# Using Analytics to Manage a High Performing Network

Amanda Hammel - Memorial Hermann VP, Information Systems

Peter Smart - Cerner Sr. Director, Pop Health-Data Analytics

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# Agenda



Memorial Hermann Snapshot

Preparing for Bundled Contracts

 Informing Network and Contract Performance

Addressing Network Leakage

### Company Snapshot - 2017 The Market Leader



\$6.0B Total Assets<sup>1</sup> \$5.3B Net Operating Revenue<sup>1</sup> 24,000 Employees; 5,000 Physicians

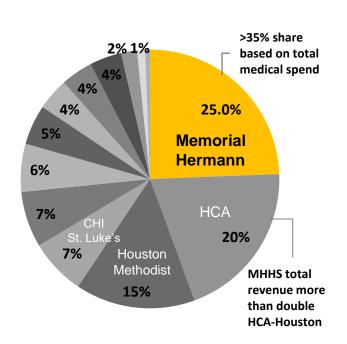
### **267 Locations**

# Memorial Hermann Northeast Memorial Hermann Memorial Hermann Memorial Hermann Memorial Hermann Northeast Memoria

### **Market Share Ranking**

- 1st: Aggregate Market Share
- 1st: Burns
- 1st: Cardiology
- 1st: ENT
- 1st: General Medicine
- 1st: General Surgery
- 1st: Neurology
- 1st: Neurosurgery
- 1st: Ophthalmology
- 1st: Orthopedics
- 1st: Rehab
- 1st: Spine
- 1st: Thoracic Surgery
- 1st: Urology
- 1st: Vascular
- 2nd: Gynecology
- 2nd: Neonatology
- 2nd: Obstetrics
- 2nd: Oncology

### **Inpatient Market Share**

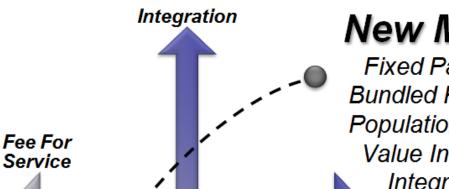


**Greater Houston MSA 6.6 million population, projected to 7.1 million (2020)** 

# Moving to Value







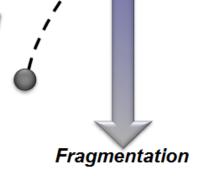
### New Model

Fixed Payment **Bundled Payment** Population Health Value Incentive Integration



### **Current Model**

Fee-for-Service Disparate Payments Illness & Cure Volume Incentive Fragmentation

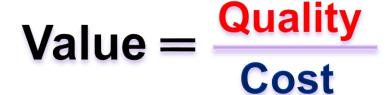




Population

Health





# Memorial Hermann Health System Promise



Memorial Hermann employees and physicians will provide exceptional end-to-end patient care experiences anchored by superior quality, clinical excellence and affordable care with a commitment to advance the health of our patients and members.



# Memorial Hermann Care Delivery



### Care Delivery: Indispensable market leader in health delivery

### **Texas Medical Center**

- Primary teaching hospital for The University of Texas Medical School at Houston
- · Children's Memorial Hermann Hospital
- TIRR Memorial Hermann
- Memorial Hermann Heart & Vascular Institute - Texas Medical Center
- · Mischer Neuroscience Institute
- MH Ironman Sports Medicine Institute
- Memorial Hermann Clinical Innovation & Research Center
- Nation's Busiest Level 1 Trauma Center with 7,000 cases/year and 3,500 Life Flight transports/year

### Ambulatory Portfolio

- Sports Medicine & Rehabilitation Centers: 41
- Ambulatory Surgery Centers/Hospitals: 20
- Diagnostic Laboratories: 28
- **Imaging Centers: 24**
- Cancer Centers: 7
- **Breast Care Centers: 9**
- 24 Hour Free Standing ER: 1
- Convenient Care Centers: 5

### Community Hospital Portfolio

- The Woodlands Hospital
- **Greater Heights Hospital**
- Southwest Hospital
- Southeast Hospital
- Orthopedic and Spine Hospital
- Memorial City Medical Center
- Sugar Land Hospital
- Katy Hospital
- · Northeast Hospital
- Pearland
- Cypress (planned)



- TIRR Inpatient Rehab Centers:7
- Retirement/Nursing Center: 1
- Home Health Branches: 3
- Inpatient Hospice: 1

### **Health Solutions**



### Health Solutions: Value-added health plans & employer solutions

### MEMORIAL HERMANN

### Accountable Care Organization

- New subsidiary of MHHS
- Formed to meet the intent of both Commercial and Medicare ACO principles
- Applied as an ACO for the CMS shared savings program – July 1 start

### **MHiE**

Facilitates access to and retrieval of clinical data to provide safer, more timely, efficient, effective, patient-centered care by providing the capability to electronically share clinical information among disparate health care information systems in a useful manner.



### MEMORIAI HERMANN

### Health Insurance Co

- Self-insured / TPA Services
- Fully-insured license
- Employer-based contracting
- Member Cost Share / Incentives to encourage engagement in their health
- Narrow Network of Highest Quality
- Competitive Provider Contracts built with Integral Pay for Performance structures



# The MH ACO allows for integration of a pluralistic physician model (UT, MHMG & MHMD) to drive quality outcomes





Commercial



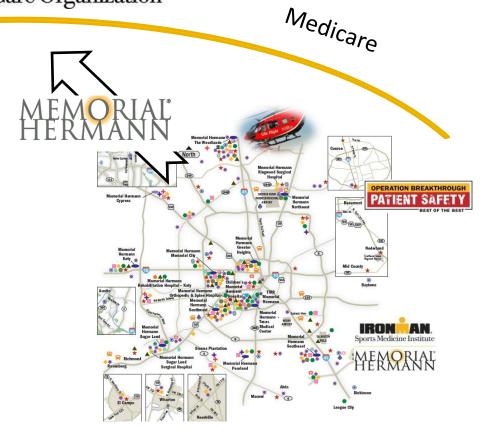
~4,000 MHMD Physicians, ~3500 'CIN' Clinically Integrated Network Private, Employed & Faculty Integration

3 DISTINCT PRACTICE MODELS
Employment Private Faculty









Population Health Infrastructure

### Physician Integration



### Physicians: Fully integrated physician network

### **MHMD**

- 3,600 physicians members
- 2,600 clinically integrated physicians
- Unites private practice, academic faculty, and employed physicians
- Clinical Programs Committees linked to System Quality Committee

 Foundation for Memorial Hermann Accountable Care Organization



Medical Group





# **University of Texas Medical School, Houston**

- 1,075 Faculty Members
- · 24 Departments
- 920 Residents and Fellows
- 954 Medical Students
- 1 Million Annual Clinical Encounters

### Memorial Hermann Medical Group

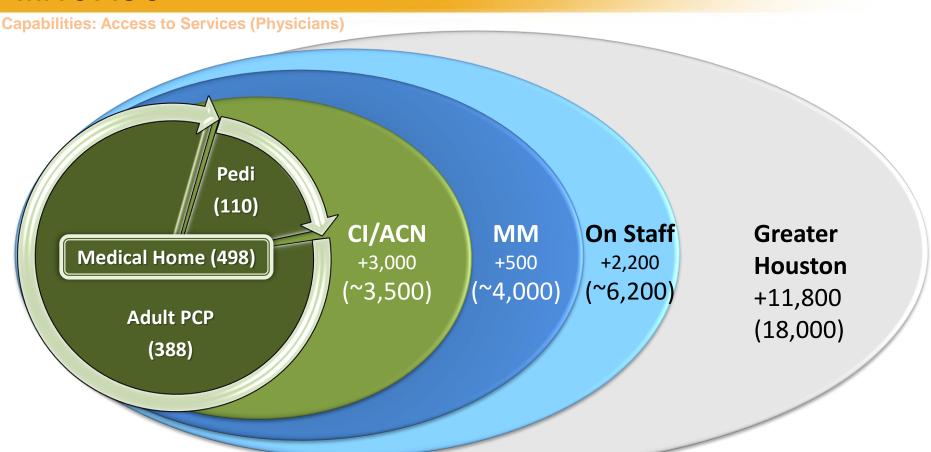
- 501(a)
- 142 Employed Physicians
- Primary care and specialists

### **Clinical Integration Principles**

- Create order sets, protocols, and performance standards
- Connect systems and share data
- Report and manage quality outcomes

# There are approximately 3,500 physicians who have different levels of integration with MH's ACO





Medical Home: Highly MH Aligned PCPs and Pedi

CI/ACN: Clinical Integration/Accountable Care Network (Includes UT MDs)

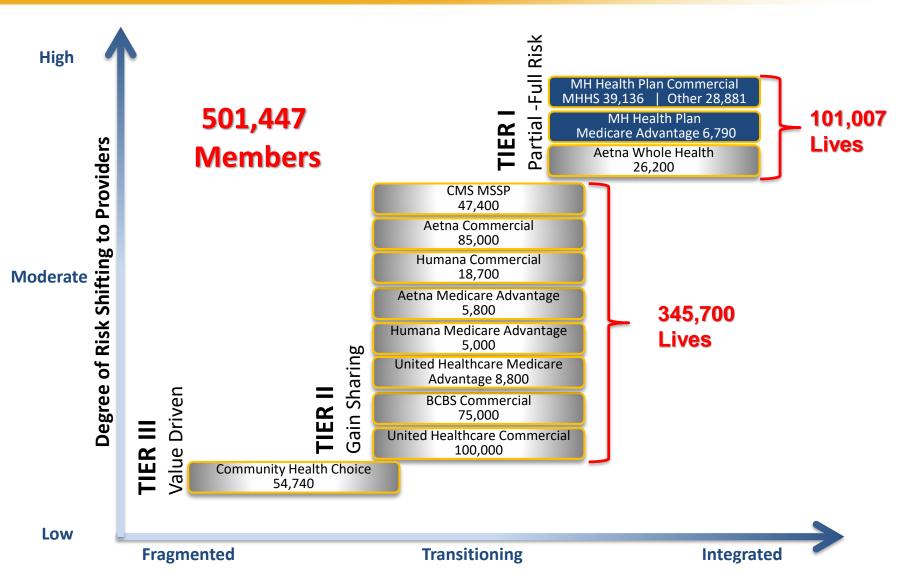
**MM**: Messenger Model

**Staff**. Physicians on Staff at MH (\*\*Includes USPI facilities)



# MH assumes varying degrees of risk for their ACO members





# Cerner's Pop Health Platform HERMA





# Population Health Platform MEM



### **Applications**







### Algorithms

- Sepsis
- TOC
- Readmissions
- **HCC** Suspected
- **3M**
- Truven

### Analytics



### Consumer

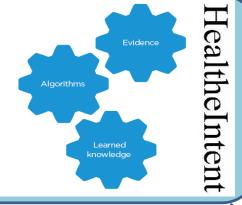


### **SmartData**



















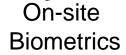


























### **Embedded Content**



### **Benchmarks**



Hospital General Information Healthcare Associated Infections Readmissions, Complications, & Death Value Based Purchasing Scores Timely & Effective Care Outpatient Imaging Efficiency Relative Value Units Hospital Acquired Condition Heart Attack Payment Data Hospital ACS Measures Medicare Hospital Spending by Claim Medicare Volume Outpatient Procedures Volume Measure Dates **HCAHPS** Medicare Prescribing Data

### Evidence-based Algorithms\*





**Emergency Department Visit** 

Classification.

Potentially Preventable Events
MS-DRG Grouper
MDC Grouper
Service Categorizations
Episode Groupers
Benchmarks



HEALTH ANALYTICS'

Service Categories

HCC Suggested Diagnosis HCC Persistence Diagnosis Recommended Transition of Care Readmission Risk Sepsis Risk



MARA Prospective risk score MARA Retrospective risk score



TCRRV/TCOC

### Reference





Social Vulnerability Index

Tract-Zip & Zip-Tract





American Time Use Survey



<sup>\*</sup>Some content requires corresponding Analytics package

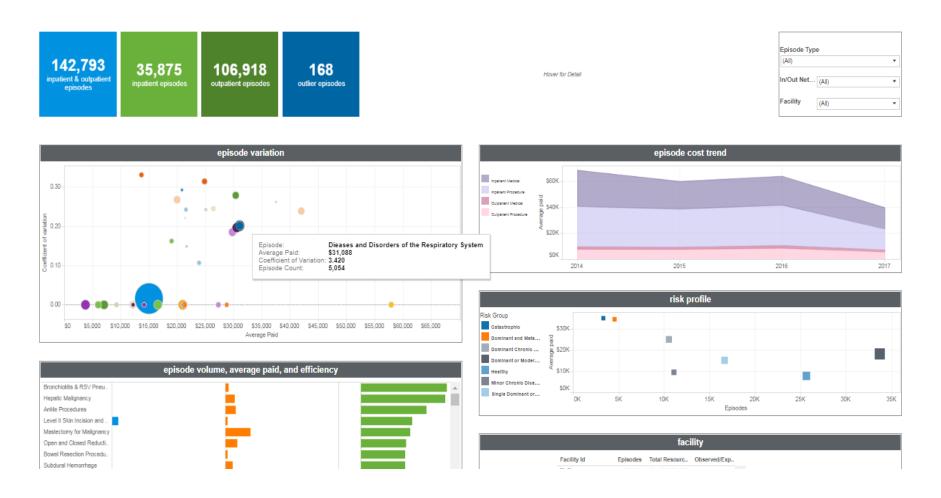


- Understand physician performance in an episodic context
  - Especially important for specialists
  - Provides different lens for cost in care continuum

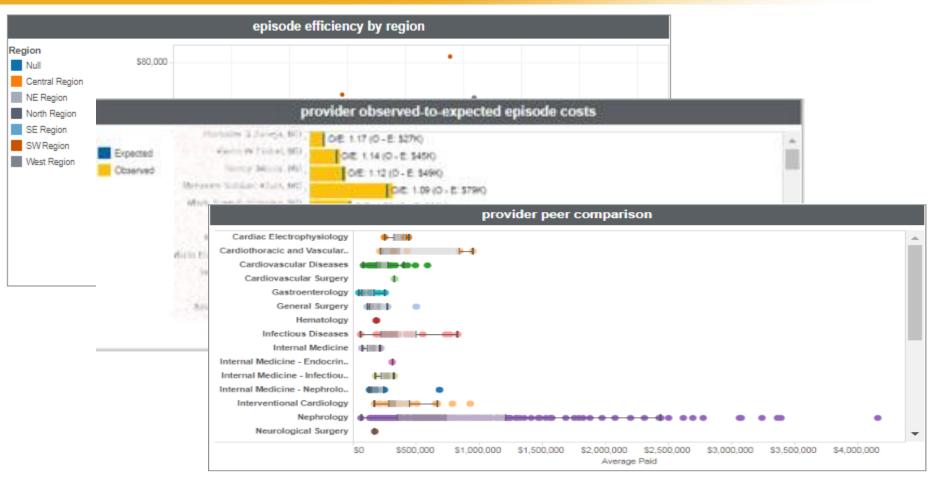
- Ability to group across different types
  - Episodes, Diagnoses, Risk

Setting up for employer "Centers of Excellence"
 Care















# Informing Network/Contract Performance



- Analytics to track overall performance
  - CMO Scorecard key metrics to review and track
  - SmartRegistry/Quality Dashboard tool and analytics solution to manage care gaps
  - HCC tool/HCC Dashboard tool and analytics to manage MA plan performance

# **CMO Scorecards**



### Aetna MA

### Aetna PCMH

Avg Overall Risk

1.47

		2017		
	January	February	March	YTD
Total Paid Charges	\$6,866,239.46	\$7,030,348.88	\$7,399,640.61	\$21,296,228.95
# Member Months	7,514	7,619	7,793	22,926
РМРМ	\$913.79	\$922.74	\$949.52	\$928.91
PMPM Inpatient	\$233.96	\$273.81	\$226.28	\$244.59
PMPM Pharmacy	\$188.12	\$180.64	\$205.30	\$191.48
PMPM Professional	\$306.60	\$303.27	\$320.74	\$310.30
PMPM Home Health	\$25.65	\$20.74	\$30.56	\$25.69
PMPM Hospice	\$0.00	\$0.00	\$0.00	\$0.00
PMPM Psych	\$0.00	\$2.32	\$0.00	\$0.77
PMPM Rehab	\$209.36	\$243.29	\$220.36	\$224.38
PMPM Skilled Nursing	\$30.73	\$24.21	\$26.84	\$27.24
Admits per 1000	261.91	244.13	221.74	242.34
ED Visits per 1000	533.4	469.35	523.55	508.77
High Cost Imaging per 1000	530.21	526.05	558.96	538.6
GDU %	86%	87%	87%	87%
Risk Adjusted - PMPM	\$1,345.79	\$1,358.96	\$1,398.41	\$1,368.05
Risk Adjusted - Inpatient PMPM	\$636.97	\$643.21	\$661.88	\$647.51
Risk Adjusted - Pharmacy PMPM	\$0.00	\$0.00	\$0.00	\$0.00

	Avg	Overall	Risk
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1.37

		2017		
	January	February	March	YTD
Total Paid Charges	\$29,983,428.82	\$25,851,159.20	\$26,171,443.14	\$82,006,031.16
# Member Months	83,087	82,152	76,080	241,299
РМРМ	\$360.87	\$314.67	\$344.09	\$339.85
PMPM Inpatient	\$77.97	\$55.89	\$53.65	\$62.79
PMPM Pharmacy	\$38.60	\$35.99	\$34.95	\$36.56
PMPM Professional	\$114.98	\$111.65	\$121.09	\$115.77
PMPM Home Health	\$0.01	\$0.00	\$0.00	\$0.00
PMPM Hospice	\$0.08	\$0.10	\$0.09	\$0.09
PMPM Psych	\$0.38	\$0.11	\$0.00	\$0.17
PMPM Rehab	\$50.14	\$34.43	\$36.95	\$40.64
PMPM Skilled Nursing	\$0.54	\$0.38	\$0.26	\$0.40
Admits per 1000	51.99	41.34	43.86	45.8
ED Visits per 1000	213.9	204.5	218.51	212.15
High Cost Imaging per 1000	123.92	113.64	125.27	120.85
GDU %	85%	85%	84%	84%
Risk Adjusted - PMPM	\$492.66	\$429.60	\$469.75	\$463.97
Risk Adjusted - Inpatient PMPM	\$115.46	\$100.68	\$110.10	\$108.74
Risk Adjusted - Pharmacy PMPM	\$76.86	\$87.02	\$73.29	\$72.39

# Registries and Measures



#### **Adult Wellness:**

- Annual Office Visit
- Blood Pressure Measurement
- Blood Pressure Re-Screen
- Body Mass Index
- Body Mass Index Follow-up Plan
- Breast Cancer Screening (ages40-64)
- Cervical Cancer Screening (ages 21-64)
- Colorectal Cancer Screening (ages 50-64)
- · Depression Screening
- Depression Follow-up Plan
- Influenza Vaccination
- Post-Osteoporotic Fracture Evaluation Women
- Post-Osteoporotic Fracture Evaluation Men
- Tobacco Use Screening and Cessation

#### Senior Wellness:

- Annual Office Visit
- Blood Pressure Measurement
- Blood Pressure Re-Screen
- Body Mass index
- Body Mass Index Follow-up Plan
- Bone Density Screening
- Breast Cancer Screening (ages 65-69)
- Colorectal Cancer Screening
- · Depression Screening
- Depression Follow-up Plan
- Fall Risk Screening
- Influenza Vaccination
- Post-Osteoporotic Fracture Evaluation Women
- Post-Osteoporotic Fracture Evaluation Men
- Pneumonia Vaccination

#### **Pediatric Wellness:**

- Annual Office Visit
- · Adolescent Depression Screening
- · Immunization Status Age 2
- · Tobacco Exposure Screening
- · Tobacco Use Screening and Cessation

### **COPD Registry:**

Semi-Annual Office Visits

#### Adult Diabetes:

- Antiplatelets for DM with IVD/CAD
- Blood Pressure < 140/90mm Hg
- Diabetes Tx Mgmt ACE Inhibitor or ARB Therapy
- Eye Exam
- HbA1C Monitoring
- HbA1C <8%
- HbA1c Poorly Controlled HbA1c >9%
- Lipid Panel
- LDL < 100 mg/dL</li>
- LDL Poorly Controlled LDL >= 130 mg/dL
- · Nephropathy Screening
- Semi-Annual Office Visits
- Tobacco Use Screening and Cessation

#### **Heart Failure:**

- Beta Blocker for Low EF (<40%)</li>
- Beta Blocker Therapy After AMI
- · Semi-Annual Office Visits

### Hypertension:

Blood Pressure < 140/90 mm Hg</li>

### Ischemic Vascular Disease Coronary Artery Disease:

- AMI or CAD: ACEI or ARB if diabetic or EF <40%</li>
- · Antiplatelet Therapy
- Lipid Panel
- LDL < 100 mg/dL</li>
- Lipid-Lowering Therapy

#### Asthma:

· Medication Management

#### **Back Pain:**

Imaging Studies for Low Back Pain

### **Rheumatoid Arthritis Management:**

Rheumatoid Arthritis Management

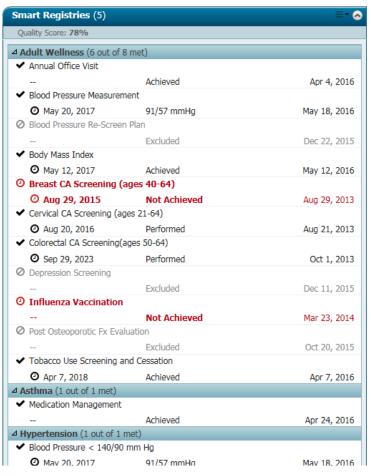
### **Ambulatory Urgent Care:**

- Avoidance of Antibiotic Treatment in Patients w/ Acute Bronchitis
- Appropriate Treatment for Children w/ URI
- Appropriate Testing for Children w/ Pharyngitis

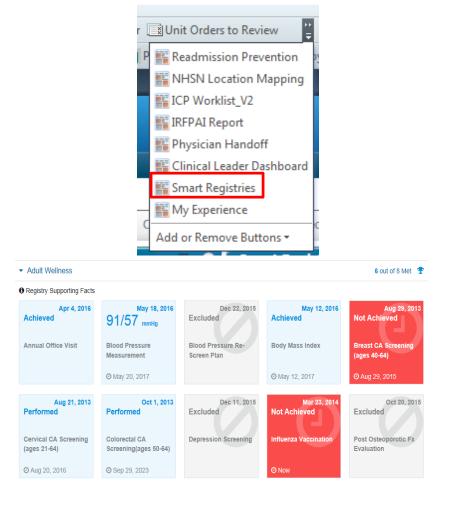
# SmartRegistry: Integrated Workflow



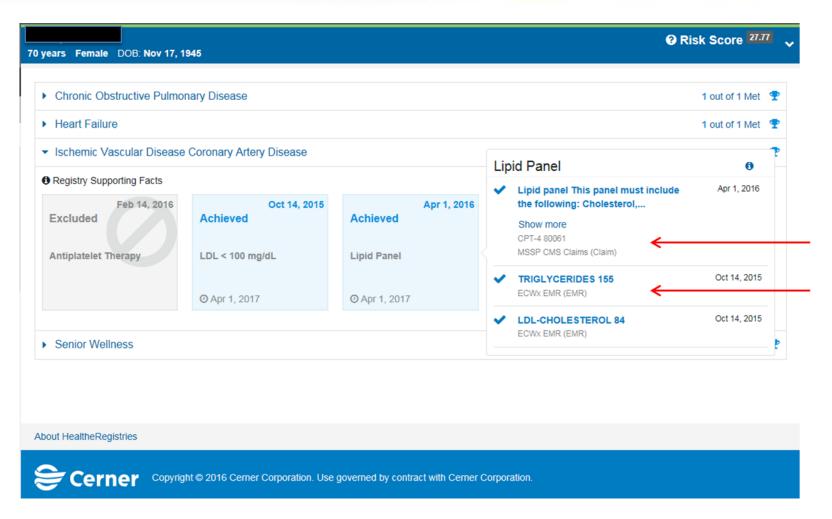
 PowerChart/PowerChart Ambulatory users have integrated and streamlined access to the SmartRegistry module.



 Web-based access to SmartRegistry portal also an option.



# SmartRegistry: MSSP Claims + eCW Encounter Data MEMORIA HERMAN



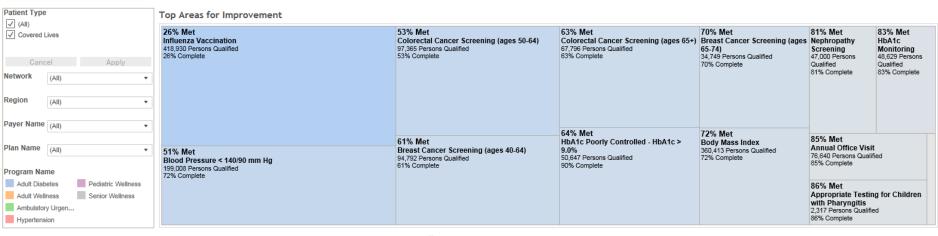
- MSSP Claims Data
- eCW EMR encounter with physician

# **Quality Dashboard**

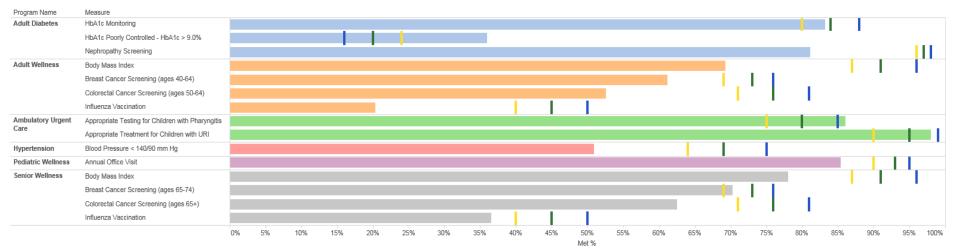


### **Filters**

### Top Areas for Improvement

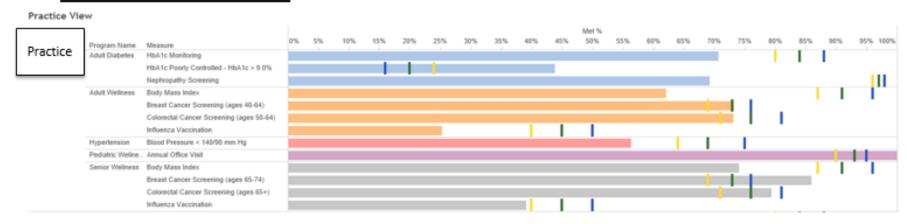


#### Overall Measure Met Percents

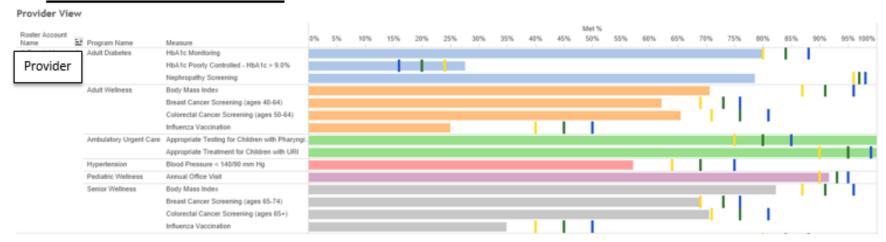


# Quality - Provider/Practice MERIAN

### Practice View



### Provider View



# HCC Tool-CMS Payment model MEMORIAL

- Workflow tool for providers to help identify documentation requirements
  - Persistent diagnoses
    - Previously documented diagnoses which have not been documented yet in the calendar year on the patient.
  - Suspected conditions
    - Diagnoses that are supported by data within SmartData (HealtheIntent), but have not ever been documented before, especially during this current year.

### **HCC Tool**



Hierarchical Condition Categories (5)

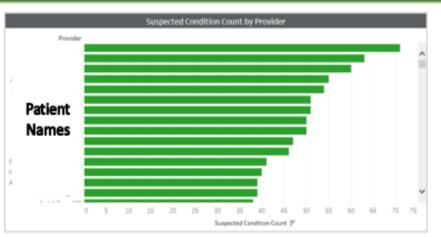
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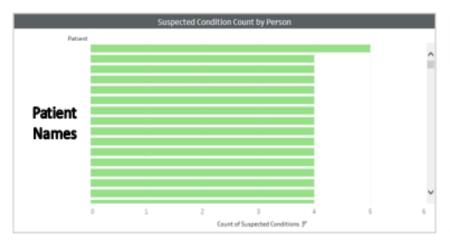
Dx	Dx Description	Last Service Date	Suspected Condition	Supporting Facts - Last Service Dates	Competing Facts
HCC79 Seize	re Disorders and Convulsions				
780.39	Atypical seizure	02/17/15			
HCC86 Acut	e Myocardial Infarction				
-	-		Moderately Suspected	beta_blocker_cardioselective_present = true (01/ 20/15) antiplatelet_present = true (01/20/15)	
HCC87 Unst	able Angina and Other Acute Ischen	nic Heart Disease			
-	-	-	Moderately Suspected	beta_blocker_cardioselective_present = true (01/ 20/15) antiplatelet_present = true (01/20/15)	-
HCC135 Acu	te Renal Failure				
		-	Highly Suspected	max_serum_creatinine_seven_days_value = 1.9 (01/11/15) max_serum_creatinine_forty_eight_hrs_value = 2.6 (01/10/15) min_serum_creatinine_seven_days_value = 1.1 (01/08/15)	-
HCC136 Chr	onic Kidney Disease, Stage 5				
			Highly Suspected	gfr_val = 14.0 (01/09/15)	

## **HCC** Dashboard





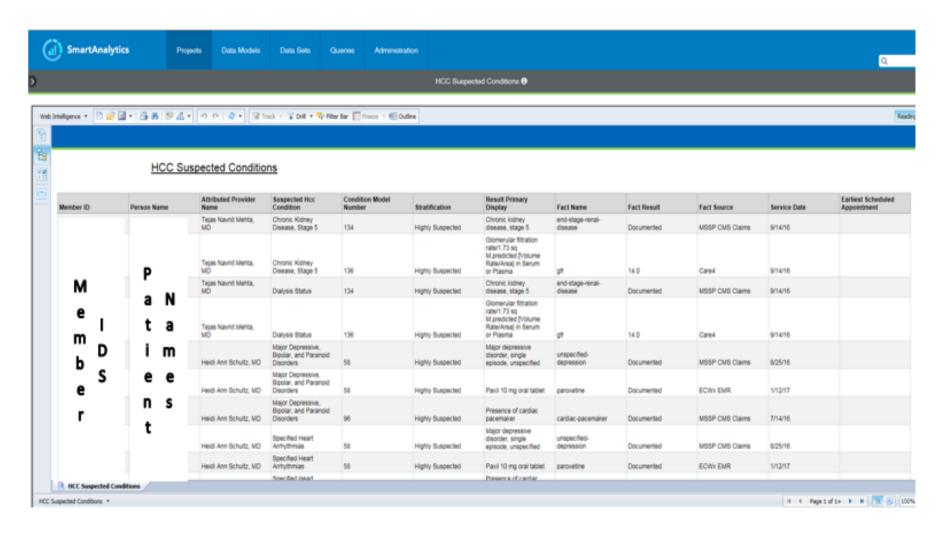




Patient	Suspected Condition Name	Supporting Fact	Source Description	Day of Service Date	
	Dirento Kidney Disease, S.,	gfr	Memorial Hermann	January 17, 2017	
	Angina Pectoris	acute-myocardial-infarcti	Memorial Hermann Huma	November 21, 2016	
	Major Depressive, Bipolar	duloratina	Memorial Hermann	June 20, 2017	
	Diabetes with Acute Com	incretin-mimetic	ECWY EMR	October 27, 2016	
	Morbid Obesity	bmi	ECWy EMR	October 27, 2016	
	Major Depressive, Bipolar,	sertraline	ECWY EMR	March 28, 2017	
Patient  Wajor Depressive, Bipo and Paranoid Disorder Wajor Depressive, Bipo	and Paranoid Disorders	unspecified-depression	ECWy EMR	June 19, 2017	
	Major Depressive, Bipolar,	bupropion	ECWY EMR	November 9, 2016	
	and Paranoid Disorders	unspecified-depression	Memorial Hermann Healt	April 6, 2017	
	Major Depressive, Bipolar, and Paranoid Disorders	fluoretine	ECWY EMR	October 19, 2016	
		unspecified-depression	Memorial Hermann Healt	April 20, 2017	
	Morbid Obesity	bmi	ECWY EMR	May 30, 2017	
	Protein Calorie	height	Memorial Hermann	February 20, 2017	
	Malnutrition	weight	Memorial Hermann	February 20, 2017	
	Specified Heart Arrhythm	cardiac-pacemaker	Memorial Hermann Healt	February 21, 2017	
	Morbid Obesity	height	Memorial Hermann	December 27, 2016	

# **HCC** Report





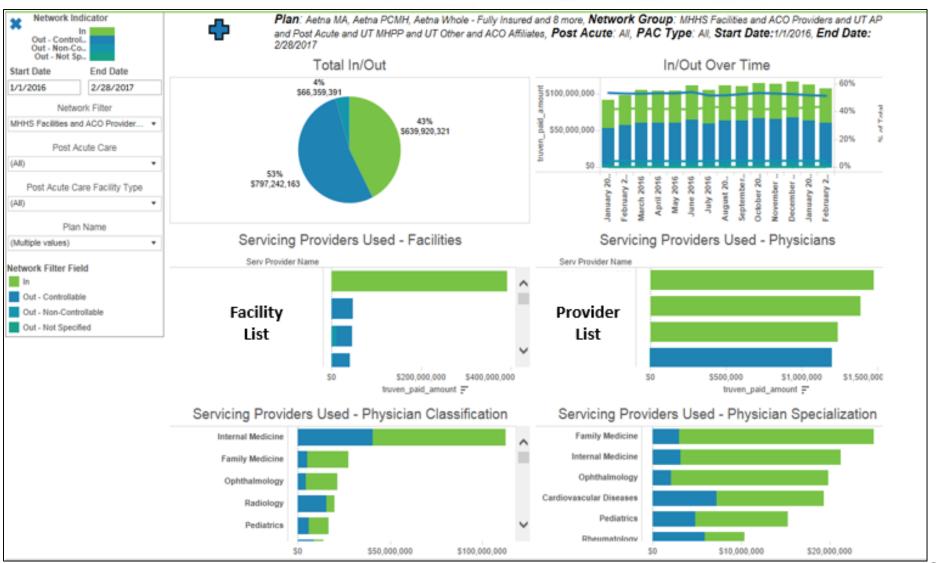
# Addressing Network Leakage HERRA



- Transparency into data to drive change in practice referral patterns and/or change in network.
  - Network Analysis and Overview Dashboard
  - Provider Detail Report
  - Referral Dashboard

# **Network Analysis**





# Top Provider Opportunity



Plan: All, Network: All, Post Acute: All, PAC Type: All, Start Date: 1/1/2016, End Date: 2/28/2017

Top 10 Attributed Providers by Out of Network Dollars

#1 #2 #3 #4 #5 #6 #7 #8 #9 #10

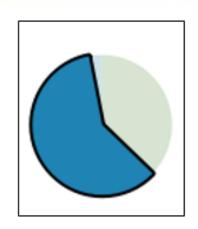




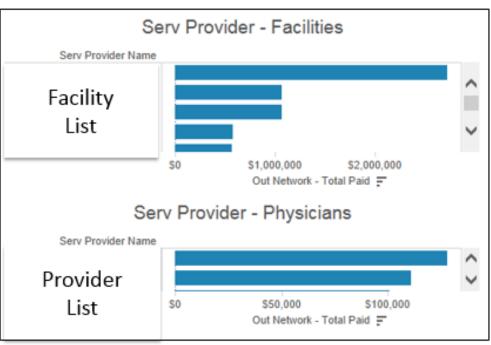
### **Detail Available**



Click on opportunity area



 View Facilities and Providers to see where leakage is happening



# Report for Provider



Provi	der Name				
Total Enrolled Count	Patient Count				
1,594	1,200				
Network	Avg Paid/Patient	Claim Count %	Claim Count	Total Paid %	Total Paid
In	\$941.37	36.73%	3,046	39.87%	\$881,126.27
Out - Controllable	\$1,181.78	62.66%	5,197	55.29%	\$1,221,961.32
Out - Non-Controllable	\$3,522.95	0.51%	42	3.83%	\$84,550.81
				1.01%	622 424 56
Out - Not Specified	\$3,738.59	0.11%	9	1.0170	\$22,431.56

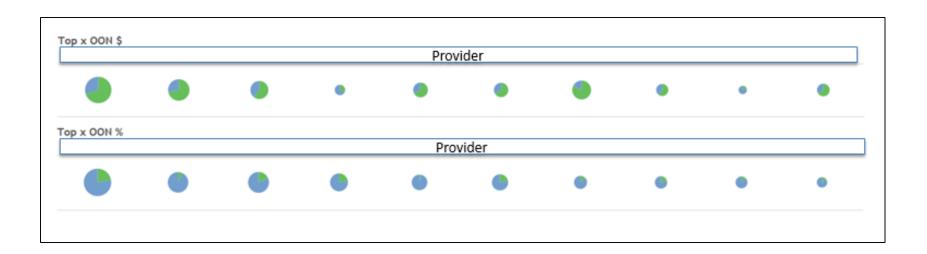
 Additional detail for facility and provider list as well as detail patient view

Patient Name	Servicing Provider	Network	Controllable/Non- Controllable Flag	Houp Level 1	Houp Level 2	Claim Month Qualification	Total Paid
Pt Name		In Network	Controllable	Diseases of the genitourinary system _LVL1	Diseases of the urinary system _LVL2	20170201	\$85.29
Provider	Out of Network	Controllable	Diseases of the genitourinary system _LVL1	Diseases of the urinary system _LVL2	20170201	\$0.00	

### Referral Dashboard

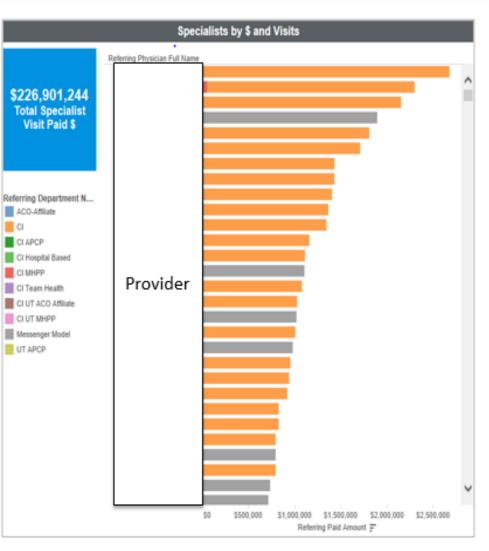


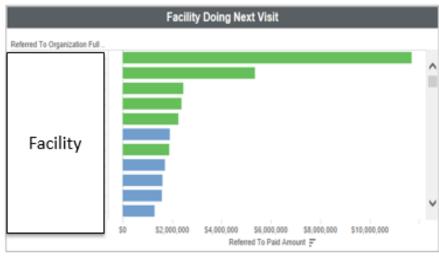
 Review opportunities to bring out of network dollars back to the network based on overall dollars and percentage.

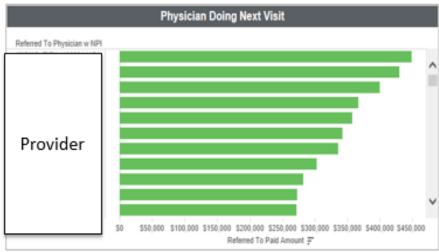


### **Next Visit Info**









### What is Next?



- Continued workflow tools and analytics dashboards and reports to improve quality, optimize network and reduce overall cost
  - Potentially Preventable Events
  - Care Redesign/Performance Improvement
  - Incentive Payment Reporting
  - Employer Solutions
  - HEDIS Submission for Health Plan



# Questions?