

Care Alignment: Standardizing Clinical Practice to Align with Best Practices

Camila Vargas, BSN RN, Quality Consultant Cardiothoracic Surgery; Dr. Sara Pereira, MD, Professor of Cardiothoracic Surgery; Collin Seabourne, MS Industrial Engineering, Sr. Quality Consultant



Learning Objectives:

1. Discuss the key drivers of documentation that result in inaccurate performance rankings.
2. Explain successful methods used to improve adherence to best practices in cardiac surgery.

Background:

UHEALTH is a level 1 trauma academic medical center with the largest geographic area served in the United States. In looking at the acuity of our cardiac surgery patients and the morbidity as quantified by STS our CT surgery group suspected a disparity.

Analysis of workflows and documentation in the EMR showed free form notes in inconsistent locations left our abstractors and coders searching the EMR resulting in inefficiencies and back and forth between abstractors and clinicians to accurately classify and quantify patient acuity.

A multidisciplinary team of cardiac surgeons, advanced practice clinicians, IT analysts, data architects, data analysts, nurses, and process improvement engineers was assembled to further investigate the nature of the documentation opportunity and explore potential interventions.

Intervention:

The team identified that the lack of documentation standards resulted in inconsistencies in where, if, and how comorbidities were documented. In October of 2019 through an iterative process, a discrete template was developed to be used for all cardiac surgery patients that would ensure standards in documentation and ease parsing this information for abstractors and coders. The team compared STS and Vizient risk models looking for points of divergence and similarity to identify discrete fields to be included in the template. The template was made accessible in the EMR at key-points in the patient’s clinical course, pairing workflow with patient journey: clinic consult visits, H&P, date of surgery, post op, and discharge. The template included fields for comorbidities, best practices, and contraindications.

Figure 1: Documentation Template Contained in EMR

The screenshot shows a 'NoteWriter' interface with a 'RISK Factor and Comorbidity' section. It includes checkboxes for Cardiac (Hypertension, Endocarditis, Heart Failure, etc.), Pulmonary (Tobacco, Sleep Apnea, etc.), and other medical conditions. A blue arrow points from this template to the generated note in Figure 2.

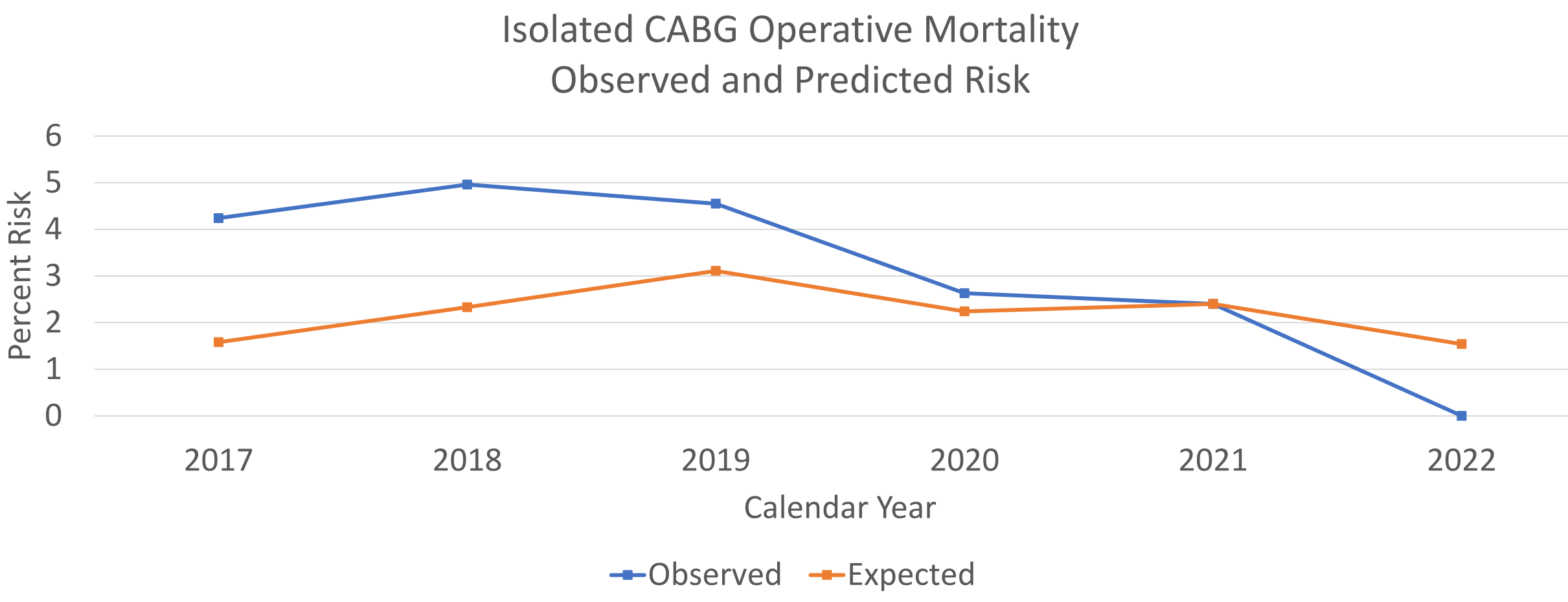
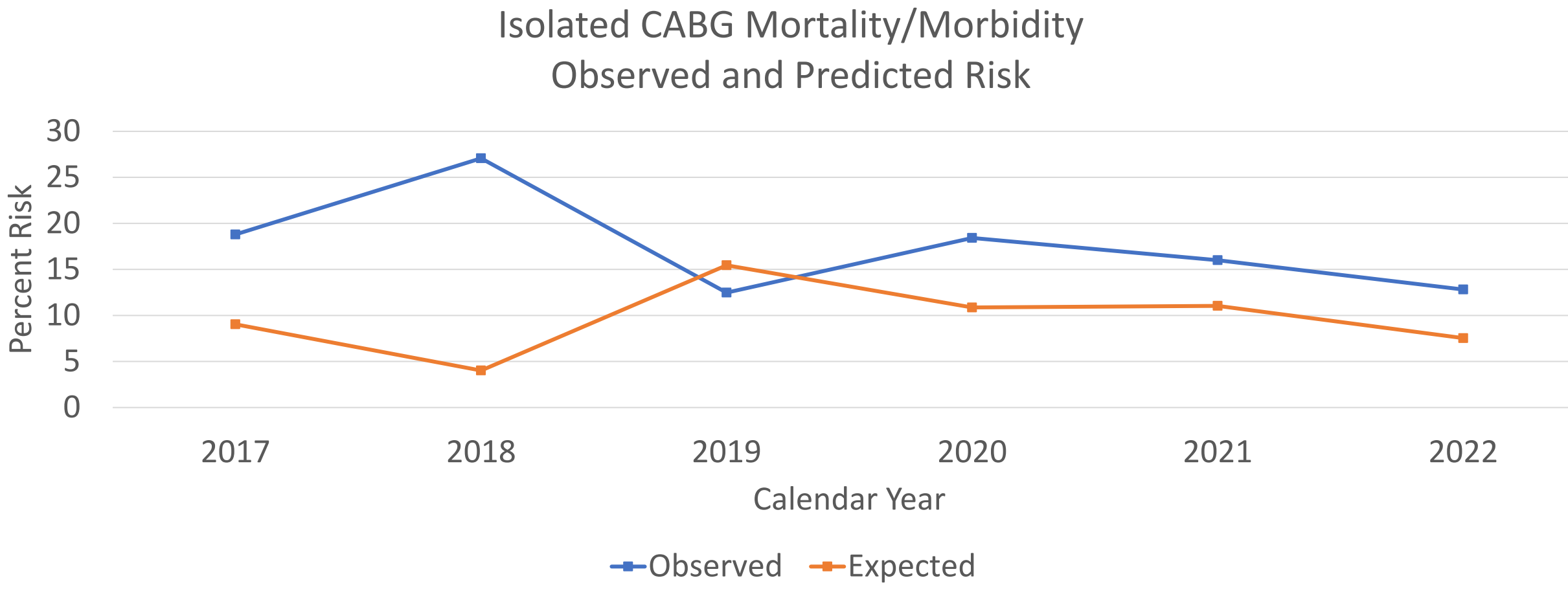
Figure 2: An Example Note in EMR Generated Using the Documentation Template

The screenshot shows a completed EMR note titled 'My Note H&P'. The 'RISK Factor and Comorbidity' section is populated with structured data: Cardiac (Hypertension: Yes, Endocarditis: Yes, etc.), Pulmonary (Tobacco: never smoker, Sleep Apnea: Yes, etc.), Neuro, Nutrition/Electrolytes/Renal, Endocrine, Hematology, Cancer History, and Home environment. A 'Review of Systems' section is also visible.

Results:

After implementing the documentation template an increase in risk adjusted morbidity/mortality and operative mortality for CABG patients was observed, which the team felt more accurately reflected true acuity of patients presenting in our hospital. Adherence to beta blockers and other perioperative medications also increased. Interviews with abstractors show increased efficiency and satisfaction with workflows.

At the time of intervention, the team also saw reductions in observed morbidity and operative mortality for CABG patients. Similar improvements were seen for other cardiac surgery patients.



*Note that 2022 only includes 3 months of data at present.

References:

Images above are based on STS risk models.
www.sts.org

Speaker Contact:

Camila Vargas: camila.Vargas@hsc.utah.edu
 Dr. Pereira: sara.pereira@hsc.utah.edu
 Collin Seabourne: collin.seabourne@hsc.utah.edu

The authors have no relevant financial relationships to disclose.

Care Alignment: Standardizing Clinical Practice to Align with Best Practices

Camila Vargas, BSN RN, Quality Consultant Cardiothoracic Surgery; Dr. Sara Pereira, MD, Professor of Cardiothoracic Surgery; Collin Seabourne, MS Industrial Engineering, Sr. Quality Consultant



NoteWriter

RISK Factor and Comorbidity

Please right click buttons if it is unknown (only for the data elements with Yes/No choices)

Risk Factor and Comorbidity

Cardiac

Hypertension Yes No

Endocarditis Yes No

If Yes treated active culture negative strept species MRSA MSSA coag neg staph enterococcus gram neg polymicrobial mycobacterium (chiner) fungal other unknown

Thoracic Aorta Disease Yes No

Peripheral Artery Disease Yes No

Myocardial infarction (MI) Yes No

Cardiac Presentation/symptoms at admission none stable angina unstable angina non-STEMI STEMI angina equivalent

Heart Failure Yes No acute chronic diastolic systolic unavailable

NYHA Class class 1 class 2 class 3 class 4 unknown

Arrhythmia Yes No

Permanently Paced Yes No

Valve Disease Yes No

Family Hx of Premature CAD Yes No

Previous Surgical Cardiac Interventions Yes No

Pulmonary

Tobacco never smoker current every day smoker current some day smoker smoker, current status (frequency) unknow former smoker smoking status unknown

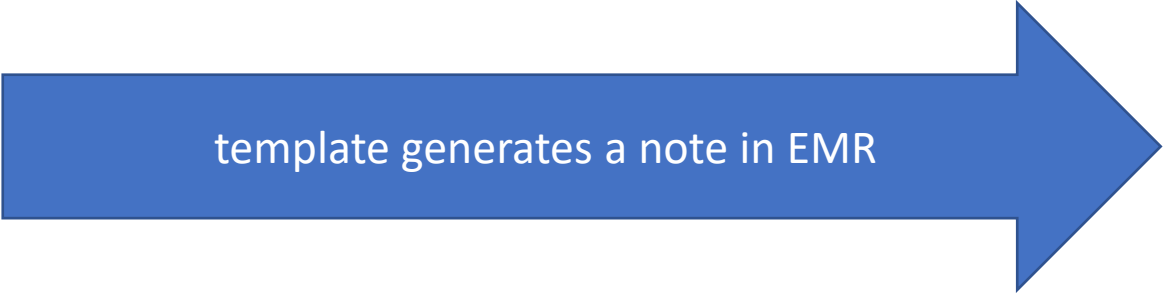
Syncopy Yes No

Sleep Apnea Yes No

Pneumonia none recent remote unknown

Chest wall Deformity Yes No

Lung Disease none mild moderate severe lung disease documented, servrity unknown unknow



My Note

H&P

RISK Factor and Comorbidity

Service: Date of Service: 7/26/2022 1620

Cosign Required

Multiple Vitamins-Minerals (MULTIVITAMIN PO)

Risk Factor and Comorbidity

Cardiac

Hypertension: Yes. Endocarditis: Yes, culture negative. Peripheral Artery Disease: Yes. Heart Failure: Yes. Arrhythmia: Yes. Valve Disease: No.

Pulmonary

Tobacco use: never smoker. Sleep Apnea: Yes. Pneumonia: recent Lung Disease: none, Inhaled Medications or Oral Bronchodilators: Yes. Home Oxygen: yes, PRN. DVT: Yes.

Neuro

Unresponsive state: No. Depression: Yes. Prior Cerebrovascular accident (CVA): Yes, <=30 days. Carotid Stenosis: none.

Nutrition/Electrolytes/Renal

Dialysis: Yes. Kidney Disease: Yes. Renal Transplant: No.

Endocrine

Diabetes: Yes and type 2. Diabetes Control: diet only.

Hematology

Liver Disease: No. Shock: Yes and cardiogenic.

Cancer History

Cancer: No.

Home enviroment

Living Status: family member or friend's residence. Illicit Drug Use: recent. Alcohol Use: <=1 drink/week.

Review of Systems

ROS

End Sign Cancel