



Physician Documentation Optimization

Presented by:

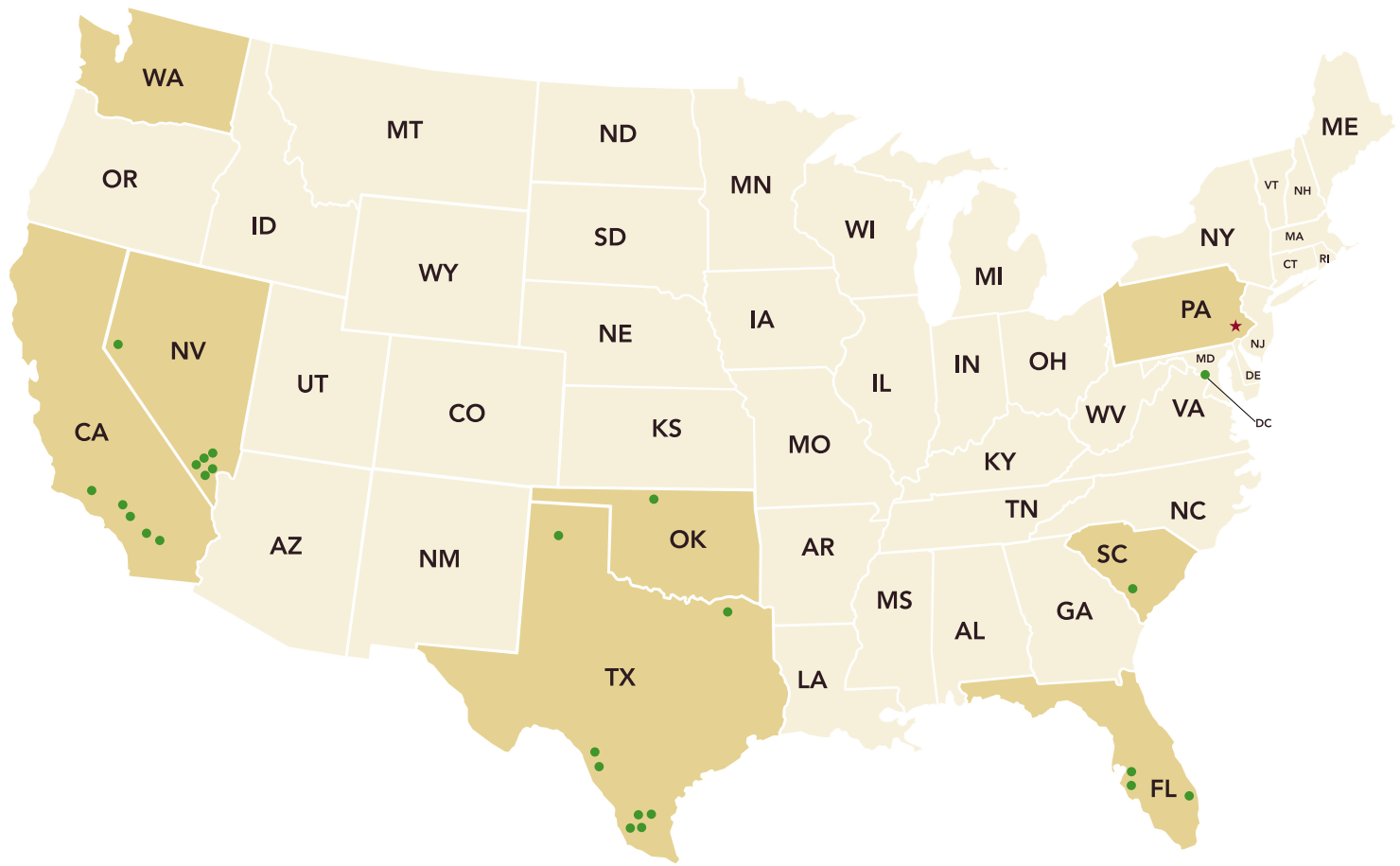
Ehab Hanna, MD, MBA – CMIO

Bruce Marcolongo – Sr. Director Information Services

UHS Universal Health Services, Inc.

UHS

- Fortune 500 Company Headquartered in King of Prussia with ~ \$11 billion in annual revenue & 83K employees
- Own and operate **27 acute care hospitals** & >300 behavioral health facilities in U.S & U.K



Physician Alignment

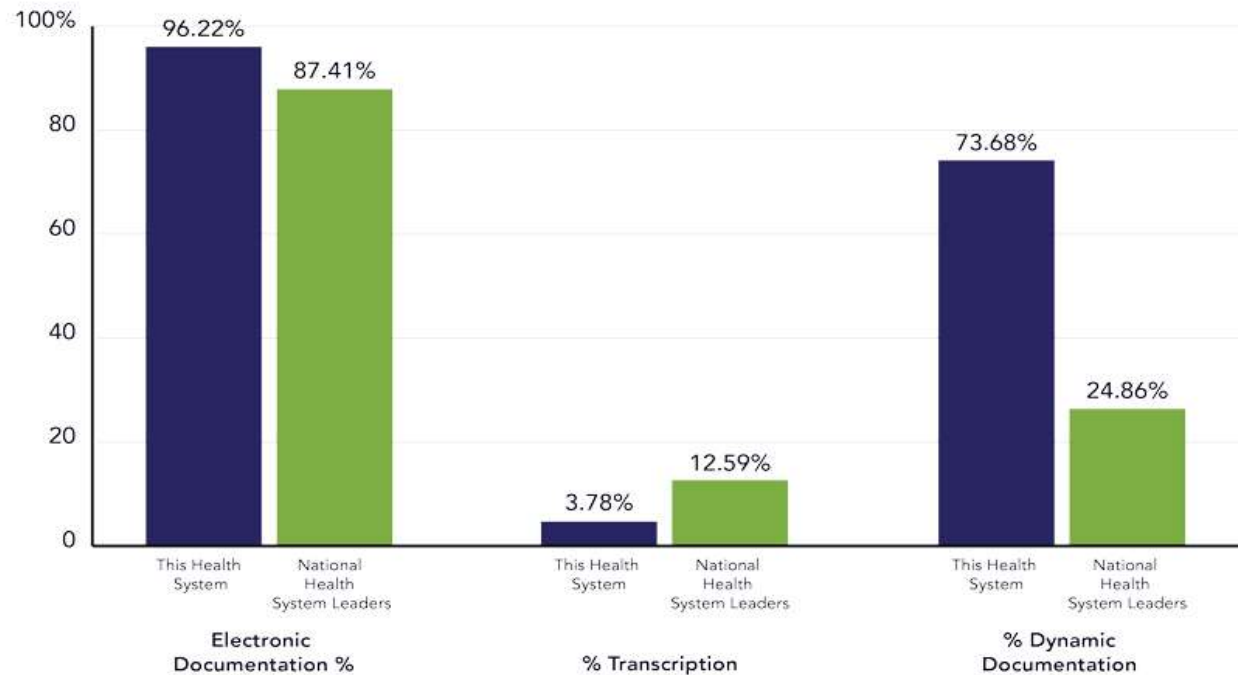
- Approximately 6,000 credentialed physicians
 - 2,250 active physicians
- UHS employs limited numbers of physicians:
 - 500 physicians
 - 115 practice locations
- All other MDs are independent physicians, some of whom split patients with competitors
- Challenge for us is to create a better EMR experience for physicians and nurses practicing in our facilities

Approach to Physician Documentation

- Previously inpatient physicians were primarily using dictation with mix of electronic & handwritten progress notes
 - Hybrid chart (EMR + Paper Record)
- Goal - to transition physicians off dictation and to the EMR
- UHS customized documentation tool included voice recognition system
- Focus on usability and efficiency with good adoption

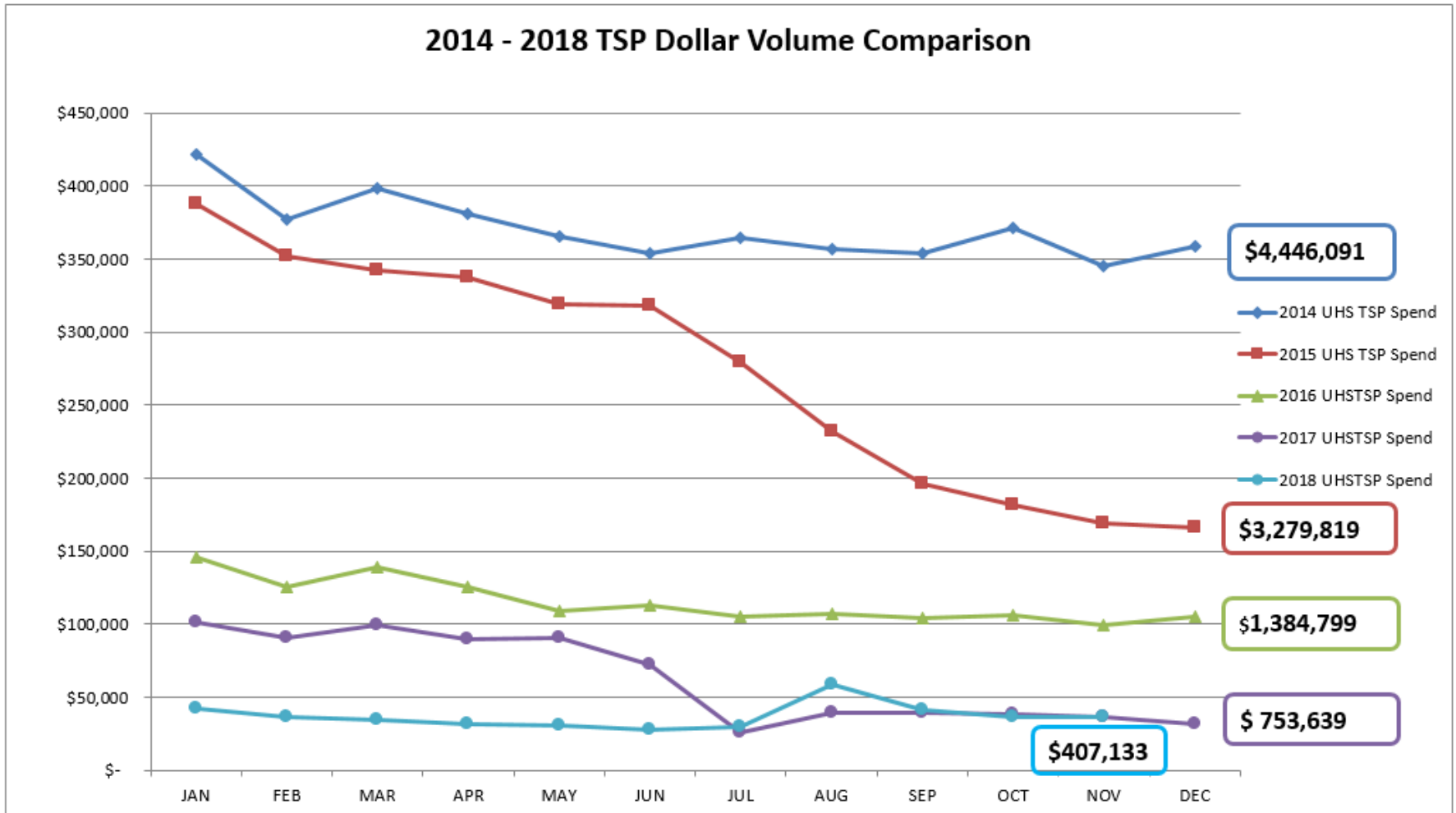
UHS Physician Documentation Utilization

- High electronic documentation adoption of **96 percent** – **10 percent higher** than national health system leaders
- Reduction in transcription to **3.8 percent** – **9 percent lower** than national health system leaders
- Significant use of dynamic documentation of **73.7 percent** – **49 percent higher** than national health system leaders



Physician Adoption Results Transcription Service Provider – Expense Reduction

(25%+ increase in Admits during these years)



DQR Project Background

- Use back end computer assisted coding
- Started looking into front end (physician) concurrent coding in 2015
 - Sought a solution that integrated well into existing physician workflow

Role of Documentation in Quality

- Hospitals and now Physicians are being measured on the quality of care delivered
- Metrics being monitored include:
 - **Severity of Illness (SOI)**
 - Indication of the complexity of your patients based on your documentation
 - **Risk of Mortality (ROM)**
 - Calculated based on the diagnosis and the degree of complexity (SOI)
 - **Observed/Expected Mortality (O/E Mortality)**
 - Compares observed mortality rates to the risk of mortality (ROM) rates calculated based on SOI documentation
 - **Length of Stay (LOS)**
 - Expected LOS is calculated based on the SOI documented.
- Each metric is dependent upon provider documentation that reflects accurate severity of illness

DQR

- An automated decision-support tool within physician documentation that analyzes clinical notes and responds in real time
 - Looks at all notes and evidence across an encounter
 - Assists in accurately reflecting the quality of care provided
 - Reflects actual acuity
- Prompts the physician for clarifications only when there is high confidence for additional diagnosis to most accurately reflect severity of illness (SOI)
 - Fewer retroactive coding queries

Sepsis Example

Physician documents Left Lower Lobe pneumonia with no other co-morbidities Documented

Current MS DRG 195 Simple Pneumonia & Pleurisy W/O CC/MCC

Clarification is fired from DQR noting that clinical documentation suggests the patient has sepsis. If accepted by the physician the DRG will be MS DRG 871 Septicemia/severe Sepsis w/o MV 96+ Hrs w MCC

If you are treating a septic patient and your documentation reflects pneumonia there is a huge impact:

- *A septic patient has 30x the mortality rate of the simple pneumonia*
- *4x the expected complication rate*
- *2x the expected readmission rate*

Example	CODE	MS DRG	Mortality Expected	Complication Expected	Ave LOS Expected	Expected Readmission Rate
Pneumonia	J18.9	195	0.55%	5.91%	3.33	7.89%
Sepsis + Pneumonia	A41.9 J18.9	871	14.80%	20.12%	6.90	16.12%

*Expected (Exp) Outcome Values based on specific Population with Proprietary analysis of Severity may vary with different population and assessment methods. For illustrative purposes only; based on real data.

How Does DQR Work?

The screenshot shows a web-based document viewer interface. At the top, there's a navigation bar with 'Document Viewing', 'Full screen', 'Print', and '1 minutes ago'. Below that is a toolbar with various icons for document management. The main content area is titled 'Admission H & P' and contains several sections: 'Chief Complaint', 'History of Present Illness', 'Review of Systems', 'Physical Exam' (with a sub-link for 'Vitals & Measurements'), and 'Assessment/Plan'. The 'Assessment/Plan' section contains text: 'Hepatic cirrhosis. Oriented times person but not to place or date. SGOT 80. Bilirubin 2.8. Altered mental status. LFTs abnormal. Begin lactulose.' To the right, there are sections for 'Problem List/Past Medical History', 'Procedure/Surgical History', 'Medications' (listing Acetaminophen and Carboplatin), 'Allergies' (No active allergies), 'Social History', and 'Family History'. At the bottom of the document, there are buttons for 'SmartReview', 'Sign/Submit', 'Save', 'Save & Close', and 'Cancel'. A blue callout box with white text points to the 'SmartReview' button, stating: 'Signing the note will auto-trigger SmartReview.' The bottom status bar shows 'Note Details: Admission Note, O'Neill, Patrick, 4/7/2015 10:47 AM CDT, Admission H & P'.

Signing the
note will auto-
trigger
SmartReview.

Clarification Found

The screenshot displays a medical software interface with a 'SmartReview' window open. The window title is 'DQPerson10, DQPerson10' and it shows patient information: 'Female 31 years DOB: 3/3/1984 FDN: 00012942'. The review date is '4/7/2015 10:49:55 AM'. The main content area is titled 'Opportunities for clarification' and lists 'Supported' diagnoses. One diagnosis, 'HE - Hepatic encephalopathy', is highlighted. Below it, the text reads 'Based on the computer interpreted findings, indicate if the diagnosis may be clarified.' The diagnosis is 'HE - Hepatic encephalopathy / HEPATIC COMA (S72.2)'. There are three buttons: 'Clarify', 'Ask Later', and 'Does Not Apply'. A blue callout box points to the diagnosis name with the text 'Clarification suggested for review'. Below the diagnosis, there is a section for 'Computer interpreted findings' with a table:

Findings	Medications	Measurements
altered mental status	Lactulose	Blindness
confusion		SGOT

At the bottom of the window, there are buttons for 'Save' and 'Cancel'. A footer note says '(?) Run SmartReview when signing this note type (Admission Note)'. The background shows a sidebar with 'Admission History' and 'History of' sections.

DQR – How does it work?

It is important that a response is chosen.

- ◆ **Clarify:** Choose this if you agree with recommendations
- ◆ **Ask Later:** Choose this if unsure.
- ◆ **Does Not Apply:** Choose this only if you are sure the diagnosis proposed is incorrect

Based on the computer-interpreted findings, indicate if the diagnosis may be clarified.

Supported Diagnosis

Acute respiratory failure

Acute respiratory failure with hypoxia (J96.01)

ClarifyAsk LaterDoes Not Apply

Computer interpreted findings

Findings	Medications	Measurements
accessory muscle use	NPPV	Oxygen Saturation
dyspnea	oxygen mask	PaCO2
pneumonia		PaO2
respiratory insufficiency		Respirations

Clarification Accepted

The screenshot shows a medical software interface with a 'SmartReview' window. The window title is 'DQRPerson10, DQRPerson10' and it shows patient information: 'Female, 31 years, DOB: 1/3/1984, FPN: 00012942'. The review is dated '4/7/2015 10:49:55 AM'. The main content area is titled 'Opportunities for clarification' and shows a list of 'Supported' diagnoses. 'HE - Hepatic encephalopathy' is selected and has a green checkmark. Below the list, there is a 'Clarify' button, an 'Ask Later' button, and a 'Does Not Apply' button. A text box contains the following text: 'Based on evidence within the medical record during this hospital stay, the patient is being treated for HEPATIC ENCEPHALOPATHY.' Below this text box is a table of 'Computer interpreted findings':

Findings	Medications	Measurements
altered mental status	Lactulose	Bilirubin
confusion		SGOT

At the bottom of the window, there is a green checkmark and the text 'Done! There are no more SmartReview clarifications to review. Click Save to write your selections to your note.' A blue callout box points to the text box with the text 'This text can be edited prior to pulling into the note'. The interface also shows a 'History' panel on the right and a 'Provider' field at the top right.

Tenets of Good Clinical Decision Support

- Communicates the right information
 - Succinct and evidence / guideline based
- To the right person
 - Provider documenting patient care
- Using the right format
 - Usable alert
- Through the right channel
 - Physician documentation platform
- At the right time in the workflow
 - When completing a note

DQR – Medical Diagnostic Families

- Currently fires on approximately 70% of patients

- Encephalopathy
- Pneumonia
- Respiratory Failure
- Acute Exacerbation COPD
- Asthma
- Heart Failure
- Shock
- Malnutrition
- Renal Failure
- Anemia
- Sepsis

Deployment model



Data collection

Facility	Percent Evaluated	Clarifications Unique	Total Responses	Agree Responses	DNA Responses	Response Rate	Agree Rate
Valley Hospital Medical Center	91.07%	996	740	261	479	74%	35%
Summerlin Hospital Medical Center	85.19%	1117	826	506	320	74%	61%
Henderson Hospital	84.36%	386	334	152	182	87%	46%
Fort Duncan Regional Medical Center (FDR)	83.99%	262	99	52	47	38%	53%
STHS	83.47%	1035	895	525	370	86%	59%
Spring Valley Hospital Medical Center	82.02%	797	658	414	244	83%	63%
Wellington Regional Medical Center	81.07%	457	402	129	273	88%	32%
Temecula Valley Hospital	79.48%	558	504	184	320	90%	37%
Aiken Regional Medical Center	78.88%	651	499	279	220	77%	56%
Northwest Texas Health (NWT)	75.86%	720	383	118	265	53%	31%
Corona Regional Medical Center (CRM)	73.41%	326	330	145	185	101%	44%
Centennial Hills Hospital Medical Center	71.92%	569	588	351	237	103%	60%
Southwest Health System - Inland Valley and Rancho Springs	71.20%	671	588	241	347	88%	41%
Desert Springs Hospital Medical Center	70.72%	673	496	211	285	74%	43%
Northern Nevada Medical Center (NNM)	70.34%	182	211	74	137	116%	35%
Texoma Medical Center (TMC)	68.87%	811	580	359	221	72%	62%
Doctor's Hospital of Laredo (DHL)	64.01%	381	277	177	100	73%	64%
St. Mary's Regional Medical Center (STM)	63.29%	170	137	68	69	81%	50%
George Washington University Hospital	61.02%	719	589	255	334	82%	43%
Palmdale Regional Medical Center	53.90%	359	349	177	172	97%	51%
Manatee Health System - Manatee	50.49%	669	514	152	362	77%	30%
Manatee Health System - Lakewood Ranch	42.76%	136	114	23	91	84%	20%
		12645	10113	4853	5260	80%	48%

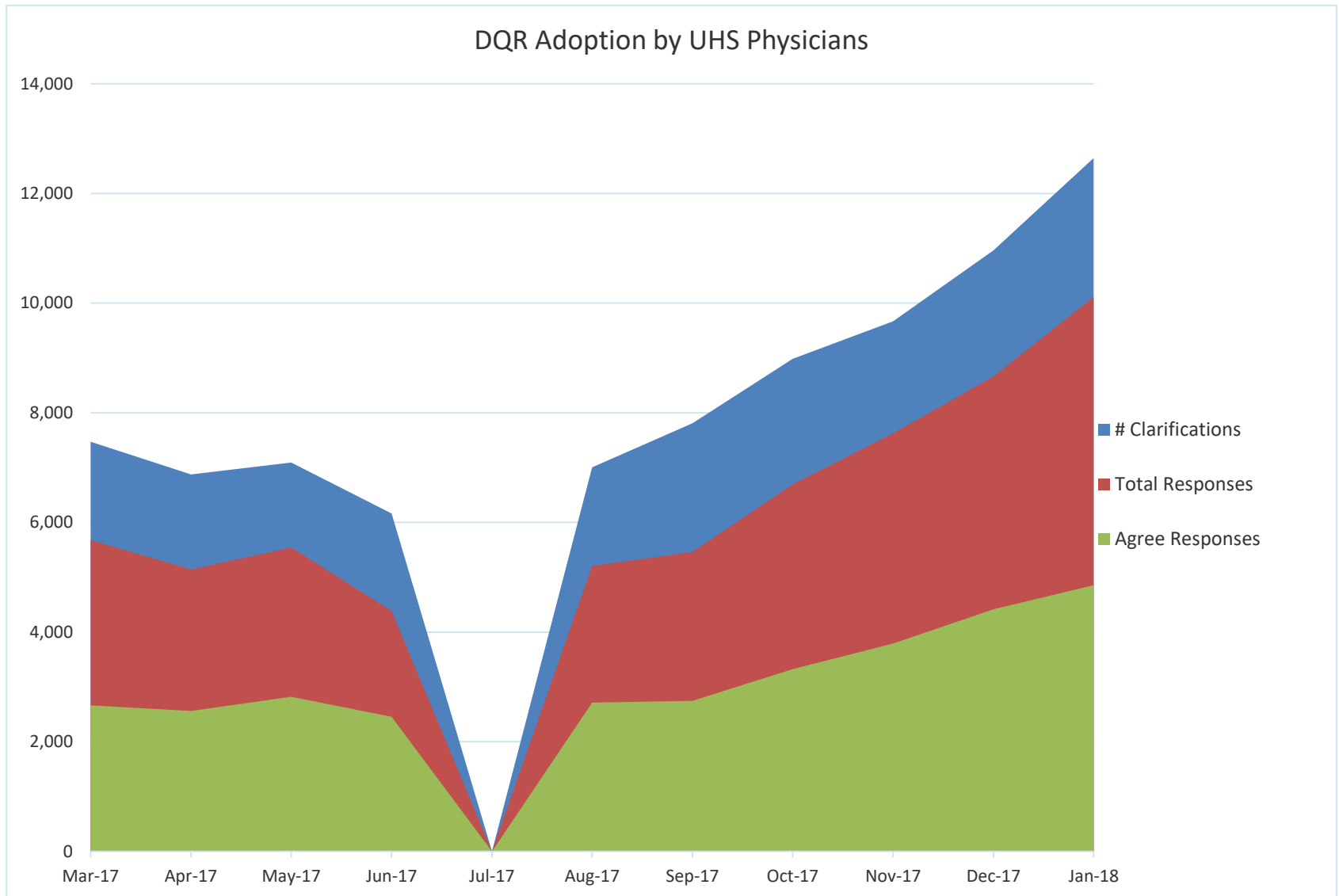
Outcomes - Pilot



- Overall shift in capture of SOI and ROM from Minor/Moderate to Major/Extreme
- 36% improvement in capture of Extreme SOI
- 24% improvement in capture of Extreme ROM
- 12% CMI uplift across accepted encounters

Source: Metrics captured during a nine-week ROI study from June through August 2016 at two UHS facilities.

DQR MD Adoption at UHS



Improved documentation of severity level

1 - June 2016 Pilot:

Two facilities SoCal (27 MDs, primarily Hospitalists)

2 - October 2016:

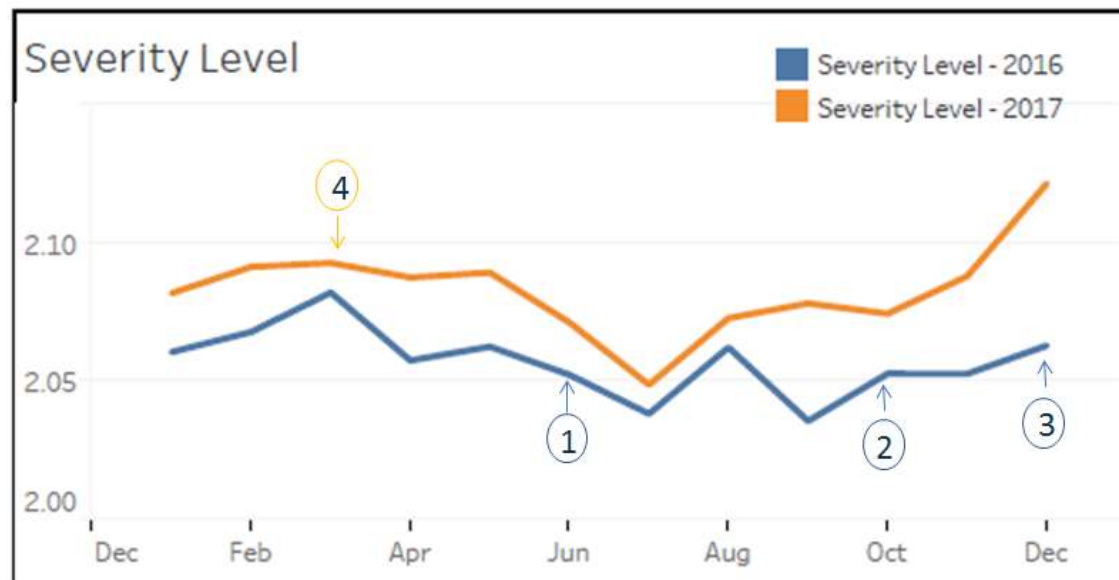
Six hospital system Las Vegas

3 - December 2016:

Five hospital system S. TX
Four hospitals in FL, SC, TX

4 - March 2017:

Five hospitals in CA, NV, OK, TX, DC



Improved documentation of risk of mortality

1 - June 2016 Pilot:

Two facilities SoCal (27 MDs, primarily Hospitalists)

2 - October 2016:

Six hospital system Las Vegas

3 - December 2016:

Five hospital system S. TX
Four hospitals in FL, SC, TX

4 - March 2017:

Five hospitals in CA, NV, OK, TX, DC



Improved observed / expected mortality

1 - June 2016 Pilot:

Two facilities SoCal (27 MDs, primarily Hospitalists)

2 - October 2016:

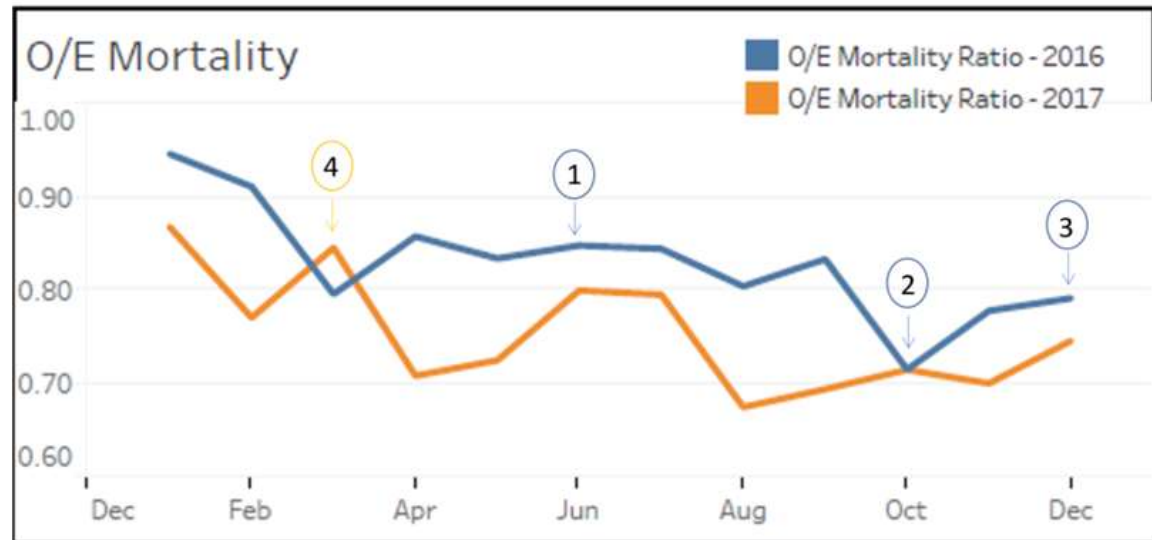
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Thanks for your time – QUESTIONS?



Ehab Hanna, MD MBA | Chief Medical Information Officer | ehab.hanna@uhsinc.com | Office (610) 382-4762
Universal Health Services, Inc. | UHS of Delaware, Inc. | 367 South Gulph Road, King of Prussia, PA 19406 |

Bruce Marcolongo | Senior Director Information Services | bruce.marcolongo@uhsinc.com | Office (610) 382-4683
Universal Health Services, Inc. | UHS of Delaware, Inc. | 367 South Gulph Road, King of Prussia, PA 19406 |

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