

## Measuring and Communicating CDI Impact

Moderated by:

**Brian Murphy**

*Director*

Association of Clinical Documentation Integrity Specialists (ACDIS)

Middleton, MA

### Moderated By



**Brian Murphy** is the director of the Association of Clinical Documentation Integrity Specialists (ACDIS), a 6,800-member association headquartered in Middleton, Massachusetts, dedicated to the unique needs of the CDI profession. He oversees management of its award-winning resources, leads association outreach, and develops industry CDI guidance in conjunction with the ACDIS Advisory Board. He is also the host of the *ACDIS Podcast: Talking CDI*. Murphy is a former managing editor at HCPPro, with experience in developing products and services serving health information management (HIM) professionals. He has extensive knowledge of CDI and HIM, with an emphasis on documentation, coding, Medicare regulations, and the revenue cycle.

## Learning Objectives

- At the completion of this educational activity, the learner will be able to:
  - Define the most important metrics for portraying the impact of CDI efforts
  - Describe effective techniques for interpreting and communicating CDI metrics to hospital administration
  - Describe the relationship of metrics to program growth
  - Review tools, strategies, and best practices used by multiple organizations

3

3

## Leveraging Data to Measure KPI's in Clinical Documentation Integrity

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4

## Dashboards to Measure KPI's

### Peds CDI Key Performance Indicators

FY2021 | Health Information Management | Clinical Documentation Integrity

Key Performance Indicator	FY20 Source	FY21 Actual	Target FY21	Goal FY21	FY 2021			FY 2022 Q1
					Q2	Q3	Q4	
Case Mix Index	1.64	1.77	1.64	1.64	1.84	1.75	1.68	1.72
Mortality Index	1.01	0.74	0.95	0.95	1.11	0.48	0.69	1.18
Expected Mortality	1.01	1.24	1.02	1.02	1.02	1.39	1.29	1.40
Sepsis Expected Mortality	4.41	3.99	4.42	4.42	3.04	2.12	6.04	4.72
Expected LOS	5.48	6.33	5.48	5.48	6.72	6.30	6.27	5.89

Data Source: Vizient CDB FY2020-FY2022 (July) | 2020 AMC Risk Model | Age <18

### Adult CDI Key Performance Indicators

FY2021 | Health Information Management | Clinical Documentation Integrity

Key Performance Indicator	FY20 Source	FY21 Actual	Target FY21	Goal FY21	FY 2021			FY 2022 Q1
					Q2	Q3	Q4	
Case Mix Index	2.19	2.30	2.19	2.19	2.33	2.29	2.28	2.31
Mortality Index	0.84	0.68	0.80	0.80	0.79	0.70	0.53	0.71
Oncology Mortality Index	1.19	0.68	1.18	1.18	0.82	0.83	0.55	0.95
Sepsis Mortality Index NPOA	2.15	1.44	2.12	2.12	1.58	1.42	1.23	1.61
LOS Index	0.95	0.96	0.94	0.94	0.96	0.98	0.93	0.95
CY2021 MSSP RAF Score	1.338	1.514	1.402	1.402				

Data Source: Vizient CDB FY2020-FY2022 (July) | 2020 AMC Risk Model | RAF Score Source: Optum OPA - Rolling 12 Month Period

5

5

## Adult Sepsis Mortality NPOA

Institutional Driver	CDI Aligned Indicator	FY20	Target	FY21	Gap	Q2 FY21	Q3 FY21	Q4 FY21	Q1 FY22
Mortality	Adult Sepsis Mortality Index NPOA	2.15	2.12	1.44	-	1.58	1.42	1.23	1.61

#### Current State

- Increased number of diagnostic variables in sepsis risk models
- Observed Mortality near lowest AMC Quartile
- Expected Mortality slightly above Median AMC Quartile
- Increased in denials (UHC, Healthnet, Centene, Imperial Health, Anthem BC) all sending denials

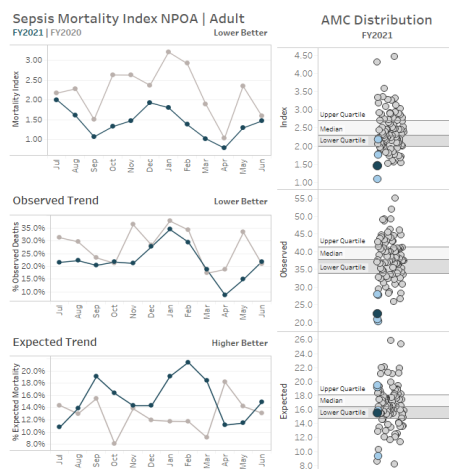
#### Barriers

- Multiple gaps in documentation, Clinical practice and EHR protocols
- Complex patient care issues
- CMS Core Measure/Legacy DSRIP do not correlate with best practice
- High volume of physician queries needed
- SIRS Criteria
- Volume of non expired sepsis population not reviewed
- Over documentation of Sepsis

#### Action Plan

- HIM consulting with SIC
- Adopt Sepsis-3

Data Source: Vizient CDB FY20-FY22 (July) | 2020 AMC Risk Model | Age > 17 | Comparison- Comprehensive AMC's



6

6

## CMI and CC/MCC Capture Rates

### Case Mix Index Improvement

FY2021 | UCD's Best Overall CMI Growth | +7.4%

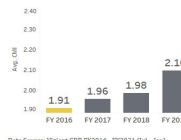
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Clinical Documentation  
Integrity

Collaboration between Coding, CDI, Physicians, and Analytics has contributed to improvement in Overall CMI.

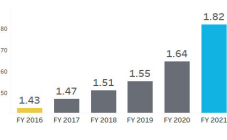


CDI Expansion in late FY2017 has been a significant contributor to CMI growth.

#### Adult CMI



#### Pediatric CMI



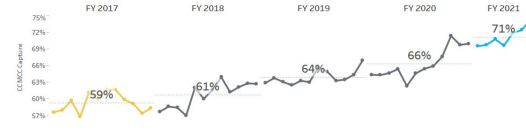
Data Source: Vistech CDB FY2016 - FY2021 (Jul - Jan)

### CC MCC Capture Improvement

FY2021 | UCD's Best Overall Growth | +5%

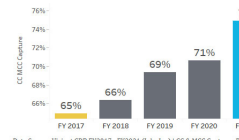
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Collaboration between Coding, CDI, Physicians, and Analytics has contributed to improvement in CC&MCC Capture.

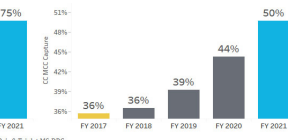


CDI Expansion in late FY2017 has been a significant contributor to CC & MCC Capture growth.

#### Adult CC & MCC Capture



#### Peds CC & MCC Capture

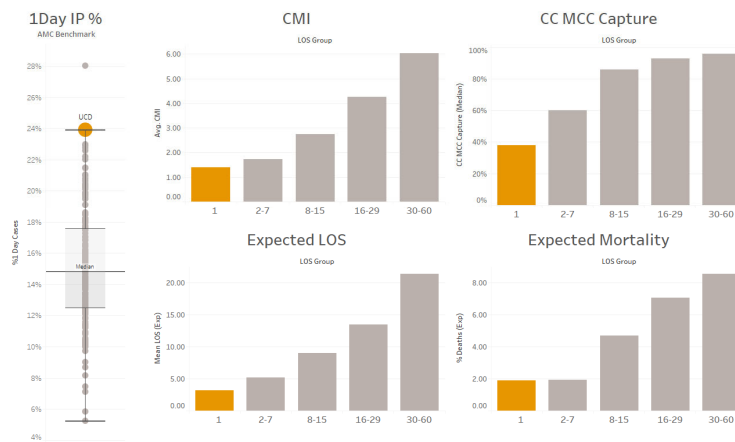


Data Source: Vistech CDB FY2017 - FY2021 (Jul - Jan) | CC & MCC Capture - Fair & Triplet MS DRGs

7

## 1 Day Stays and the Impact on CDI KPI's

### High % of 1 Day IP Admissions Dilutes AMC Metrics



Data Source: Vistech CDB FY2018 | Benchmark: Vistech Group A Cohort (n=189 AMC)

8

## Service Line Data Analysis (LOS Outliers in OBGYN)

Edv#P VGUJ	Fdv#v ( #dvhv	P hqg# OR V# R ev,	P hqg# OR V# # {s,	OR V# Iggh{	
595#dj lqghdyhu	:5;	86 (	5D7	5B7	3k9
57;#hfwtrq	73:	63 (	7D4	7B9	4B9
66<#qhsdwp zhfwslf	47:	44 (	5l4	6B8	3l<
673#rvedwep zsrwderwtq	8;	7 (	5l9	5k4	3k;
674#derwtq	56	5 (	4l3	4B<	4B:

Edv#P VGUJ	F dvhv ( #Fdvhv	P hqg# OR V# R ev,	P hqg# OR V# # {s,	OR V# Iggh{	
595#dj lqghdyhu	465,6<8	8< (	5B3	5D8	3k7
57;#hfwtrq	99,497	5< (	6B9:	6l;	3k7
66<#qhsdwp zhfwslf	4;/4<	;	6B:	6B7	4B4
673#rvedwep zsrwderwtq	9/:9	6 (	5l8	5k4	3k8
674#derwtq	4,5<:	4 (	4l4	4l<	3k8

9

9

## Service Line Data Analysis (LOS Outliers OBGYN)

### LOS | RMG 240 (Uterine & adnexal procedures for non-malignancy)

FY2021 | Total Encounters- 42

UC DAVIS HEALTH MEDICAL CENTER  
HIM | Clinical Documentation Integrity

Service Line  
Gynecology

AMC Risk Model  
2020 AMC Risk

Index  
**1.36**

▲+0.02

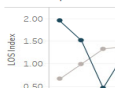
Observed  
**3.74**

▲+0.36

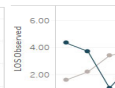
Expected  
**2.74**

▲+0.23

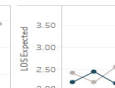
FY2021 | FY2020



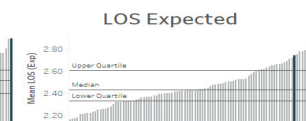
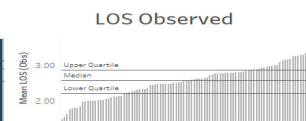
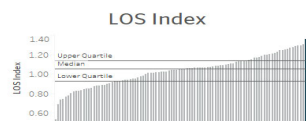
AMC LOS Index  
UCD 98 of 99 | Lower Better



AMC Observed LOS  
UCD 99 of 99 | Lower Better



AMC Expected LOS  
UCD 89 of 99 | Higher Better



Data Source: Vizient CDB FY2020-FY2021 (Jul-Feb) | Comparison Cohort: Comprehensive AMCs | 99 Hospitals | RMG 240 = Uterine & adnexal procedures for non-malignancy | Excludes LOS out...

10

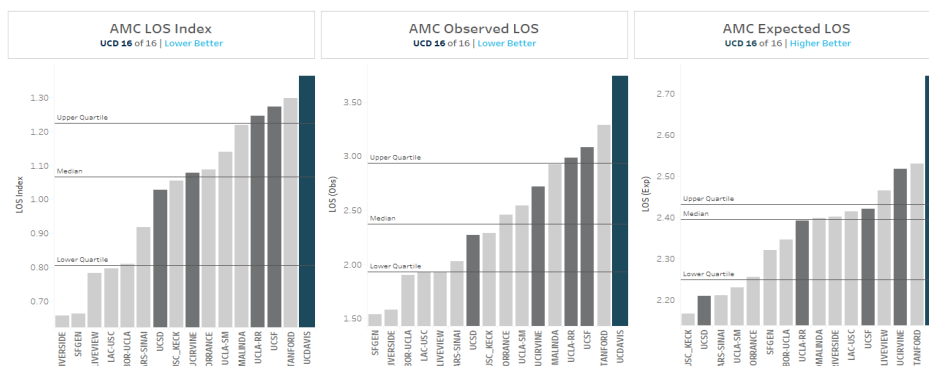
10

## Service Line Data Analysis (LOS Outliers OBGYN)

### LOS | RMG 240 (Uterine & adnexal procedures for non-malignancy)

#### California AMCs Comparison

HIM | Clinical Documentation Integrity



Data Source: Vizient CDB FY2020-FY2021 (Jul-Feb) | Comparison Cohort: California Comprehensive AMCs = 16 Hospitals | Comparison UC Hospitals = 5 Hospitals | Excludes LOS outliers

11

11

## RAF Score

Institutional Driver	CDI Aligned Indicator	CY20 Baseline	CY21 Current	Gap	Q4 FY19	Q1 FY20	Q2 FY20	Q3 FY20
Outpatient CDI	CY20 RAF Score MSSP	1.338	1.5141	.176				

### Current State

- Daily reviews done to determine upcoming visits
- Added tool called "HCC Collaborate" to enhance both visit review and physician notification of possible HCC that have not been added to patient
- Queries sent daily to Clinic Providers
- Significant Improvement in RAF score
- Outpatient CDI Staff is reviewing all MSSP population
- Added Outpt CDI in ED & Ambulatory Surgery

### Barriers

- Learning Curve with new process
- Process varies amongst Clinics
- Providers deleting Queries

### Action Plan

- Continue to send Queries when documentation is insufficient
- Continue to educate providers on the important
- M\*Modal CAPD-CDI triage

#### CMS-HCC-RAF Score for MSSP PTs

CMS-HCC Score Timeframe	CMS-HCC Score Eligible Data Source	# Patients	Score - CMS-HCC Score Average
Rolling 12 Months	Claims	29,414	1.3862
	Claims, Billing	29,414	1.4433
	Claims, Billing, EMR	29,414	1.5141

#### CMS-HCC-RAF Score for HNT COMM

CMS-HCC Score Timeframe	CMS-HCC Score Eligible Data Source	# Patients	Score - CMS-HCC Score Average
Rolling 12 Months	Claims	16,210	0.2896
	Claims, Billing	16,210	0.3865
	Claims, Billing, EMR	16,210	0.4030

#### CMS-HCC-RAF Score for COMM HHO Plans

CMS-HCC Score Timeframe	CMS-HCC Score Eligible Data Source	# Patients	Score - CMS-HCC Score Average
Rolling 12 Months	Claims	34,630	0.2923
	Claims, Billing	34,630	0.4299
	Claims, Billing, EMR	34,630	0.4543

12

12



**Thank you.**

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## Vidant Health Inpatient CDI Program

- 20 CDI Specialists
- 1 CDI Quality Analyst
- 1 CDI Manager
- Covering 6 of our 9 hospitals
  - Level 1 Trauma Center
  - Maynard Children's Hospital
    - Level IV NICU
  - Community Acute Care
  - Noncovered sites are CAHs
- Focus on Medicare, Medicaid and Commercial DRG contracts
- Adult Inpatient
- Women and Children

17

17

## CDI Metrics - Individual & Group (Totals and Average)

- Reviewed Cases
- Total # of reviews per case
- Case count with queries
- Query Rate
  - Agree Rate
  - Clinical Indeterminate Response Monitoring
- Baseline and Final Working CDI DRG
  - Financial impact
  - Average chart review value
- CDI vs. Coding Queries
- Expected and Actual Average Initial Reviews per Day

18

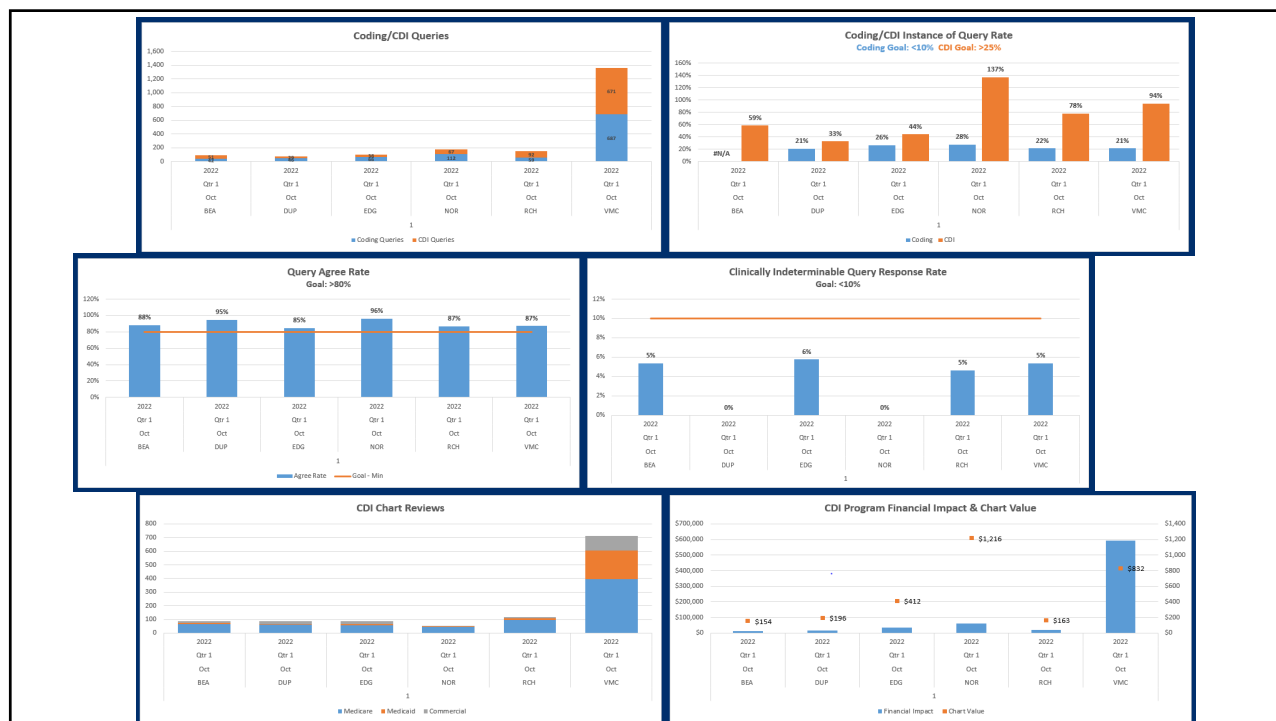
18

## Executive Level Summary

- Coding/CDI Query Performance
  - Coding/CDI Instance of Query Rate
    - Coding Goal: <10%
    - CDI Goal: >25%
  - Query Agree Rate
    - Goal: >80%
  - Clinically Indeterminable Response Rate
    - Goal: <10%
- CDI Chart Reviews/Location
  - Medicare
  - Medicaid
  - Commercial
- CDI Program Financial Impact & Chart Value
- CC/MCC Capture Rate
- Automated Query Activity
  - Epic NoteReaderCDI Performance

19

19



20



**Thank you.**

[Deborah.Martin@vidanthealth.com](mailto:Deborah.Martin@vidanthealth.com)

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21



**AdventHealth- West Florida Division**

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**Kim Higgins, BSN, CCDS**  
*Divisional Director Clinical Documentation Integrity*  
AdventHealth, West Florida Division



22

## AdventHealth CDI Key Performance Indicators

- Monthly site reports:
  - Initial review rate:
    - expected all patients except, OB, NUR, PEDS, Hospice
  - Clarification rate:
    - Counted on per chart, goal of 45 %
  - Physician Response rate:
    - Target 98 %
  - CDI Education Performance
    - Target 100 %, all or )
  - Composite Score
    - Target 85 %

23

23

AdventHealth WFD									
Attribution	Target	4th Q 2020	1st Q 2021	2nd Q 2021	3rd Q 2021	Oct-21	Nov-21	Dec-21	
AH Clinical Documentation Inpatient	> 96%	91.00	81.50	84.61	78.64	78.23	77.31	70.62	
Initial Review									
Clarifications	Inpatient ≥ 45%	49.7	55.42	61.62	60.71	59.26	58.36	57.27	
Physician Response Rate	Inpatient ≥ 98%	99.67	99.87	99.62	99.69	99.72	99.86	99.7	
CDI Education Compliance	CDS Nurse 100%	100	100	100	100	100	100	100	
Composite Score	≥ 85%	85.09	84.6	87.7	84.7	84.40	84.93	83.28	

Facility	Review Rate %	Total discharged patients reviewed	Total patients Discharged	Unique Clarification Score	Encounters with clarifications	Patients reviewed	Physician Response Rate	Total Clarifications Sent	Physician Response	CDI Education Score	composite Score
Adventhealth Carrollwood	46.88	278	593	57.91	161	278	100.00	344	344	100	76.20
Adventhealth Dade City	79.49	283	356	45.58	129	283	98.01	201	197	100	80.77
Adventhealth Lake Placid	98.78	81	82	62.96	51	81	100.00	82	82	100	90.44
Adventhealth North Pinellas	83.44	398	477	52.51	209	398	99.46	373	371	100	83.85
Adventhealth Ocala	72.13	1012	1403	50.69	513	1012	99.90	961	960	100	80.68
Adventhealth Sebring	84.85	672	792	62.80	422	672	100.00	974	974	100	86.91
Adventhealth Tampa	69.10	1288	1864	53.73	692	1288	99.38	1457	1448	100	80.55
Adventhealth Wauchula	100.00	9	9	55.56	5	9	100	11	11	100	88.89
Adventhealth Wesley Chapel	62.98	536	851	62.69	336	536	100.00	605	605	100	81.42
Adventhealth Zephyrhills	68.34	559	818	57.07	319	559	100.00	510	510	100	81.35
Adventhealth Connerton	71.70	38	53	68.42	26	38	100	76	76	100	85.03
WFD	70.62	5154	7298	57.27	2863	5154	99.70	5594	5578	100	83.28

Target &gt;96 %

Target &gt;45 %

Target &gt;98 %

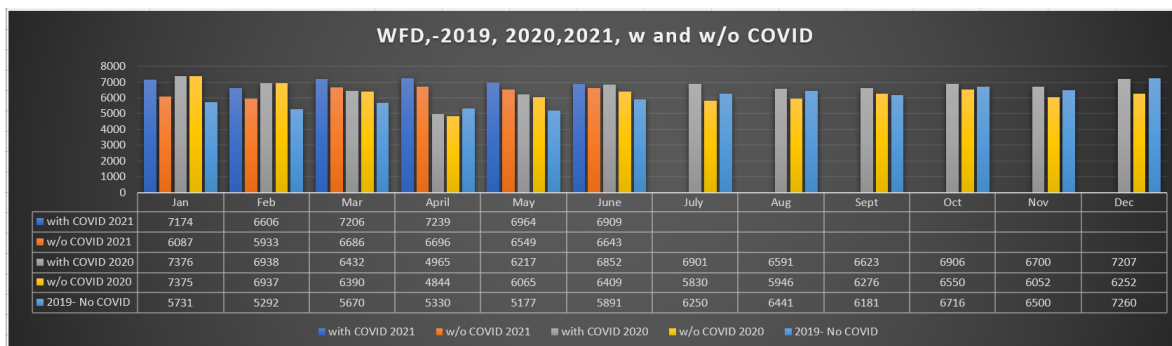
Target =100 %

Target &gt;85 %

24

24

## Volume comparisons with and W/O COVID FTEs based on 1 CDS for 1500 Discharges

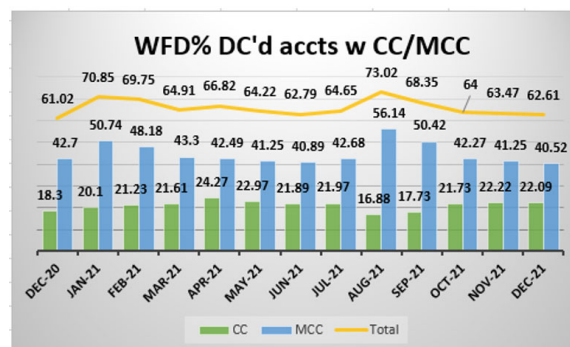


25

25

## CC/MCC Capture Rate

- CC/MCC Capture Rate Trend
- Compare to top DRGs to look for opportunity
- How many DRGs does can CDI shift?
- With COVID automatic MCC takes away , compare with and without



26

26

## QSR Process: Mortality O/E Improvement

- Multidisciplinary, retrospective review of 100 % mortality review
- Coding, CDI, Quality infectious Disease
- Coding summary converted to a mortality %
- Suggested risk adjusters
- PSIs/HACA ID' d
- One final review before dropping the bill, guided by software

**3. Create or Edit Exclusions, Opportunities, & Follow Up Form**

**INSTRUCTIONS:**  
Type/Copy patient info and codes into Premier Risk Calculator, then fill out initial Expected Mortality- Initial.

Reflect any proposed changes or additions in the Expected Mortality- Target.

Reflect the final result in the Expected Mortality- Final

Expected Mortality- Initial  
44.87

Expected Mortality- Target  
54.13

Expected Mortality- Final  
54.13

Comment  
R65.20 on coding summary prior to but below line 45

Diagnosis Code Changes/Additions

Instructions:  
Add any new codes not originally included.

For any changes, include the code to be modified and select the

Edit Form Cancel Save

27

27



**Thank you.**

[Kimberly.higgins@adventhealth.com](mailto:Kimberly.higgins@adventhealth.com)

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28

## Panel Discussion

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## Questions for Discussion

- What are the must-track metrics of the CDI department of today?
- Does CMI remain a viable metric, and if so, how do you “tell the story”?
- What are the obstacles you face (tools, transparency, vendor operability, time/resources etc.) that stand in your way of an optimal dashboard?
- What is the key to using metrics to drive program improvements and enhancements?



**Thank you.**

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