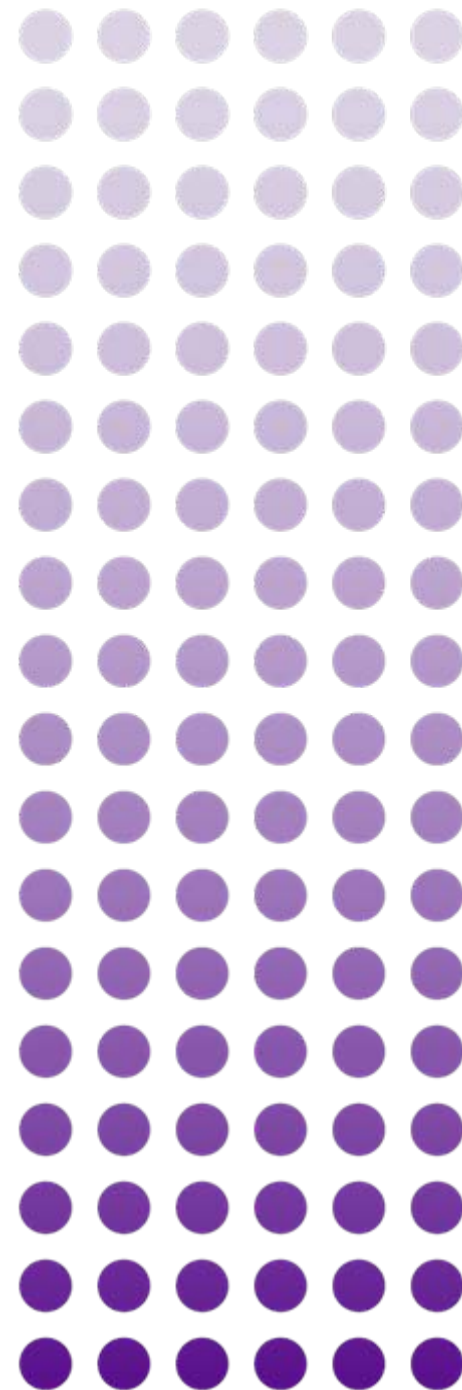**NYU Langone**
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Measuring Success with Bundles:
Winning Strategies in Analytics
The National Bundled Payment Summit
Washington, DC
June 16-18, 2014

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Senior Vice President and Chief of Managed
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NYU Langone Medical Center

- Academic medical center comprised of four hospitals
- 1,069 licensed beds
- 39,000 patient admissions
- 670,000 outpatient visits
- Medicare beneficiaries represent 27% of NYULMC volume and 18% of revenue

- Established NYUPN, a Clinically-Integrated Network, in 2010
- 761 voluntary physicians (38%)
- 1262 Faculty Group Practice (FGP) physicians (62%)
- >1M FGP physician visits

Using Analytics to Empower Clinicians

❑ To be successful in BPCI, NYULMC needed to place focused information in the hands of clinicians on a timely basis in order to facilitate care redesign.

❑ Since DRG coding occurs post-discharge, NYULMC had to find a way to predict BPCI patients at both the pre-admission phase after scheduling of surgery and during the inpatient stay. NYULMC leveraged Epic to identify this population of interest.

❑ NYULMC also built tools in Epic so that Clinical Care Coordinators (CCCs) could document care coordination activities, including readmissions to facilities outside of NYULMC. CCCs have been able to capture the majority (>85%) of readmissions that occur at outside our hospitals.

❑ Using EMR data, a weekly dashboard was developed to regularly inform leadership and clinicians on BPCI performance, at both the condition and physician levels.

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BPCI Episode Technical Workflow

BPCI Episode Technical Workflow
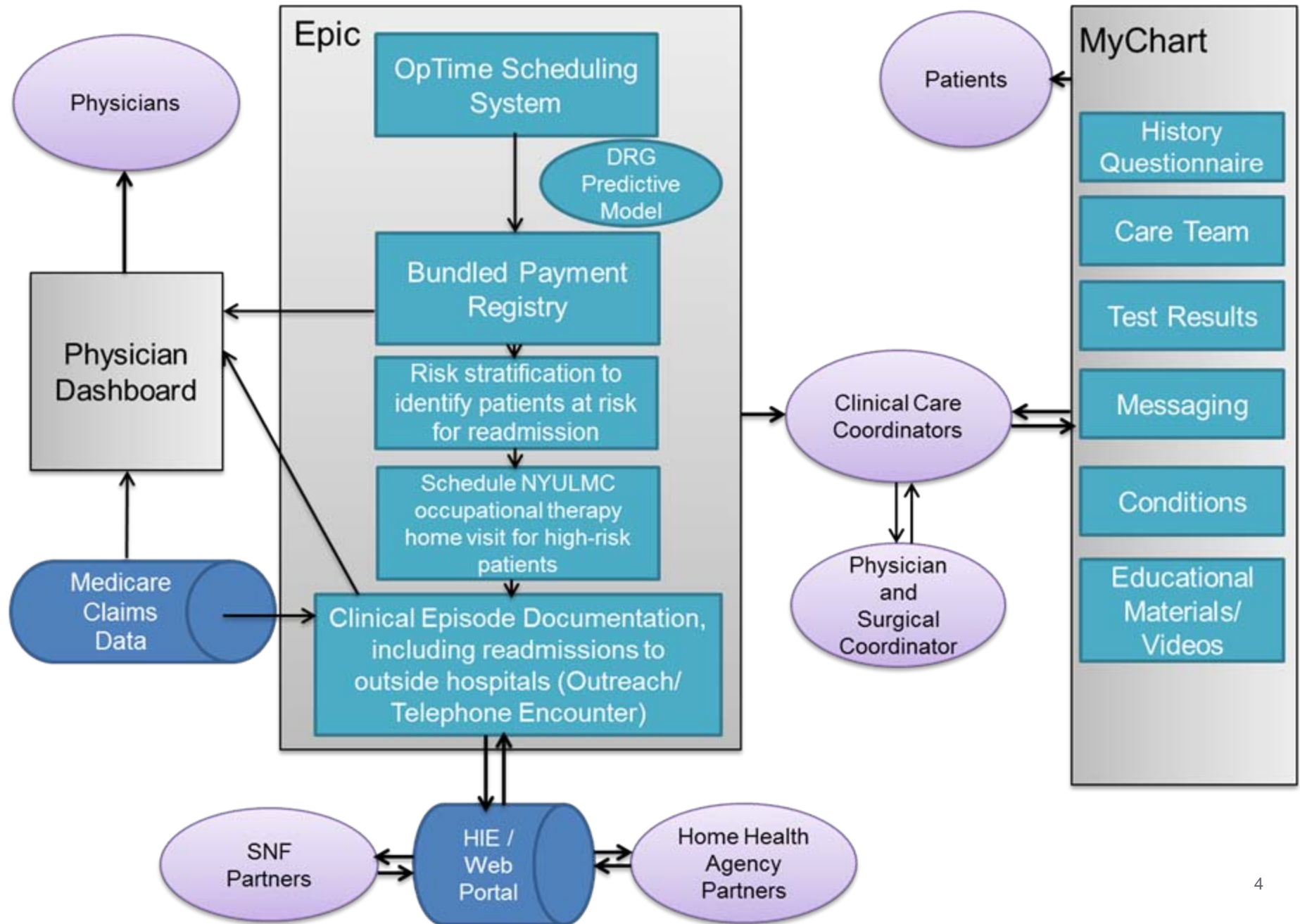
BPCI Patient Identification

- **Scheduled procedures report** kicks off outreach efforts pre-surgically

Surgery Date	Pre-Testing Date	Patient Name	Patient Age on Surgery Date	Surgeon Name	Procedure	Home Phone	Email Address	Birth Date	Patient PCP Name	PCP Office Phone Num	Schedule Status
10/15/2013	5/8/2013	Patient 1	69.5	Surgeon 1	ROBOTIC MITRAL VALVE ANNULOPLASTY	Phone 1	Email 1	DOB 1	PCP 1	PCP 1	Scheduled
10/15/2013	10/1/2013	Patient 2	62.2	Surgeon 2	REVISION FUSION SPINAL POSTERIOR	Phone 2	Email 2	DOB 2	PCP 2	PCP 2	Scheduled
10/15/2013	10/2/2013	Patient 3	70.9	Surgeon 3	REPLACEMENT HIP TOTAL	Phone 3	Email 3	DOB 3	PCP 3	PCP 3	Scheduled
10/15/2013	10/4/2013	Patient 4	88.6	Surgeon 4	REPLACEMENT KNEE TOTAL	Phone 4	Email 4	DOB 4	PCP 4	PCP 4	Scheduled
10/15/2013	10/4/2013	Patient 5	71.5	Surgeon 5	REPLACEMENT HIP TOTAL	Phone 5	Email 5	DOB 5	PCP 5	PCP 5	Scheduled

- **FYI Flags** are added at the time of booking to identify patients in the EMR

BPCI Patient Identification (con't)

- ***Inpatient census report*** is available to the care team daily

Bundled Payment Initiative Inpatient Census Report - Medicare Only

Date range: Yesterday

Surgery Date	Patient Name	MRN	Sex	Birth Date	Admission Date	Discharge Date	LOS to Date	ADT Patient	Actual Procedure Name	Surgeon	Service	Total Case Time	Payor	Age
10/11/2013	Patient 1	MRN 1	Male	DOB 1	10/11/2013		2.74	Inpatient	REPLACEMENT KNEE TOTAL	Surgeon 1	Ortho Total Joint	164.00mins	MEDICARE	71.00
10/09/2013	Patient 2	MRN 2	Male	DOB 2	10/09/2013		4.74	Inpatient	REPLACEMENT HIP TOTAL	Surgeon 2	Ortho Total Joint	145.00mins	MEDICARE	85.00
10/10/2013	Patient 3	MRN 3	Male	DOB 3	10/10/2013		3.76	Inpatient	REOP AVR	Surgeon 3	Cardiovascular	330.00mins	MEDICARE	69.00

Run Date: 10/14/2013

- ***Readmission and ED/Urgent Care Visit Report*** alerts staff in real time

Bundled Payment Initiative Urgent Care/ED Visit, Readmission, and Inpatient Rehab Report - Daily

PATIENT CLASS	SERVICE	INDEX ATTENDING	MRN	PAT NAME	HOSP ADMSN TIME	HOSP DISCH TIME	CURRENT DX DESCRIPTION	INDEX ADMIT DATE	INDEX DISCHARGE DATE	INDEX DRG NUM	INDEX DISCHARGE DISPOSITION
Inpatient	Medicine	Surgeon 1	MRN 1	Patient 1	10/13/2013			8/31/2013	9/5/2013	MS470	Skilled Nursing Facility
Inpatient	Medicine	Surgeon 2	MRN 2	Patient 2	10/13/2013			9/4/2013	9/9/2013	MS460	Home Health Care Svc
Observation	Surgery	Surgeon 3	MRN 3	Patient 3	10/14/2013	10/14/2013	Lymph edema	10/7/2013	10/11/2013	MS470	Home Health Care Svc

Blue- Current Visit

Yellow - Index Visit

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Inpatient Care Pathway

- ***Epic Pathway Report*** monitors a patient's progress on the pathway

EMR Care Coordination Tools and Patient Registries

- Care coordination tools were built into the EMR so that Clinical Care Coordinators could see their daily patient lists, view the 90-day longitudinal plan of care as well as document all notes, including information from patients, post-acute providers, and readmissions back to NYULMC and to other hospitals

Communication With Patients – NYULMC MyChart

- NYULMC MyChart is an online patient portal that allows patients to access educational videos, test results, appointment calendars, and messages from clinicians and Clinical Care Coordinators

Post-Acute Communication

- NYULMC's *Health Information Exchange*

  - Allows care team to review clinical results/notes of other facilities and physicians
  - "EMR Light" allows for enhanced communication with post-acute care providers through the use of an electronic transitional care communication tool. The tool consists of:

    - **Transfer Document:** Completed by a NYULMC Clinical Care Coordinator upon hospital discharge and made available to the post-acute provider through EMR Light. Includes information such as demographics, type of surgery, care pathway, most recent clinical status, and Clinical Care Coordinator contact information.

    - **Follow-up Form**: Sent from the post-acute provider to NYULMC as a patient progress report. Includes information such as post-acute length of stay, changes in clinical condition, physician / nurse practitioner evaluations, and medication changes.

    - **Continuity of Care Document:** The post-acute provider can also access the patient's Continuity of Care Document that is generated by NYULMC's electronic health record. The document is an electronic patient summary containing a set of standardized clinical elements that are most relevant during care transitions. These elements include allergies, medications, problem list, procedures, and results.

Reporting and Monitoring

Reporting and Monitoring
Cost Drivers

Cost Reductions (Cost to Providers)

• Reduce LOS or # of visits

• Reduce implant, supply, or drug costs

• Reduce OR time

Revenue Reductions (Cost to Medicare)

• Reduce readmissions

• Alter discharge patterns

• Decrease utilization (e.g., consults, ancillary tests)

• Reduce SNF LOS (paid on per diem)

NYULMC studied the levers of cost and quality in a bundle when creating a care redesign structure. BPCI reporting and analytics tracks performance on these levers.

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Reporting and Monitoring

- *Bundled Payment Weekly Dashboard*

  - *Initiative-level reporting* keeps the organization focused on achieving our targets

Analysis created for discussion purposes only

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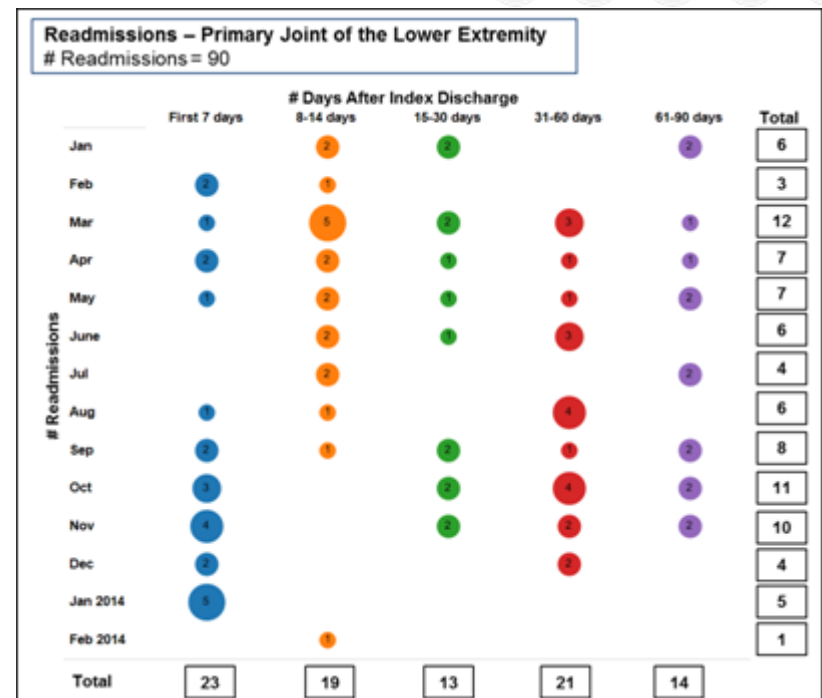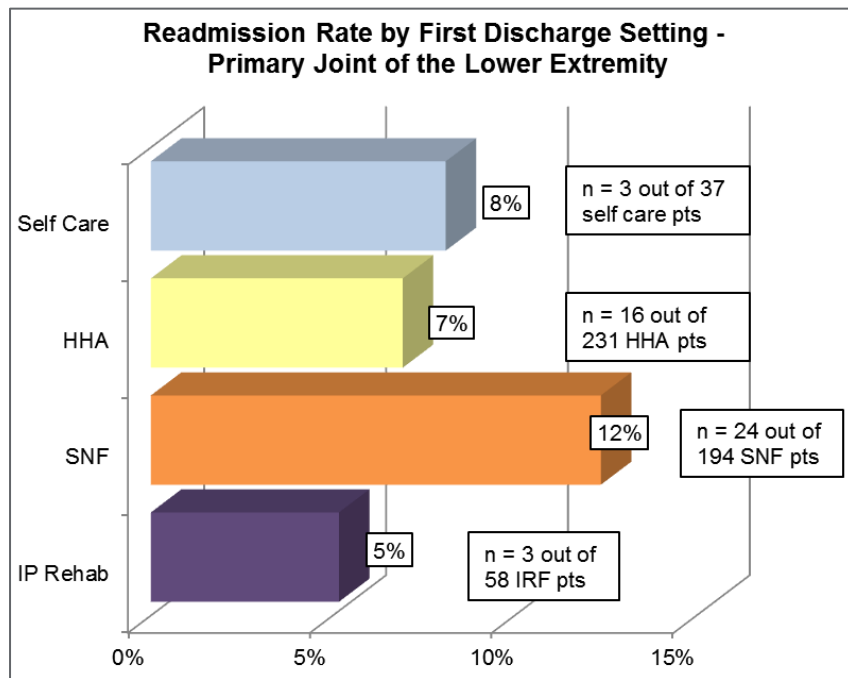
Reporting and Monitoring

- *Bundled Payment Weekly Dashboard (continued)*

  - *Physician-level reporting* allows Chairs and Chiefs to monitor their departments' performance
  - Promotes a continuous drive for improvement and results

NYULMC Physician Dashboard

	# Patients Discharged	ALOS	Discharge Disposition						90-Day Readmission Rate - *Closed Episodes Only*[1]		
			Rehab Facility	Skilled Nursing Facility	Total Facility-Based Care	Home Health Care Svc	Home/ Self Care	Total Home-Based Care	# Readmissions *(Closed Episodes Only)*	# Patients *(Closed Episodes Only)*	90-Day Readmission Rate *(Closed Episodes Only)*
Primary Joint of the Lower Extremity	779	3.52	7%	37%	44%	53%	3%	56%	42	338	12%
HJD	733	3.41	6%	35%	41%	56%	3%	59%	35	317	11%
DRG 469 - Primary Joint w MCC	17	6.76	18%	35%	53%	47%	0%	47%	1	2	50%
Physician 1	4	6.00	25%	50%	75%	25%	0%	25%	0	0	0%
Physician 2	4	8.75	25%	25%	50%	50%	0%	50%	0	0	0%
Physician 3	2	4.50	0%	50%	50%	50%	0%	50%	0	0	0%
Physician 4	2	9.00	0%	50%	50%	50%	0%	50%	0	1	0%
Physician 5	1	7.00	0%	100%	100%	0%	0%	0%	0	0	0%
Physician 6	1	3.00	0%	0%	0%	100%	0%	100%	0	0	0%
Physician 7	1	13.00	0%	0%	0%	100%	0%	100%	0	0	0%
Physician 8	1	3.00	100%	0%	100%	0%	0%	0%	0	0	0%
Physician 9	1	3.00	0%	0%	0%	100%	0%	100%	1	1	100%

Reporting and Monitoring

- ## *Quarterly Reporting*

  - *Physician-level financial performance:*

Q1 2013 physician comparison - Episode cost

2013 Predicted Target Prices		Q1 n=	Q1 2013 Total Episode Medicare Pmt	Q1 2013 Avg Medicare Pmt	Difference btw Target Price and Q1 2013 Avg. Pmt / Case*	Total Difference btw Target Price and Q1 2013 Avg. Pmt	Notes
DRG 470	$35,565						
DRG 469	$54,233						
DRG 470 - *w/o MCC*		145	$4,502,110	$31,049	$4,516	$654,856	
Physician 1		17	$555,114	$32,654	$2,911	$49,495	
Physician 2		17	$488,987	$28,764	$6,801	$115,623	
Physician 3		13	$348,167	$26,782	$8,783	$114,182	
Physician 4		12	$329,093	$27,424	$8,141	$97,690	
Physician 5		11	$300,686	$27,335	$8,230	$90,532	
Physician 6		11	$240,935	$21,903	$13,662	$150,283	
Physician 7		8	$353,004	$44,125	($8,560)	($68,482)	74% of patients to facility-based post-acute care; 5 readmissions
Physician 8		5	$185,561	$37,112	($1,547)	($7,735)	72% of patients to facility-based post-acute care
Physician 9		5	$127,504	$25,501	$10,064	$50,322	
Physician 10		4	$224,483	$56,121	($20,555)	($82,222)	79% of patients to facility-based post-acute care. One outlier patient had a $108,000 readmission. The patient had a comborbidity of CHF and was readmitted for pulmonary embolism and pneumonia. The patient expired during the readmission.
Physician 11		2	$159,205	$79,602	($44,037)	($88,074)	All fracture patients
Physician 12		2	$95,341	$47,671	($12,105)	($24,211)	All patients in Q1 were discharged to SNF

- Future dashboard:

  - Real-time pricing of the bundle using both current data and historical averages

Analysis created for discussion purposes only

Future of Bundled Payment

Successes:

- The demonstration project has created dynamic and influential changes in the delivery of care

- The hospital, physicians, and post-acute partners are better coordinating care transitions and are communicating important clinical information about shared patients

- Our patients are experiencing improved care through enhanced coordination and communications between providers

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Future of Bundled Payment

Challenges:

- Based on the 2013 CMS targets, the demonstration project is having a negative financial impact on NYULMC when you account to the cost incurred and the revenue lost due to care redesign.
  - $3 Mil in staffing cost to get ready and $1.5 Mil/year going forward
  - Loss of acute rehab revenue, $15,000 per case, 370-400 cases in 2013
  - Loss of IME, DME, DSH add-ons revenue associated with the acute rehab inpatient cases
  - Reduction in readmissions, estimated at 24 cases in 2013 at $12,500 per case plus $7,500 per case for IME, DME and DSH add-ons per case
- Recent data fluctuations are barriers to success. Baseline target prices and volumes keep changing, resulting in the inability to accurately predict financial performance and resulting in mixed messages to the physicians
- Without predictability of financial performance at both the initiative and physician-levels, it is difficult to maintain clinician engagement in existing bundles and will definitely hinder expansion to additional bundles

Questions?

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Measuring Success with Bundles: Winning Strategies in Analytics

Bundled Payment Summit
Washington, D.C.
June 17, 2014

The Arkansas Landscape

- **3 million people**
  - Poor health status
    - Obesity
    - Smoking
  - Low educational status
  - High incidence of poverty
- **3 major insurers cover roughly 2/3 of the population**
  - Medicare
  - Medicaid
  - Arkansas Blue Cross Blue Shield
- **Access to care**
  - Predominantly rural geography
  - No integrated care systems

Arkansas Payment Reform Status

- Currently the largest multi-payer statewide bundled payment initiative in the country
- SIM Grant award for payment transformation
- Selected as a Comprehensive Primary Care Initiative ("CPCI") pilot site by CMS
  - 66 practices participating
- Walmart (and other self-funded employers) participation in both CPCI and episodes of care
- Medicaid and Arkansas Blue Cross Blue Shield ("ABCBS") both pursuing Patient-centered Medical Home programs
  - ABCBS - Pilot with multiple clinics
  - Medicaid - Statewide launch 2014

Timeline

Early 2012	July 2012	October 2012	January 2013	December 2013	Summer 2014
Initial Research, Analysis, and Development Begins	First Preparatory Reports Released to Physicians and Hospitals	Provider Contracts Amended	Program Goes Live	Close of Initial Reporting Period	First Gain/Loss Sharing Transactions Occur

All Kinds of Episodes

Inpatient Hospital-Based	Inpatient Physician Based	Outpatient	Behavioral Health	Chronic	Post-Acute Care
Congestive Heart Failure	Total Hip Replacement	Tonsillectomy	Attention Deficit Disorder	Diabetes	
COPD	Total Knee Replacement	Chole-cystectomy	Oppositional Defiant Disorder	Asthma	
CABG	Perinatal	Colonoscopy		Renal Failure	

Average Costs Are What Count

- **Outlier Criteria**
  - ▸ Extraordinary cases that exceed cost outlier thresholds are excluded
  - ▸ Other extraordinary cases removed based on clinical exclusion criteria
    - ☐ Cancer
    - ☐ ESRD
    - ☐ HIV
    - ☐ Transplant
- **Risk Adjustment**
  - ▸ Where appropriate, remaining cases are risk adjusted based on age, co-morbidities, and other factors (clinically relevant)
- **Administrative Exclusions**
  - ▸ Patients without continuous coverage
  - ▸ Patients without primary coverage through the insurer

Unadjusted Episode Cost - Individual Provider

Number of episodes

Gain sharing limit · Commendable · Acceptable

Low — Cost per episode for an individual Principal Accountable Provider (unadjusted) — High

Source: www.paymentinitiative.org/
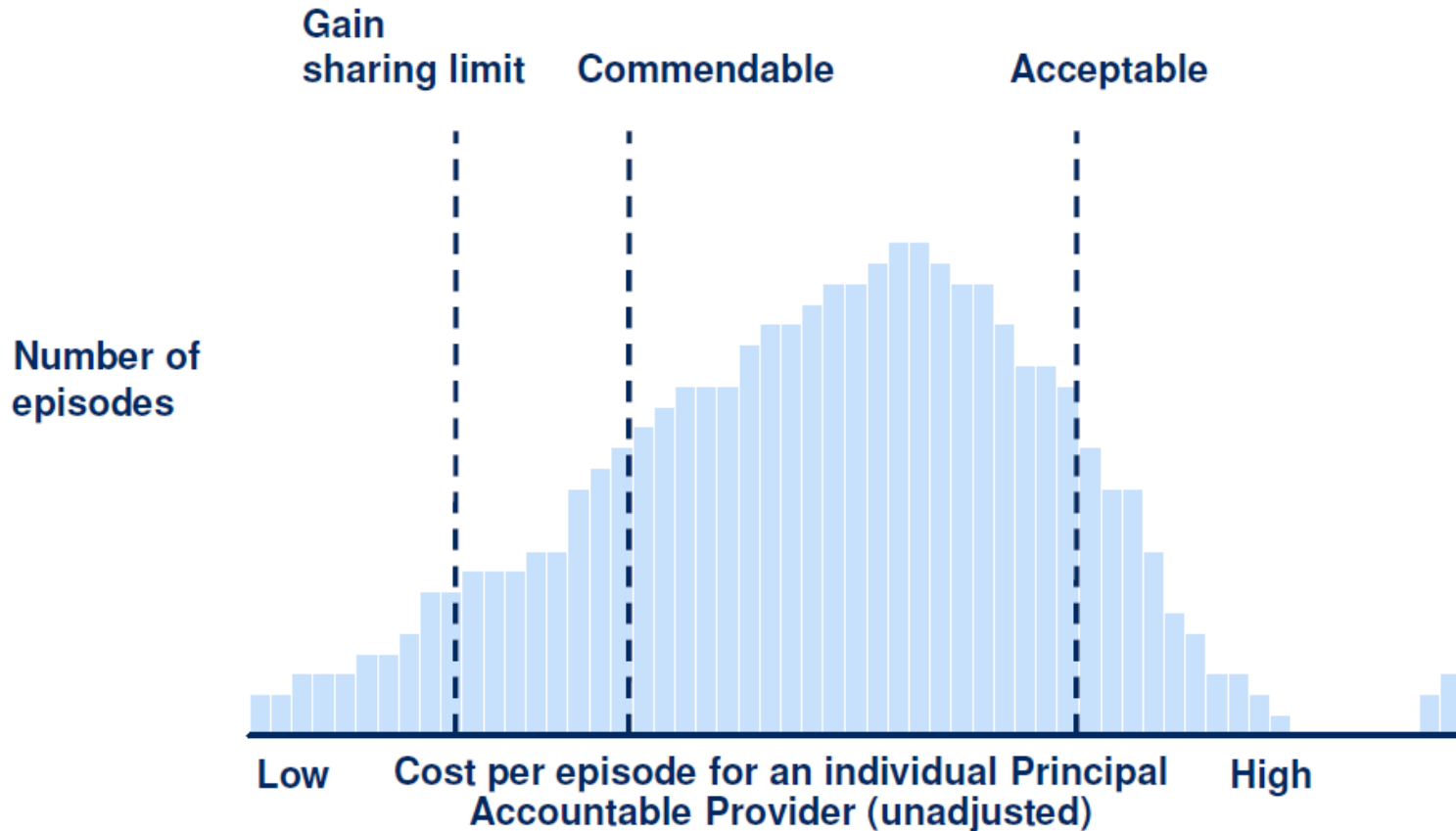
Adjusted Episode Cost - Individual Provider
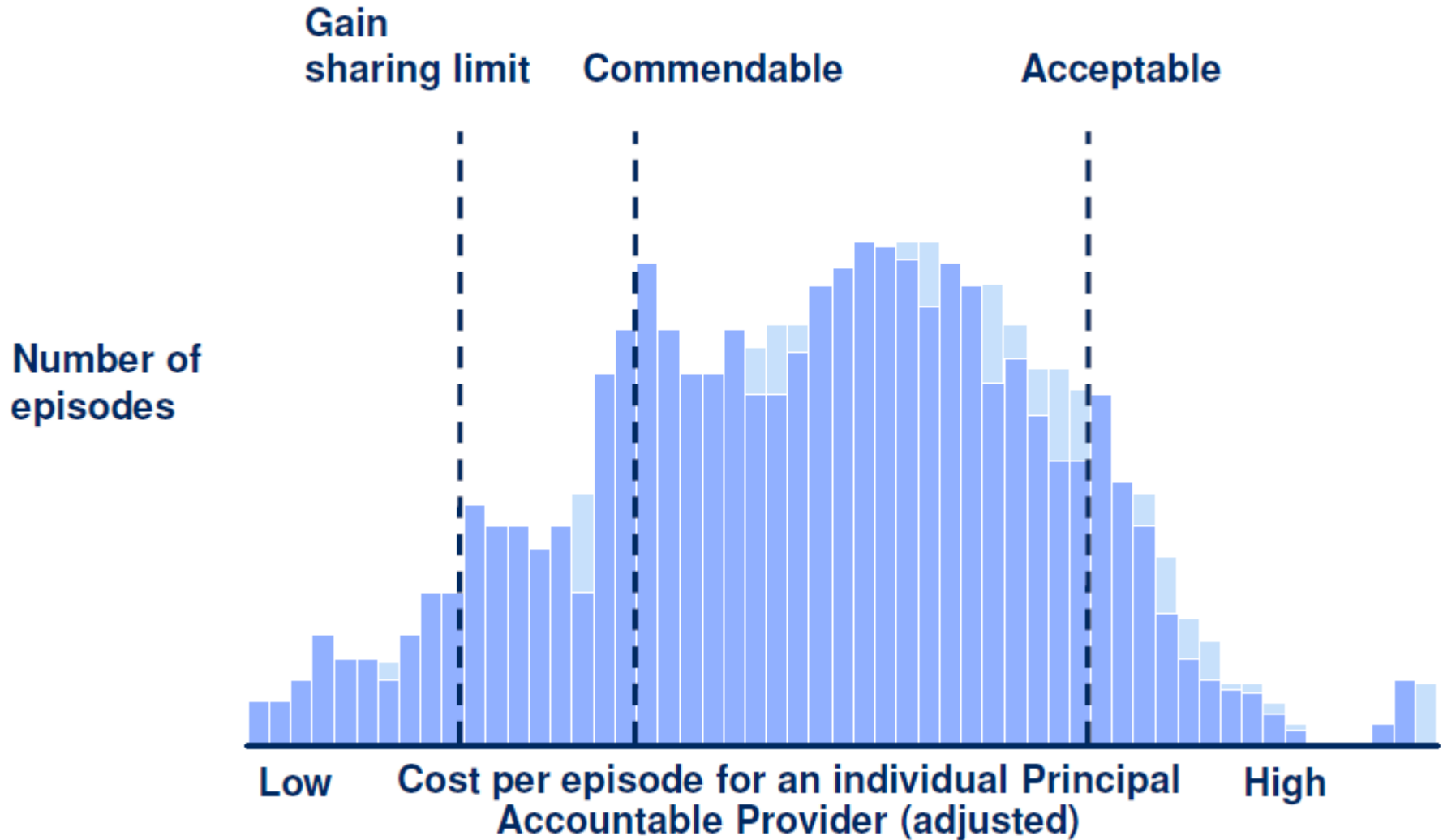
Outliers Are Removed
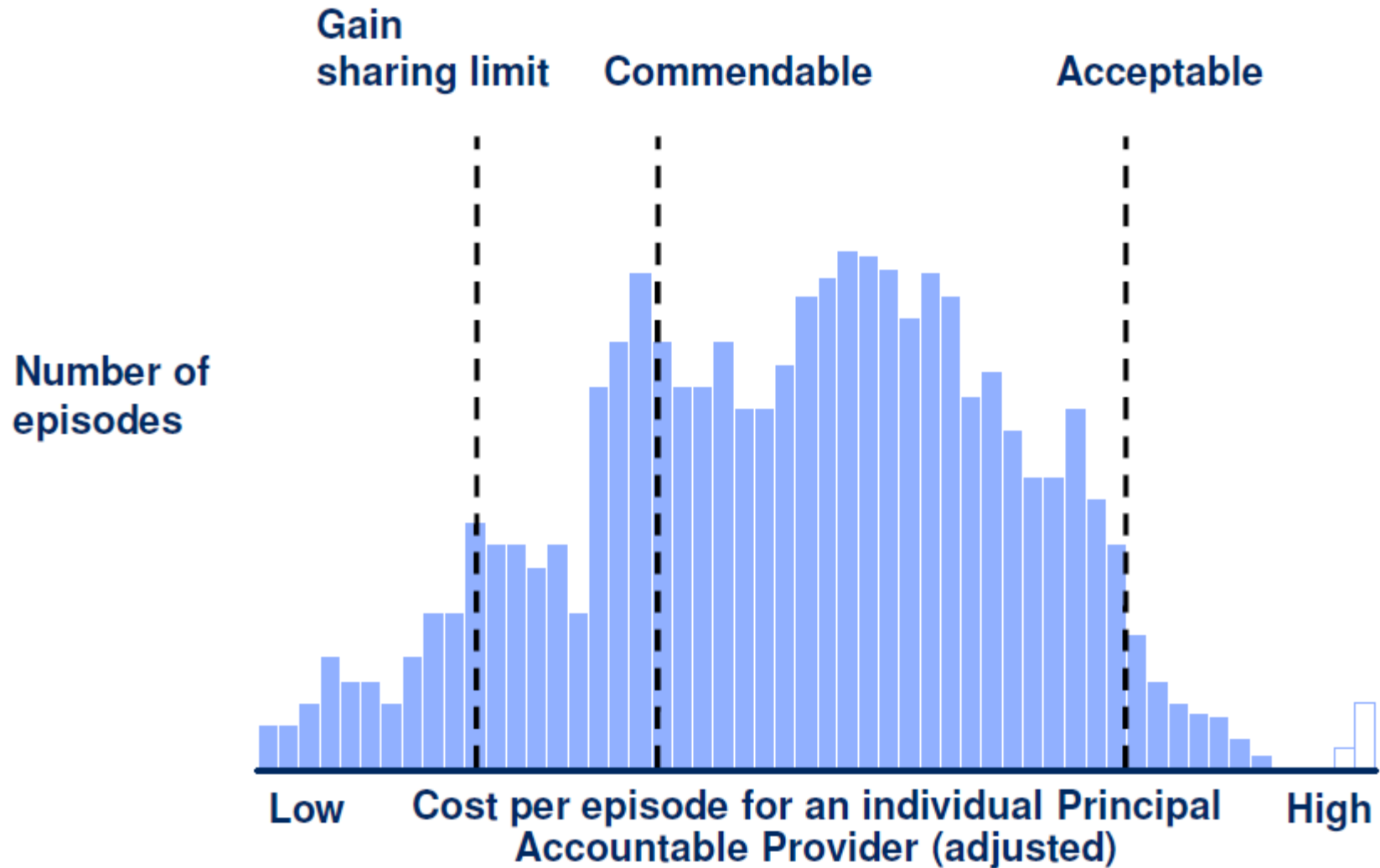
Average Adjusted Episode Cost
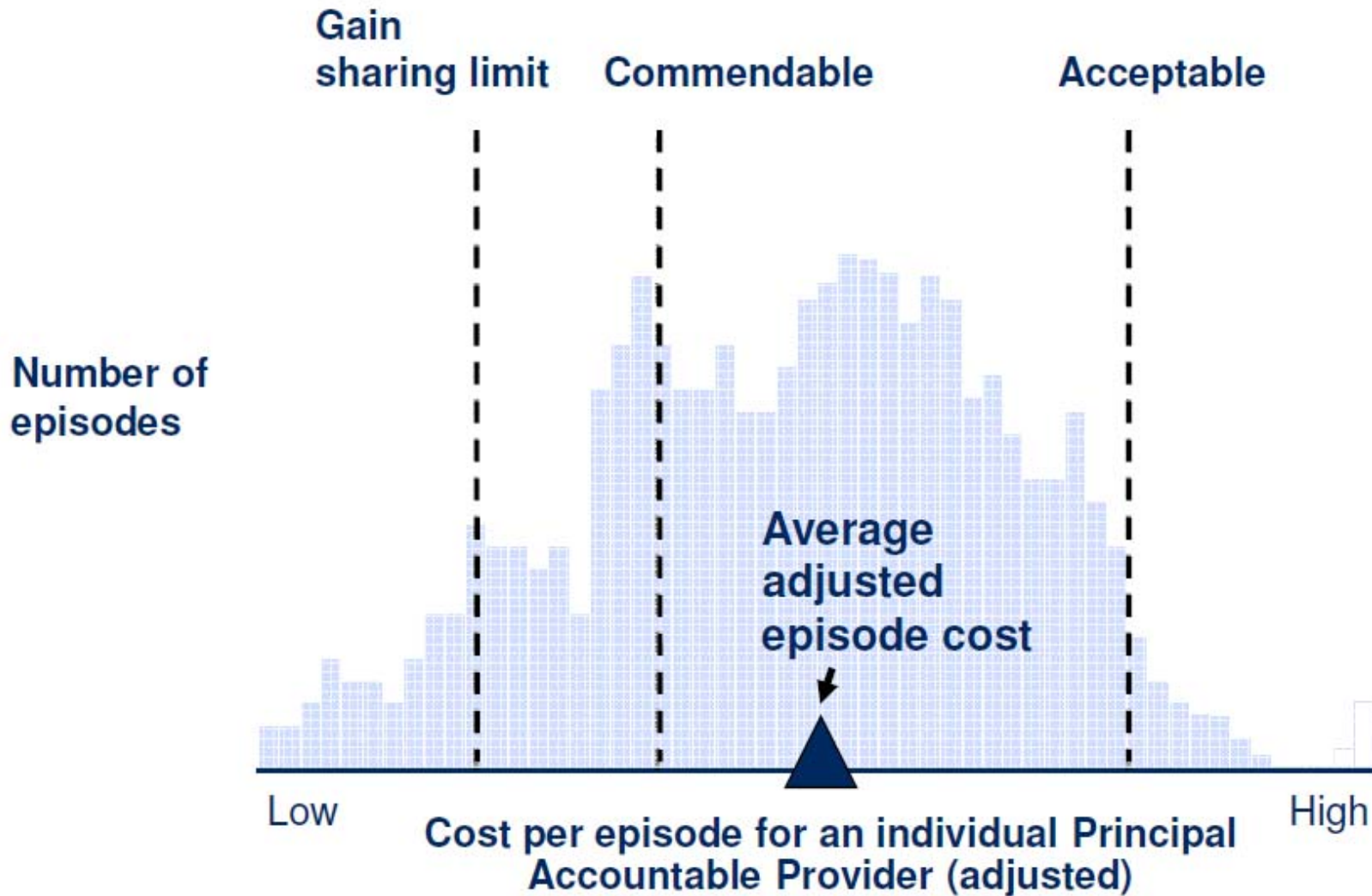
Principal Accountable Providers

Have Been Given New Tools To Help Measure And Improve Patient Care

- Reports provide performance information for principal accountable providers ("PAP") episode(s):

  - ▸ Overview of **quality** across a PAP's episodes

  - ▸ Overview of **cost effectiveness** (how a PAP is doing relative to cost thresholds and relative to other providers)

  - ▸ Overview of **utilization** and drivers of a PAP's average episode cost

Example of provider reports
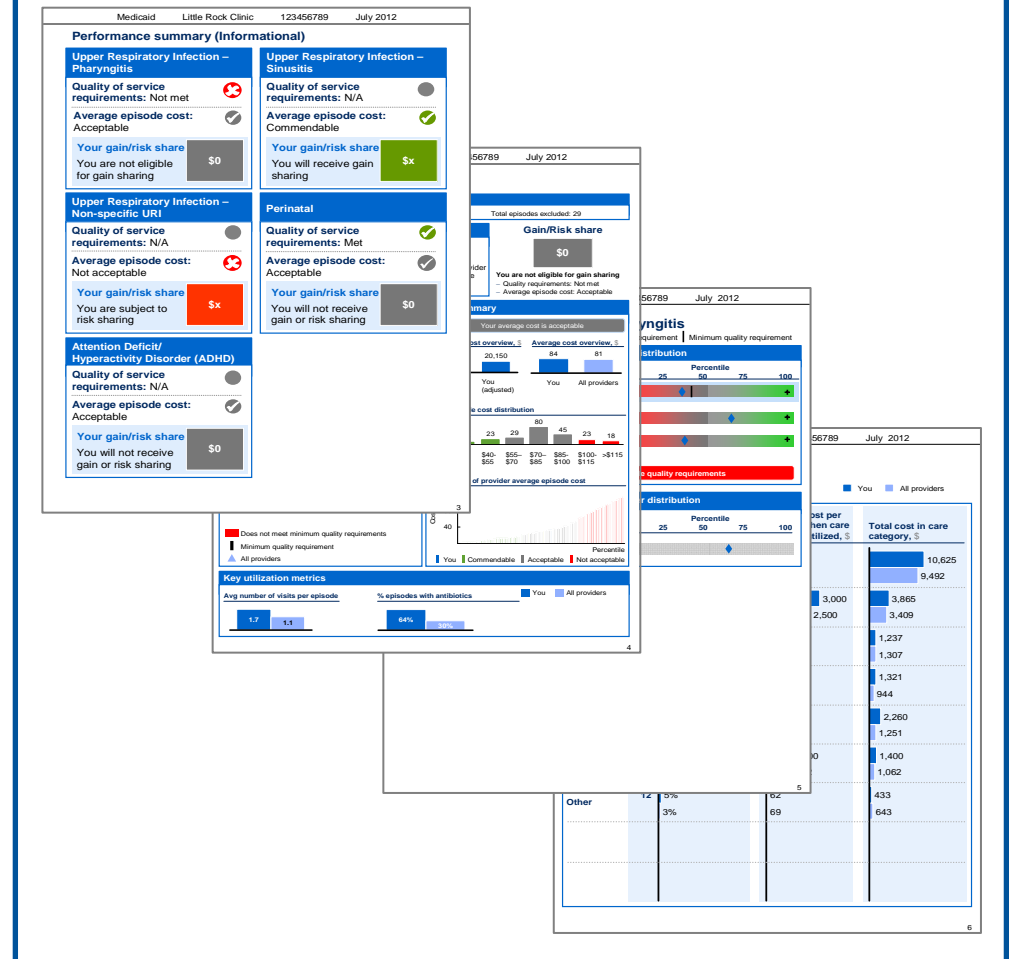
PAP Performance Reports

Have Summary Results and Detailed Analysis of Episode Costs, Quality, and Utilization

Guide to Reading Your Report

Health Care Payment Improvement Initiative

Building a healthier future for all Arkansans

The Arkansas Health Care Payment Improvement Initiative (AHCPII) is a multi-payer collaboration between Arkansas Medicaid, Arkansas Blue Cross Blue Shield, and QualChoice. The i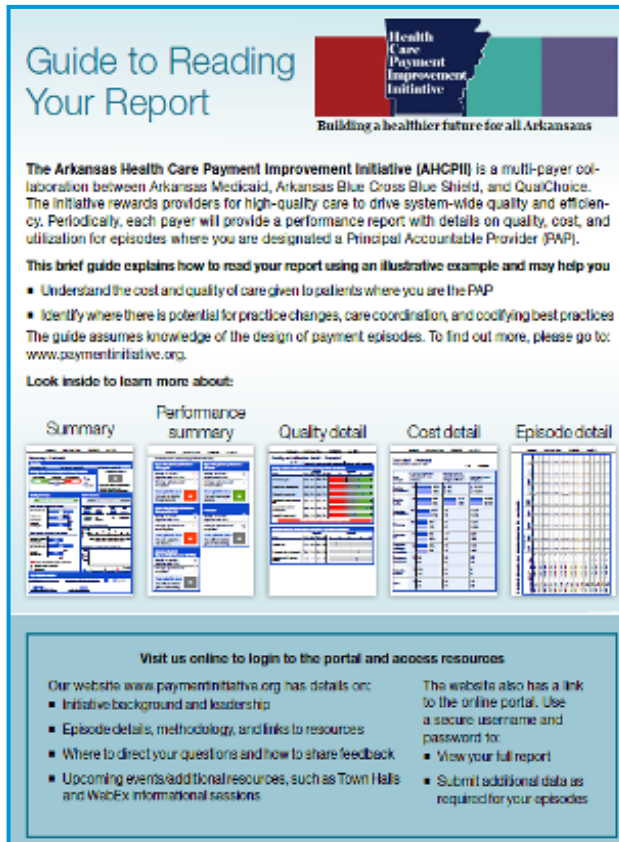nitiative rewards providers for high-quality care to drive system-wide quality and efficiency. Periodically, each payer will provide a performance report with details on quality, cost, and utilization for episodes where you are designated a Principal Accountable Provider (PAP).

This brief guide explains how to read your report using an illustrative example and may help you

- Understand the cost and quality of care given to patients where you are the PAP
- Identify where there is potential for practice changes, care coordination, and codifying best practices

The guide assumes knowledge of the design of payment episodes. To find out more, please go to: www.paymentinitiative.org.

Look inside to learn more about:

Summary | Performance summary | Quality detail | Cost detail | Episode detail

Visit us online to login to the portal and access resources

Our website www.paymentinitiative.org has details on:
- Initiative background and leadership
- Episode details, methodology, and links to resources
- Where to direct your questions and how to share feedback
- Upcoming events/additional resources, such as Town Halls and WebEx informational sessions

The website also has a link to the online portal. Use a secure username and password to:
- View your full report
- Submit additional data as required for your episodes

■ Details on the reports
  ‣ First time PAPs receive detailed analysis on costs and quality for their patients increasing performance transparency
  ‣ Guide to Reading Your Report available online
  ‣ Valuable to both PAPs and non-PAPs to understand the reports
  ‣ Reports issued quarterly starting July 2012
    □ Gain/risk sharing results reflect claims data from prior reporting period
    □ Reports will be available online via the provider portal

Provider Portal

Login to portal from payment initiative website
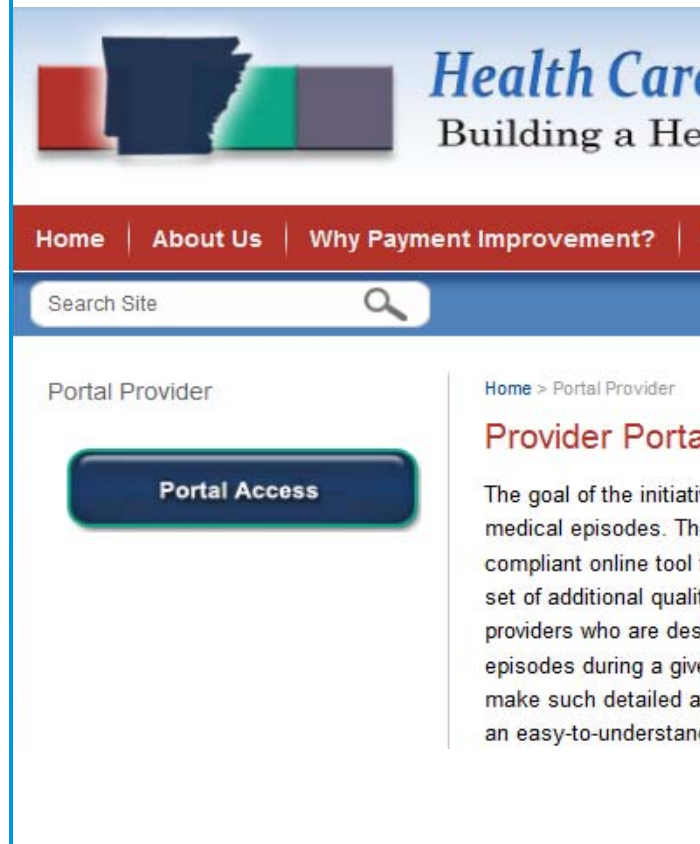
- ■ Details on the provider portal:
  - ▸ The provider portal is a multi-payer tool that allows providers to enter quality metrics for certain episodes and access their PAP reports
  - ▸ Accessible to all PAPs
    - ▸ Login with existing username/password
    - ▸ New users follow enrollment process detailed online
  - ▸ Key components of the portal are to provide a way for providers to:
    - ▸ Enter additional quality metrics for select episodes (hip, knee, CHF, and ADHD with potential for other episodes in the future)
    - ▸ Access current and past performance reports for all payers where designated the PAP

Provider Portal-Quality Metric Entry Screen

Arkansas Health Care Payment Improvement Initiative

Home   Reports   Help   Previous Page

Clinical Data Entry - CHF Episode

*Payer: Choose One

*Facility name:

*Provider:

*Patient first: Patient middle: *Patient last:

*Member ID: *Patient DOB: *Date of service:

Was there documentation in the hospital record of:

The results of an LVEF assessment - performed either before or during hospitalization?   ○ Yes ○ No

What was the average quantitative ejection fraction value (e.g., 50%)?   ___ %

Was an ACE inhibitor prescribed upon discharge OR was the patient already taking ACE inhibitor as documented in current medication list?   ○ Yes ○ No
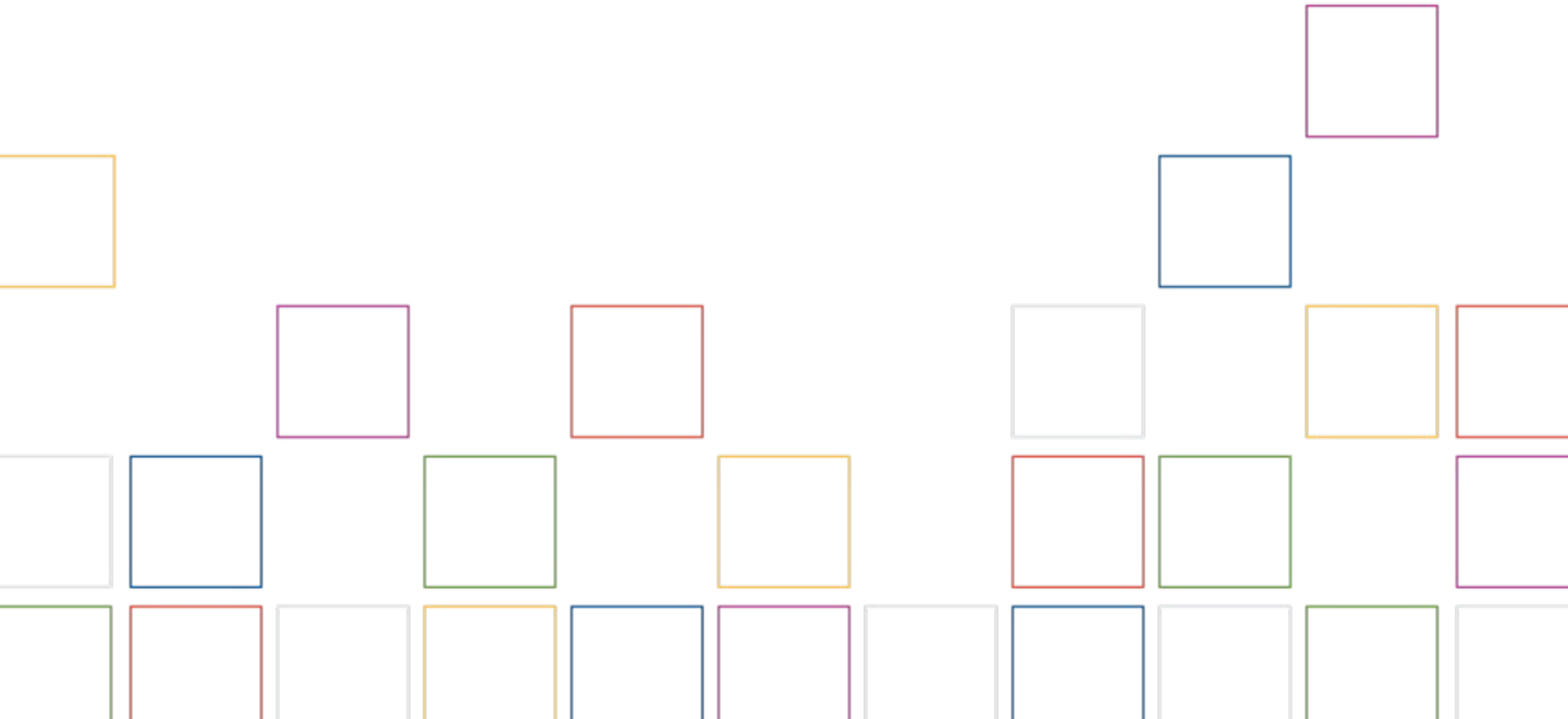
Was ARB therapy prescribed upon discharge OR was the patient already taking ARB therapy as documented in current medication list?   ○ Yes ○ No

Submit Episode Data ▶   Submit Data and Add Another Episode ▶

Questions?

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