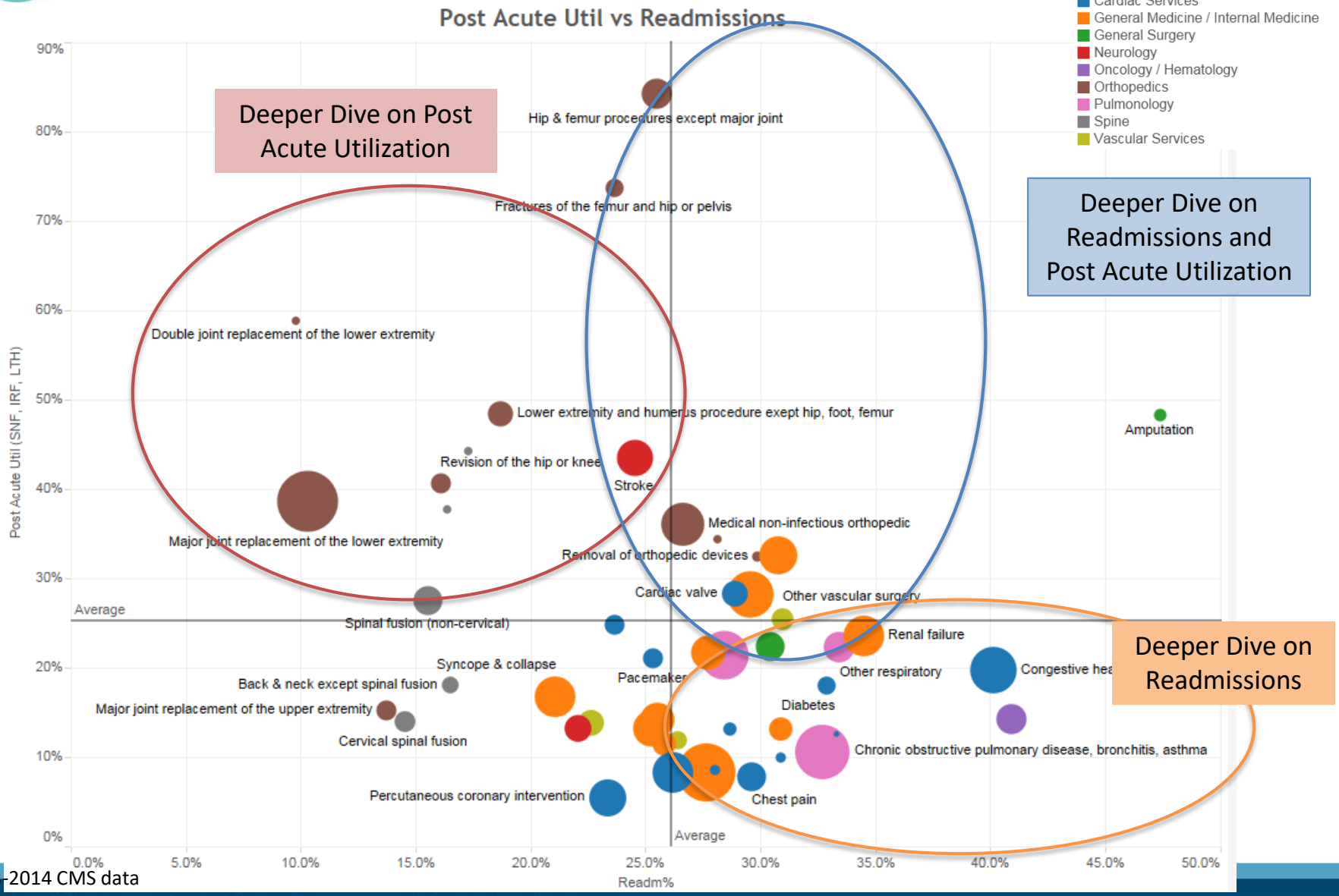
Identifying Opportunities in Other Clinical Episodes



Example: CHF episodes have $34 million in 90 day episodic spend across the continuum of care, 65% of which occurs after the initial anchor stay

2013-2014 CMS data

Identifying Opportunities in Other Clinical Episodes



2013-2014 CMS data

National Percentile by Episode Group

	SAMPLE HOSPITAL				Top Decile Performers		Bottom Decile Performers		National	
Episode Group	Epi Count	Average Epi Spend	Readmit Rate	Spend Percentile	Average Epi Spend	Readmit Rate	Average Epi Spend	Readmit Rate	Average Epi Spend	Readmit Rate
Percutaneous coronary intervention	648	$ 22,106	21.3%	65.9%	$ 19,712	17.0%	$ 29,009	26.7%	$ 23,058	21.7%
Major joint replacement of the lower extremity	634	$ 26,226	9.5%	57.1%	$ 20,704	6.7%	$ 37,478	19.2%	$ 25,589	9.9%
Cardiac arrhythmia	448	$ 14,528	29.0%	75.7%	$ 12,827	22.0%	$ 21,093	34.6%	$ 15,668	26.9%
Stroke	406	$ 28,641	21.7%	39.9%	$ 21,347	18.9%	$ 35,317	28.3%	$ 28,089	22.3%
Chronic obstructive pulmonary disease, bronchitis, asthma	390	$ 15,889	32.3%	58.8%	$ 13,308	24.6%	$ 20,970	33.9%	$ 16,516	30.6%
Congestive heart failure	369	$ 20,707	39.6%	70.2%	$ 17,858	30.7%	$ 28,129	44.4%	$ 22,115	37.8%
Simple pneumonia and respiratory infections	358	$ 20,238	26.5%	41.0%	$ 15,615	22.0%	$ 25,774	30.4%	$ 19,976	26.4%
Sepsis	278	$ 31,586	34.2%	18.0%	$ 21,198	24.1%	$ 38,914	33.7%	$ 27,244	28.3%
Coronary artery bypass graft	244	$ 44,120	25.0%	57.9%	$ 38,195	15.3%	$ 57,624	23.6%	$ 44,907	19.3%
Urinary tract infection	242	$ 18,252	24.4%	68.9%	$ 15,142	21.9%	$ 25,858	30.7%	$ 19,973	26.4%
Renal failure	235	$ 19,817	23.8%	68.5%	$ 16,725	23.3%	$ 27,389	34.7%	$ 21,318	29.2%
Pacemaker	217	$ 25,225	21.2%	63.9%	$ 21,845	14.5%	$ 33,421	25.9%	$ 26,398	19.9%
Gastrointestinal hemorrhage	191	$ 15,307	22.0%	77.3%	$ 13,470	19.8%	$ 21,956	30.8%	$ 16,860	24.7%
Medical non-infectious orthopedic	183	$ 22,470	21.3%	78.5%	$ 19,582	21.7%	$ 31,599	29.6%	$ 24,956	25.3%
Spinal fusion (non-cervical)	183	$ 41,525	16.4%	25.5%	$ 31,867	8.6%	$ 50,929	19.0%	$ 38,454	12.5%
Esophagitis, gastroenteritis and other digestive disorders	180	$ 14,910	25.0%	39.6%	$ 11,583	19.8%	$ 18,817	30.8%	$ 14,489	24.9%
Other respiratory	172	$ 30,996	34.3%	28.8%	$ 20,370	28.6%	$ 41,111	40.2%	$ 27,794	34.3%
Hip & femur procedures except major joint	171	$ 37,959	24.6%	73.2%	$ 32,915	17.0%	$ 48,589	25.3%	$ 40,463	21.0%
Cervical spinal fusion	170	$ 26,227	12.4%	55.8%	$ 21,291	6.7%	$ 38,178	17.6%	$ 27,338	11.4%
Acute myocardial infarction	164	$ 20,878	28.7%	81.9%	$ 18,289	24.8%	$ 32,782	54.4%	$ 24,316	38.5%
Other vascular surgery	160	$ 31,493	27.5%	48.1%	$ 24,307	23.6%	$ 41,755	38.6%	$ 31,313	30.8%
Cardiac valve	157	$ 56,419	31.9%	55.2%	$ 48,426	20.0%	$ 72,350	32.1%	$ 56,638	24.8%

Wage index removed and payments have been winsorized when comparing across national providers. Deciles based on Average Episodic Spend

National Percentile by Episode Group

	SAMPLE HOSPITAL				Top Decile Performers		Bottom Decile Performers		National	
Episode Group	Epi Count	Average Epi Spend	Readmit Rate	Spend Percentile	Average Epi Spend	Readmit Rate	Average Epi Spend	Readmit Rate	Average Epi Spend	Readmit Rate
Nutritional and metabolic disorders	144	$ 15,333	24.3%	78.7%	$ 13,320	20.3%	$ 23,721	32.1%	$ 17,713	25.9%
Major cardiovascular procedure	139	$ 36,127	27.3%	57.5%	$ 29,845	16.1%	$ 48,046	32.4%	$ 37,109	23.9%
Major bowel procedure	131	$ 35,915	27.5%	32.9%	$ 26,010	18.9%	$ 45,225	29.8%	$ 33,272	23.9%
Transient ischemia	130	$ 11,091	10.8%	80.5%	$ 9,674	11.9%	$ 17,344	22.0%	$ 13,033	17.0%
Chest pain	120	$ 11,784	21.7%	54.5%	$ 8,904	14.1%	$ 17,152	32.5%	$ 12,174	22.1%
Syncope & collapse	111	$ 13,092	16.2%	78.2%	$ 11,418	15.0%	$ 19,757	25.6%	$ 14,992	20.1%
Cardiac defibrillator	103	$ 48,129	22.3%	50.7%	$ 41,293	17.8%	$ 59,531	30.3%	$ 48,381	25.0%
Diabetes	97	$ 20,568	39.2%	23.1%	$ 13,693	21.5%	$ 24,721	34.9%	$ 18,532	29.2%
Cellulitis	91	$ 18,388	27.5%	33.7%	$ 13,352	18.8%	$ 23,511	28.8%	$ 17,403	24.1%
Gastrointestinal obstruction	90	$ 16,013	18.9%	28.3%	$ 10,555	16.8%	$ 19,579	31.2%	$ 14,382	23.8%
Red blood cell disorders	89	$ 18,213	33.7%	44.9%	$ 13,759	24.0%	$ 23,723	42.3%	$ 18,097	33.8%
Medical peripheral vascular disorders	83	$ 20,157	32.5%	50.5%	$ 15,101	20.0%	$ 27,338	36.5%	$ 20,411	28.6%
Amputation	82	$ 50,016	37.8%	23.6%	$ 35,391	29.9%	$ 57,811	41.7%	$ 45,170	36.5%
Back & neck except spinal fusion	78	$ 25,652	19.2%	7.8%	$ 13,316	7.4%	$ 26,976	18.5%	$ 18,809	12.4%
Lower extremity and humerus procedure exept hip, foot, femur	68	$ 29,727	19.1%	69.3%	$ 24,192	13.4%	$ 42,283	26.0%	$ 32,433	18.7%
Revision of the hip or knee	67	$ 33,994	17.9%	59.8%	$ 27,579	10.6%	$ 46,269	25.4%	$ 35,477	17.0%
Atherosclerosis	43	$ 13,660	20.9%	72.5%	$ 10,762	20.5%	$ 23,034	52.6%	$ 16,269	34.5%
Pacemaker device replacement or revision	41	$ 25,893	24.4%	55.5%	$ 19,250	13.3%	$ 37,974	32.2%	$ 26,721	24.8%
Major joint replacement of the upper extremity	33	$ 25,330	12.1%	26.4%	$ 18,410	4.6%	$ 30,412	10.7%	$ 22,955	7.9%
Fractures of the femur and hip or pelvis	31	$ 26,387	22.6%	69.7%	$ 21,159	16.0%	$ 36,243	30.8%	$ 28,739	24.2%
Double joint replacement of the lower extremity	30	$ 34,386	0.0%	76.0%	$ 28,783	4.1%	$ 45,651	15.7%	$ 37,811	8.4%

Wage index removed and payments have been winsorized when comparing across national providers. Deciles based on Average Episodic Spend

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“Next Steps"

Next Steps

- Understanding historical data will be crucial to identifying opportunity in future bundling initiatives
  - Episodic model methodologies rely on a historical "baseline" period of data
  - Generally, baseline periods are 2-3 years prior to performance period, which makes understanding 2014-2015 data relevant and important

Mandatory Programs

CJR & EPM

- Currently updating with 2015 data
- Analyses created from SAF LDS files based on episode specs from final or proposed rules
- Ability to Compare to Regional & National Trends
- CMS Data Restrictions (<11)
- Part B claims imputed from 5% sample

Voluntary Programs

Super Bundler

- Currently updating with 2015 data
- Analyses created from SAF LDS files based on episode specs BPCI
- Modeled for Model 2, 90 Day Episodes for all 48 Episode Groups available in the BPCI Program
- Ability to Compare to Regional & National Trends
- CMS Data Restrictions (<11)
- Part B claims imputed from 5% sample

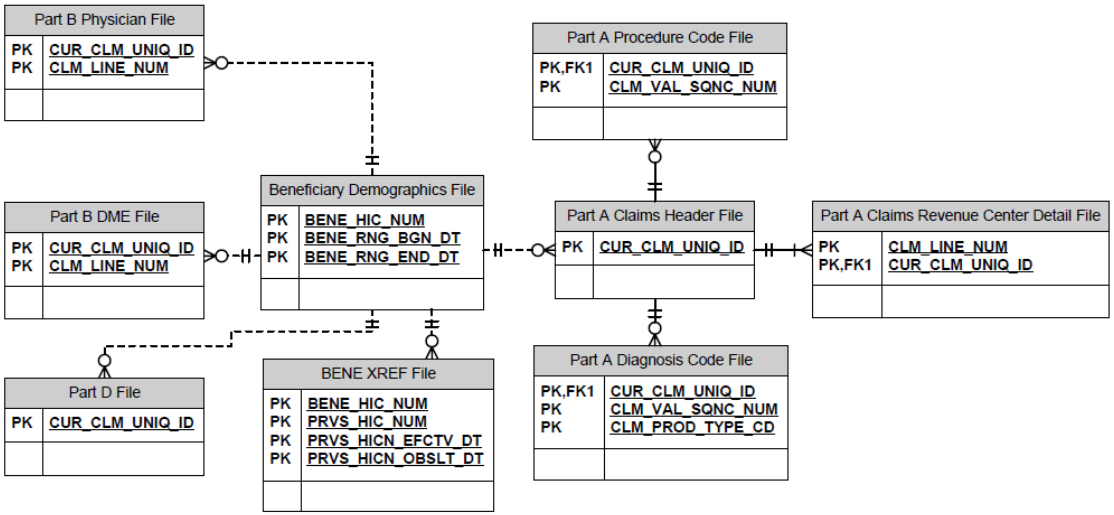
Next Steps

- If more up-to-date data is necessary, monthly ACO claims files could be used to "build" bundles and analyze key metrics and understand utilization

Current Performance/ Custom Data Pulls

ACO CCLF Files

- Monthly CMS transmission for MSSP participants
- Most recent claims files available
- Ability to model for IP initiated episodes or other custom data pulls
- Full Patient/Episode Detail available
- Tableau Enabled Dashboard

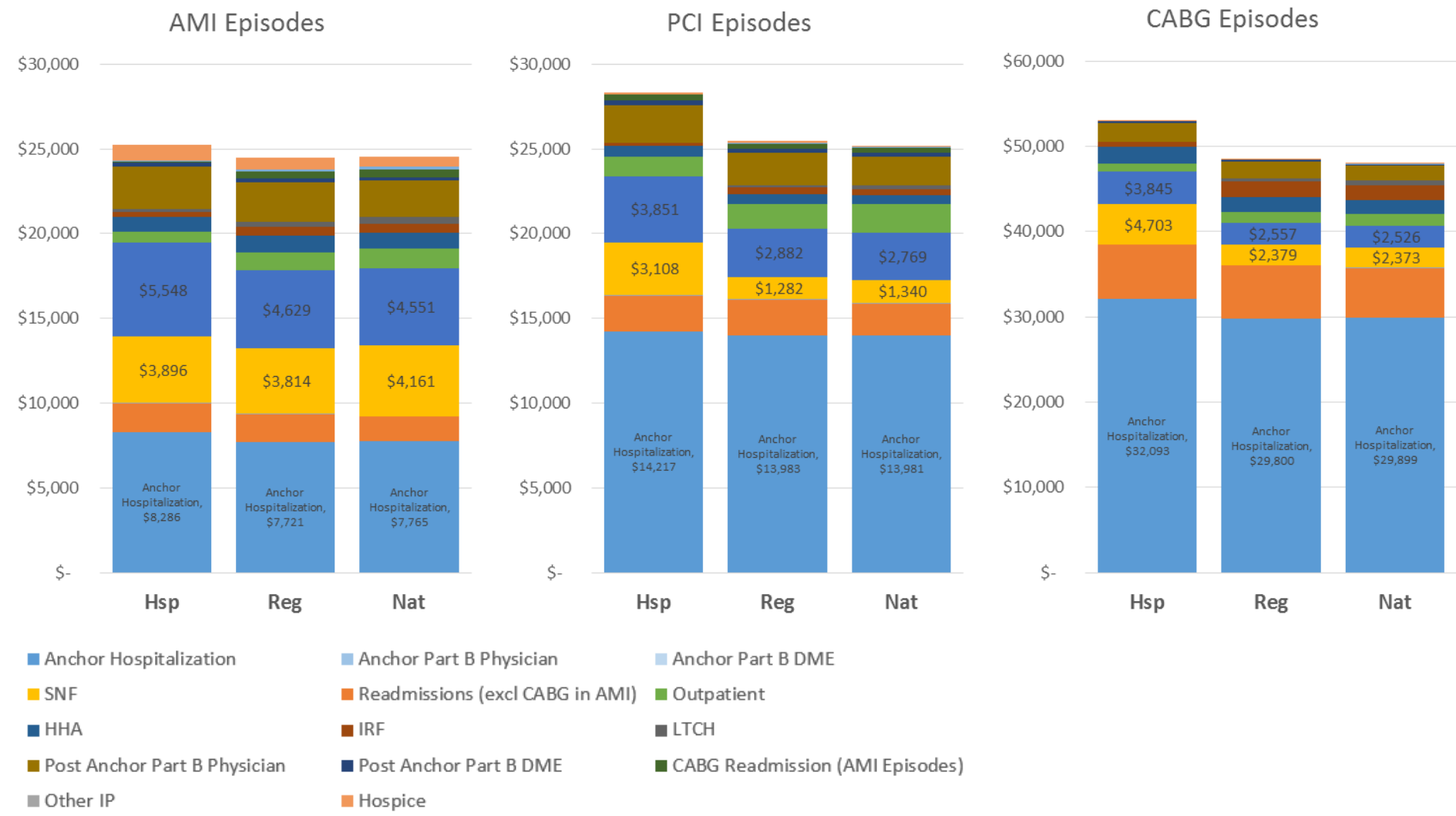


CMS Analytics – Critical to Risk Capability

CORE COMPETENCIES			PROGRAM COMPETENCIES	
PERFORMANCE	**POST-ACUTE**	**EPISODIC**	**PROGRAM SPECIFIC**	
Readmissions HACS MACRA VBP/MSPB	SNF Performance Home Health	EPM Readiness BPCI Readiness Episodic Spend & Variation	Mandatory	CJR EPM
			Voluntary	BPCI OCM ACO

DHG TOOLS / RESOURCES			
QNET Analytics	Post-Acute Scorecards	EPM Analytics BPCI Analytics “Super Bundler”	CRJ Quarterly Manager EPM Quarterly Manager BPCI Monthly Manager OCM Quarterly Manager ACO Monthly Manager National Episodic Benchmarks

EPM Spend By Setting and Model



EPMs - Estimated 1 Year Financial Impact

Per Episode	Episode Price DRG AMI	PCI	CABG	Total
Epi Count	229	60	64	353
Avg Episode Payment	$23,485	$22,927	$49,188	$28,050
Winsorized Payment	$23,054	$22,480	$49,002	$27,661
Estimated Target Price	$21,216	$22,757	$47,574	$26,257
Estimated NPRA per Episode	**($1,838)**	**$277**	**($1,428)**	**($1,404)**

Aggregate	AMI	PCI	CABG	Total
Epi Count	229	60	64	353
Total Episode Payment	$5,378,065	$1,375,620	$3,148,032	$14,613,017
Total Winsorized Payment	$5,279,366	$1,348,800	$3,136,128	$14,419,194
Total Aggregate Target Price	$4,858,543	$1,365,395	$3,044,763	$13,583,053
Estimated Total Uncapped NPRA	**($420,823)**	**$16,595**	**($91,365)**	**($836,141)**
% Spend of Target	***108.7%***	***98.8%***	***103.0%***	***105.3%***

	AMI MODEL	CABG MODEL	Total
Stop Gain/Loss	***5.0%***	*5.0%*	
Stop Gain/Loss Threshold	$311,197	$152,238	
Total Uncapped NPRA	($404,228)	($91,365)	
Estimated Total Capped NPRA	**($311,197)**	**($91,365)**	**($402,562)**

Estimated Target Price Components	AMI	PCI	CABG	Total
Hosp TP (Pre Discount)	$20,998	$22,992	$48,377	$26,301
Region TP (Pre Discount)	$22,952	$23,679	$48,882	$27,777
Blended (if min. volume met)	$21,649	$23,221	$48,545	$26,793
Discount	**2.0%**	2.0%	2.0%	2.0%
Target Price	$21,216	$22,757	$47,574	$26,257

Per Episode	CJR ADD SHFFT
Epi Count	100
Avg Episode Payment	$47,113
Winsorized Payment	$46,549
Estimated Target Price	$43,144
Estimated NPRA per Episode	**($3,405)**

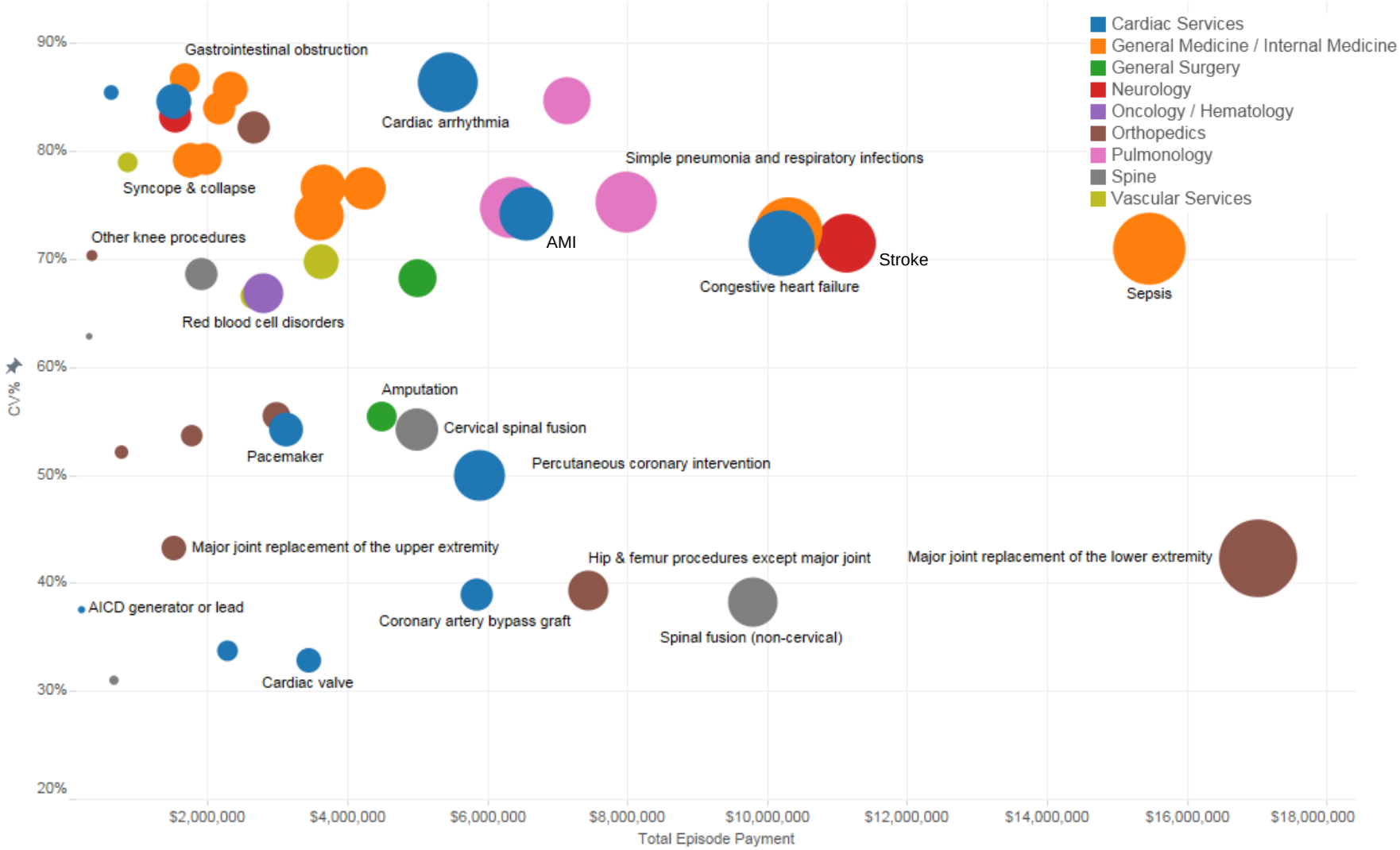
Aggregate	SHFFT
Epi Count	100
Total Episode Payment	$4,711,300
Total Winsorized Payment	$4,654,900
Total Aggregate Target Price	$4,314,352
Estimated Total Uncapped NPRA	**($340,548)**
% Spend of Target	***107.9%***

	SHFFT
Stop Gain/Loss	***5.0%***
Stop Gain/Loss Threshold	$215,718
Total Uncapped NPRA	($340,548)
Estimated Total Capped NPRA	**($215,718)**

Estimated Target Price Components	SHFFT
Hosp TP (Pre Discount)	$44,419
Region TP (Pre Discount)	$43,234
Blended (if min. volume met)	$44,024
Discount	2.0%
Target Price	$43,144

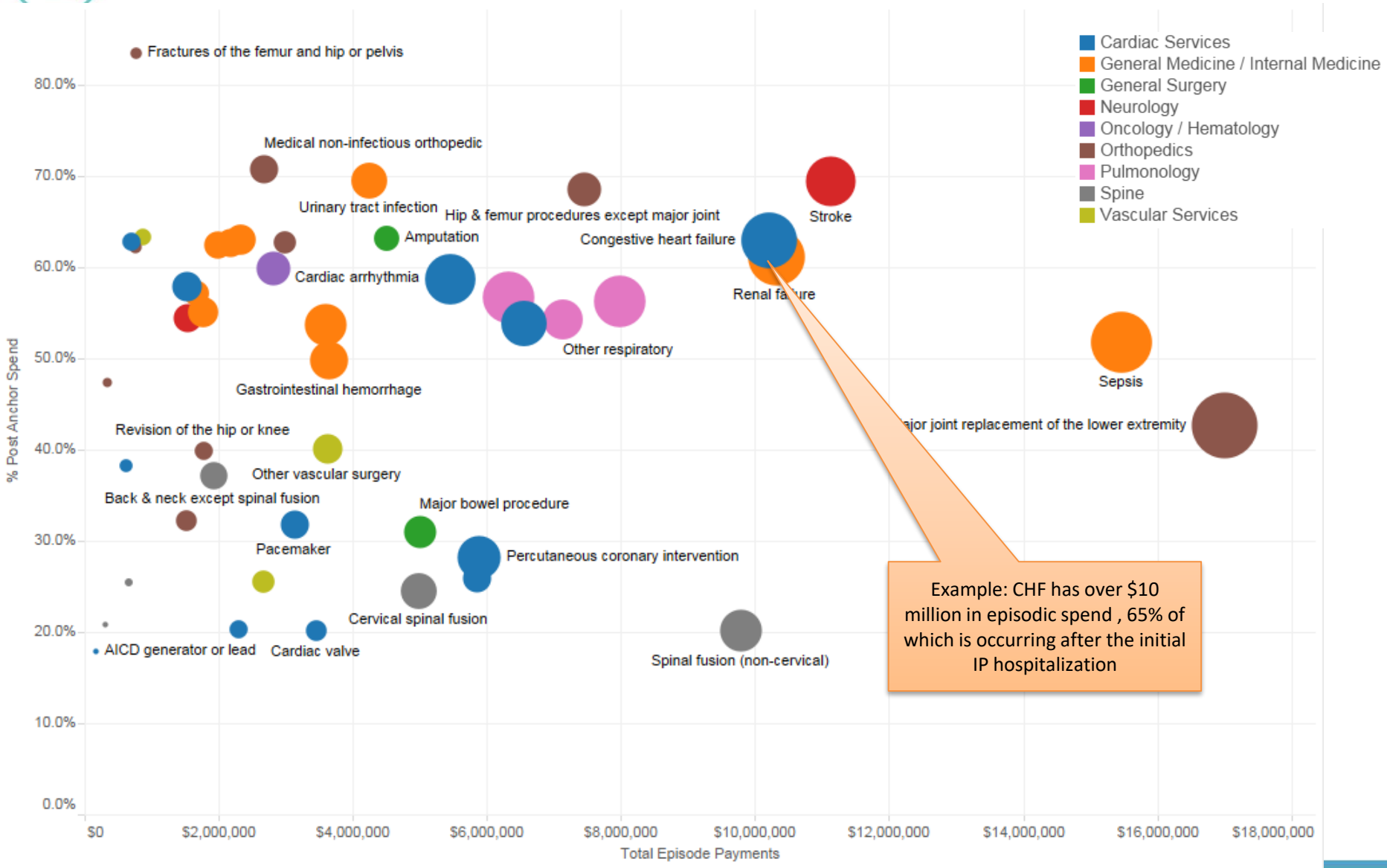
Medicare 100% LDS files for 2013 through 2014 to construct EPM episodes beginning on or after October 1, 2013 and on or before September 30, 2014 (Federal Fiscal 2014, 1 Year) – Part B imputed from 5% sample of beneficiaries

Total Episodic Payments by Product Line



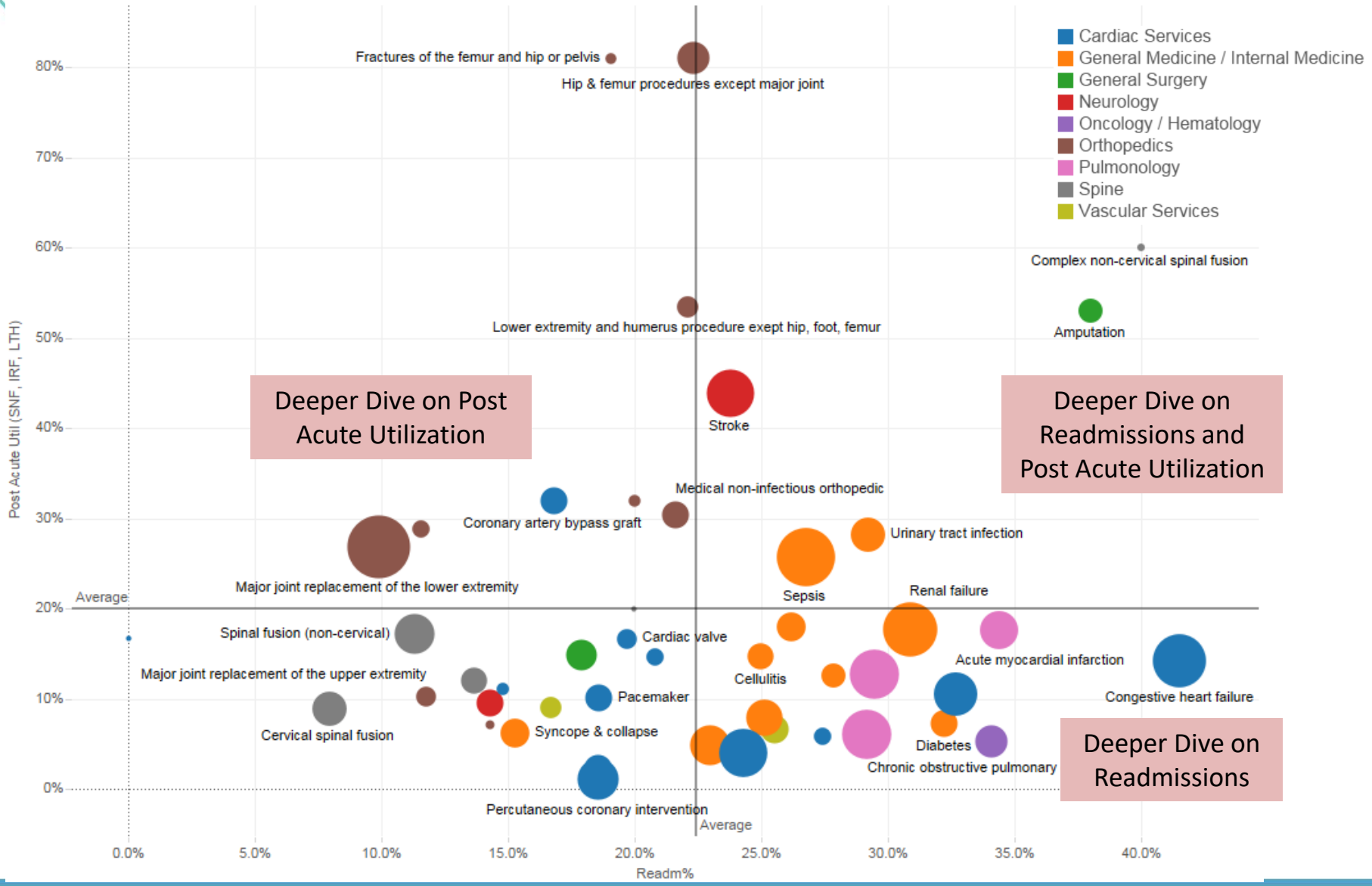
Source: CMS Public Use Files, 2013-2014 Data Years

Total Episodic Payments by Product Line



Source: CMS Public Use Files, 2013-2014 Data Years

Post Acute Utilization vs Readmission Rates



Source: CMS Public Use Files, 2013-2014 Data Years

Super Bundler Overview

	Sample Hospital			Top Decile Performers		Bottom Decile Performers		National	
Episode Group	Average Epi Spend	Readmit Rate	Spend Percentile	Average Epi Spend	Readmit Rate	Average Epi Spend	Readmit Rate	Average Epi Spend	Readmit Rate
Acute myocardial infarction	$ 18,057	21.6%	95.8%	$ 18,289	24.8%	$ 32,782	54.4%	$ 24,316	38.5%
Other respiratory	$ 20,721	31.0%	94.0%	$ 20,370	28.6%	$ 41,111	40.2%	$ 27,794	34.3%
Major bowel procedure	$ 28,035	21.2%	87.4%	$ 26,010	18.9%	$ 45,225	29.8%	$ 33,272	23.9%
Chronic obstructive pulmonary disease, bronchitis, asthma	$ 14,218	25.0%	87.2%	$ 13,308	24.6%	$ 20,970	33.9%	$ 16,516	30.6%
Transient ischemia	$ 10,772	13.5%	84.1%	$ 9,674	11.9%	17344.05	22.0%	$ 13,033	17.0%
Atherosclerosis	$ 12,520	0.0%	83.9%	$ 10,762	20.5%	$ 23,034	52.6%	$ 16,269	34.5%
Gastrointestinal hemorrhage	$ 15,077	20.2%	81.0%	$ 13,470	19.8%	$ 21,956	30.8%	$ 16,860	24.7%
Other vascular surgery	$ 27,534	23.1%	79.0%	$ 24,307	23.6%	$ 41,755	38.6%	$ 31,313	30.8%
Renal failure	$ 19,002	21.6%	78.7%	$ 16,725	23.3%	$ 27,389	34.7%	$ 21,318	29.2%
Cardiac arrhythmia	$ 14,440	24.2%	77.2%	$ 12,827	22.0%	$ 21,093	34.6%	$ 15,668	26.9%
Medical non-infectious orthopedic	$ 22,805	17.6%	75.2%	$ 19,582	21.7%	$ 31,599	29.6%	$ 24,956	25.3%
Congestive heart failure	$ 20,480	36.5%	73.7%	$ 17,858	30.7%	$ 28,129	44.4%	$ 22,115	37.8%
Cardiac defibrillator	$ 45,863	0.0%	68.1%	$ 41,293	17.8%	$ 59,531	30.3%	$ 48,381	25.0%
Nutritional and metabolic disorders	$ 16,282	18.4%	67.4%	$ 13,320	20.3%	$ 23,721	32.1%	$ 17,713	25.9%
Cervical spinal fusion	$ 25,082	13.8%	65.6%	$ 21,291	6.7%	$ 38,178	17.6%	$ 27,338	11.4%
Fractures of the femur and hip or pelvis	$ 26,919	21.3%	65.1%	$ 21,159	16.0%	$ 36,243	30.8%	$ 28,739	24.2%
Simple pneumonia and respiratory infectio	$ 18,780	27.1%	64.3%	$ 15,615	22.0%	25773.51	30.4%	$ 19,976	26.4%
Pacemaker	$ 25,193	19.4%	64.2%	$ 21,845	14.5%	$ 33,421	25.9%	$ 26,398	19.9%
Sepsis	$ 25,701	31.9%	60.9%	$ 21,198	24.1%	38914.39	33.7%	$ 27,244	28.3%
Percutaneous coronary intervention	$ 22,580	16.3%	57.2%	$ 19,712	17.0%	$ 29,009	26.7%	$ 23,058	21.7%
Major joint replacement of the lower extremity	$ 26,392	9.8%	55.5%	$ 20,704	6.7%	$ 37,478	19.2%	$ 25,589	9.9%
Cellulitis	$ 16,948	21.6%	54.6%	$ 13,352	18.8%	$ 23,511	28.8%	$ 17,403	24.1%
Amputation	$ 44,158	0.0%	53.5%	$ 35,391	29.9%	$ 57,811	41.7%	$ 45,170	36.5%
Urinary tract infection	$ 19,612	24.0%	51.7%	$ 15,142	21.9%	25858.03	30.7%	$ 19,973	26.4%

Concluding Thoughts:

- The shift to Value, which has significant market momentum, is likely to continue regardless of “Repeal and Replace.”
- An organization’s ability to understand their DATA is crucial to success in a Value based world.
- The development of new and different care models, parallel to the adoption of EPMs, is critical to success.
- Accurate and complete Clinical Documentation has never been more important.
- Planning and organizing across the continuum and across all payers are critical success factors.
- Keeping governance engaged and informed is crucial.

Upcoming Events

- We are presenting at the LA HFMA Chapter in Baton Rouge on January 23rd.
- Join us at Lone Star Chapter in Garland on January 26 and 27
- DHG Healthcare will be at the THA Annual Meeting in Austin on January 26 and 27
- DHG Healthcare is a sponsor and presenter at the HFMA National Payment Summit in Dallas on February 8th through the 10th.

DHG

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