

## TIP SHEET

**Note:** The following tip sheet is a sample from fictitious ABC Health System, based on its own unique patient population and risk model. It is presented here as an example only.

While reviewing, remember your focus is on much more than just DRG optimization. ABC Health System expects a holistic approach in CDI work for data accuracy.

The **Mortality Index** is defined by the number of patient deaths in a hospital within a ratio that compares actual deaths within a specific time period to expected deaths pulled from risk of mortality data. This is often referred to as the “O” (observed) to “E” (expected) death rate (*other abbreviations include “O/E”, “O:E”, and “actual/expected”*).

The **LOS index** is defined by the ratio of actual, observed length of stay (LOS) days for patients compared to the expected LOS values pulled from LOS metric data. This is often referred to as the “O” (observed) to “E” (expected) LOS.

These indices can be affected by the quality of care provided and/or the quality of documentation captured in the medical record. If the CDI team does not help capture the highest risk of mortality or expected LOS values appropriate for the physician or facility’s patient population through complete documentation, then the risk adjustment applied to this ratio will not be accurate.

### Significant\* Mortality Comorbidities — AMC\*\*

#### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Malnutrition**
3. **Cardiac Arrhythmia**
4. **Metastatic Cancer**
5. **Shock**
6. **Coagulation Defect**
7. **Chronic Kidney Disease**
8. Acute Renal Failure
9. **Liver Failure**
10. Vent on Admission Day
11. **Respiratory Failure**
12. DNR w/o Vent > 96 Hours or ECMO
13. Severe Brain Conditions

#### 2021 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Malnutrition**
3. **Cardiac Arrhythmia**
4. **Chronic Kidney Disease**
5. **Metastatic Cancer**
6. **Shock**
7. **Coagulation Defect**
8. Cachexia
9. **Liver Failure**
10. Thrombocytopenia & Other Platelet Defects
11. **Respiratory Failure**
12. Pulmonary Heart Disease

### Significant LOS Comorbidities — AMC

2020 Top Comorbidities	2021 Top Comorbidities
1. <b>Malnutrition</b>	1. <b>Malnutrition</b>
2. <b>Fluid &amp; Electrolyte Disorders</b>	2. <b>Fluid &amp; Electrolyte Disorders</b>
3. <b>Anemia in Chronic Disease</b>	3. <b>Nutritional Anemia</b>
4. <b>Nutritional Anemia</b>	4. <b>Obesity</b>
5. <b>Obesity</b>	5. <b>Thrombocytopenia &amp; Other Platelet Defects</b>
6. <b>Acute Renal Failure</b>	6. Pulmonary Heart Disease
7. Anemia	7. <b>Anemia in Chronic Disease</b>
8. <b>Thrombocytopenia &amp; Other Platelet Defects</b>	8. <b>Acute Renal Failure</b>
9. Blood Loss Anemia	9. Mood Disorders
10. Drug Resistant Infection	10. Chronic Liver Disease

\*Significant comorbidities include the most frequent and/or highest weighted comorbidities contributing to LOS or mortality metrics

\*\*AMC — Academic Medical Center

### Significant Service Line-Based Comorbidities and Diagnoses

Comorbidities listed affect both LOS and Mortality metrics, unless otherwise specified (\*). Listed comorbidities include top 10 most common/highest weighted variables within the relevant risk models for each service line.

#### General Medicine

2020 Top Comorbidities	2021 Top Comorbidities
1. <b>Malnutrition</b>	1. <b>Malnutrition</b>
2. Obesity	2. Cardiac Arrhythmia
3. Anemia	3. Metastatic Cancer
4. Thrombocytopenia	4. Cachexia
5. <b>Fluid &amp; Electrolyte Disorders</b>	5. <b>Fluid &amp; Electrolyte Disorders</b>
6. <b>Acute Renal Failure</b>	6. Pulmonary Heart Disease
7. Coagulation Defect	7. Thrombocytopenia & Other Platelet Defects
8. <b>Chronic Kidney Disease</b>	8. <b>Acute Renal Failure</b>
9. Blood Loss Anemia	9. <b>Chronic Kidney Disease</b>
10. Encephalopathy	10. Dementia

### General Surgery

#### 2020 Top Comorbidities

1. **Malnutrition**
2. **Chronic Kidney Disease**
3. **Coagulation Defect**
4. **Fluid & Electrolyte Disorders**
5. Thrombocytopenia
6. Anemia
7. Nutritional Anemia
8. Obesity
9. Acute Renal Failure
10. Type II Diabetes

#### 2021 Top Comorbidities

1. **Malnutrition**
2. **Fluid & Electrolyte Disorders**
3. Cardiac Arrhythmia
4. **Chronic Kidney Disease**
5. COPD
6. Pulmonary Heart Disease
7. **Coagulation Defect**
8. Cachexia
9. CHF
10. Hypertension

### Cardiac Surgery

#### 2020 Top Comorbidities

1. **Chronic Kidney Disease**
2. **Anemia In Chronic Disease**
3. **Malnutrition**
4. **Thrombocytopenia**
5. **Fluid & Electrolyte Disorders**
6. Coagulation Defect
7. Acute Renal Failure
8. Obesity
9. **Pulmonary Heart Disease**
10. **Chronic Liver Disease**

#### 2021 Top Comorbidities

1. **Anemia In Chronic Disease**
2. **Chronic Kidney Disease**
3. **Chronic Liver Disease**
4. **Fluid & Electrolyte Disorders**
5. **Malnutrition**
6. AMI/Non-STEMI
7. **Pulmonary Heart Disease**
8. **Thrombocytopenia & Other Platelet Defects**
9. Respiratory Failure
10. End Stage Heart Failure

### Cardiology

#### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Malnutrition**
3. **Chronic Kidney Disease**
4. **Thrombocytopenia & Other Platelet Defects**
5. **Coagulation Defect**
6. **Acute Renal Failure**
7. **Anemia in Chronic Disease**
8. Blood Loss Anemia
9. Nutritional Anemia
10. Obesity

#### 2021 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Malnutrition**
3. **Thrombocytopenia & Other Platelet Defects**
4. **Acute Renal Failure**
5. Chronic Liver Disease
6. Pulmonary Heart Disease
7. **Anemia in Chronic Disease**
8. **Chronic Kidney Disease**
9. **Coagulation Defect**
10. Shock

### Neurology

#### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Encephalopathy**
3. **Malnutrition**
4. Anemia
5. Nutritional Anemia\*
6. Coma
7. Chronic Kidney Disease
8. **Anemia in Chronic Disease\***
9. Acute Renal Failure
10. **Aspiration Pneumonitis**

#### 2021 Top Comorbidities

1. **Malnutrition**
2. **Fluid & Electrolyte Disorders**
3. **Encephalopathy**
4. Severe Brain Conditions
5. **Anemia in Chronic Disease**
6. Thrombocytopenia & Other Platelet Defects
7. **Anemia in Chronic Disease**
8. Chronic Fatigue and Other Debilities
9. Dysphagia
10. Drug Resistant Infection\*

### Neurosurgery

#### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Malnutrition**
3. **Thrombocytopenia**
4. **Anemia in Chronic Disease**
5. Chronic Kidney Disease
6. **Encephalopathy**
7. Anemia\*
8. Nutritional Anemia\*
9. Acute Renal Failure
10. **Blood Loss Anemia\***

#### 2021 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. Severe Brain Conditions
3. **Malnutrition**
4. **Anemia in Chronic Disease**
5. **Blood Loss Anemia**
6. **Encephalopathy**
7. **Thrombocytopenia & Other Platelet Defects**
8. Metastatic Cancer
9. SIADH\*
10. Respiratory Failure

### Orthopedics

#### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Malnutrition**
3. **Coagulation Defect**
4. **Anemia in Chronic Disease**
5. Thrombocytopenia & Other Platelet Defects
6. Chronic Kidney Disease
7. Acute Renal Failure\*
8. Anticoagulation Status\*
9. Nutritional Anemia\*
10. Type II Diabetes

#### 2021 Top Comorbidities

1. **Malnutrition**
2. **Fluid & Electrolyte Disorders**
3. Pulmonary Heart Disease
4. Chronic Fatigue and Other Debilities
5. Chronic Liver Disease
6. Metastatic Cancer
7. **Anemia in Chronic Disease**
8. **Coagulation Defect**
9. Infection Due to Orthopedic Device\*
10. Cardiac Arrhythmia

### Spinal Surgery

#### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Anemia in Chronic Disease**
3. **Thrombocytopenia & Other Platelet Defects**
4. **Malnutrition**
5. Nutritional Anemia
6. Respiratory Failure
7. Acute Renal Failure\*
8. Anticoagulation Status\*
9. Blood Loss Anemia\*
10. Obesity\*

#### 2021 Top Comorbidities

1. Metastatic Cancer
2. **Fluid & Electrolyte Disorders**
3. CHF
4. **Anemia in Chronic Disease**
5. Chronic Kidney Disease
6. Coagulation Defect
7. **Malnutrition**
8. Cardiac Arrhythmia
9. Dementia
10. **Thrombocytopenia & Other Platelet Defects**

### Pulmonary/Critical Care

#### 2020 Top Comorbidities

1. Nutritional Anemia\*
2. Obesity\*
3. **Thrombocytopenia**
4. Acute Renal Failure
5. Aspiration Pneumonitis
6. **Malnutrition**
7. Bacterial Pneumonia
8. Anemia in Chronic Disease\*
9. Coma\*
10. Coagulation Defect

#### 2021 Top Comorbidities

1. Pulmonary Heart Disease
2. Other Pulmonary Conditions
3. Shock
4. Autoimmune/Inflammatory Disease
5. Chronic Fatigue and Other Debilities
6. **Malnutrition**
7. **Thrombocytopenia & Other Platelet Defects**
8. Pulmonary Embolism
9. Severe Brain Conditions
10. Infectious Pneumonia

### Thoracic Surgery

#### 2020 Top Comorbidities

1. **Malnutrition**
2. **Complication of Transplanted Organ/Tissue**
3. Aspergillosis
4. Cystic Fibrosis
5. End Stage Heart Failure
6. Aortic Embolism/Thrombus
7. Occupational Exposure (SDOH)
8. CMV
9. Pneumocystosis
10. Viral Pneumonia or COVID-19

#### 2021 Top Comorbidities

1. Chronic Kidney Disease
2. Fluid & Electrolyte Disorders
3. Pulmonary Heart Disease
4. Acute Renal Failure
5. Coagulation Defect
6. **Complication of Transplanted Organ/Tissue**
7. **Malnutrition**
8. Metastatic Cancer
9. Other Pulmonary Conditions
10. Shock

## Obstetrics

### 2020 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Respiratory Failure**
3. Coagulation Defect\*
4. Nutritional Anemia\*
5. **Thrombocytopenia & Other Platelet Defects\***
6. Renal Disease/Failure\*
7. Sepsis\*
8. Anemia in Pregnancy\*
9. Obesity\*
10. Gestational Diabetes\*

### 2021 Top Comorbidities

1. **Fluid & Electrolyte Disorders**
2. **Respiratory Failure**
3. Shock
4. HELLP Syndrome
5. Nervous System Disorder Complicating Pregnancy
6. Hysterectomy, abdominal and vaginal
7. Venous Complication of Pregnancy
8. **Thrombocytopenia & Other Platelet Defects\***
9. Pre-Eclampsia/Eclampsia\*
10. Housing & Economic Circumstances (SDOH)\*