UCSF Medical Center

UCSF Benioff Children's Hospitals

True North Metric Update:
Mortality

QIEC: September 3, 2019

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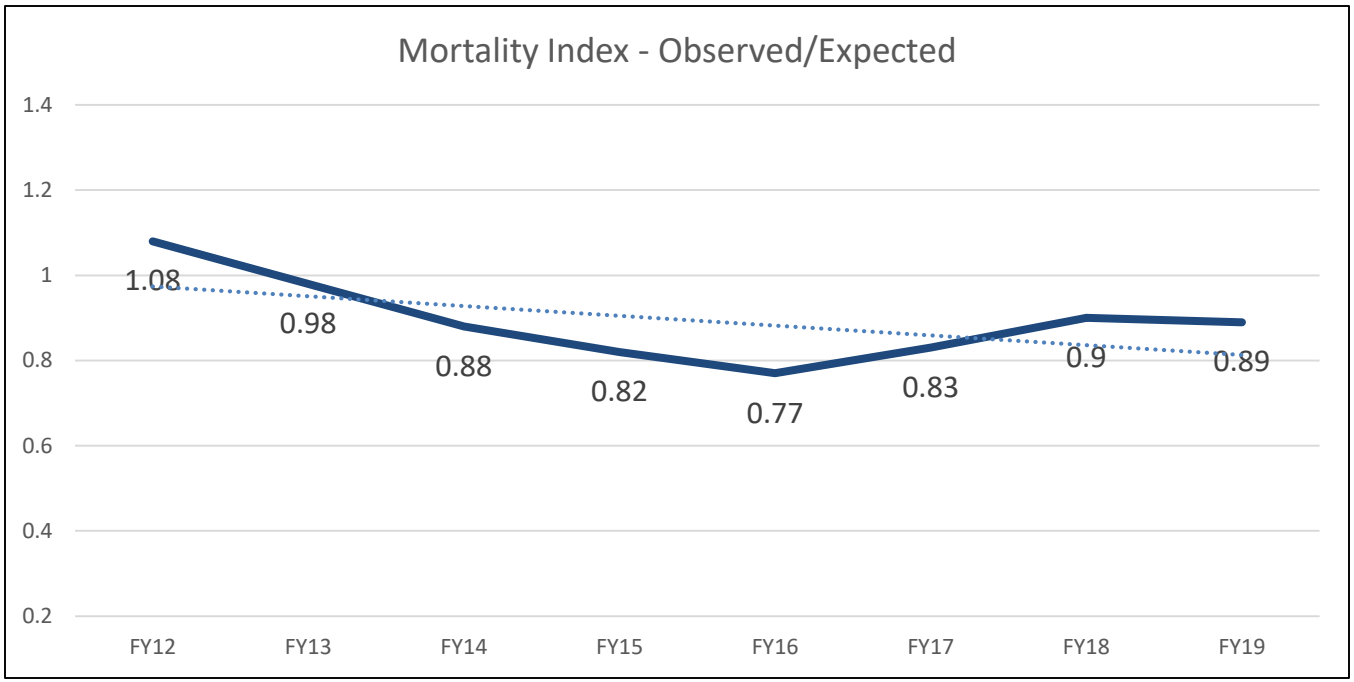
Mortality - Observed/Expected

What problem are we trying to solve? Reducing Mortality O/E

Current State: Organizationally, we have not achieved True North goal for Mortality O/E



Looking Ahead: Road to achieving further reduction in Mortality O/E

- FY20 efforts to accelerate this improvement work

FY19 - Mortality O/E – Current State

- **Current State:** have not met Aspirational goal of Vizient top decile
  - True North goal 0.88 for Mortality O/E not achieved
    - FY19 Mortality O/E = 0.89
    - Last 5 months FY19: Mortality O/E = 0.85
  - Clinical Documentation Integrity (CDI) team expansion
    - Increased clinical reviews from 42% to 55% of all discharges
    - Quarter 4 = 68% of discharges had CDI review
    - Concurrent case reviews for Mortalities increased from 75% to 80%, improved to 88% for last 5 months of FY19

- **Gaps/Barriers**
  - Time required for onboarding new CDI staff
  - Inconsistent coding of all diagnoses, procedures & POA status
  - Data integrity - Admission source inaccuracies and impact on risk modeling
  - Access for transfer patients requiring higher level care

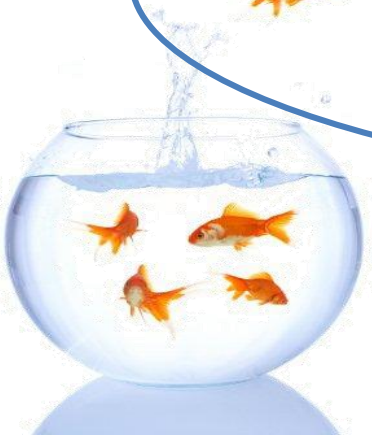
True North Metric Update: Mortality O/E

Hospitals judged by

In-patient deaths

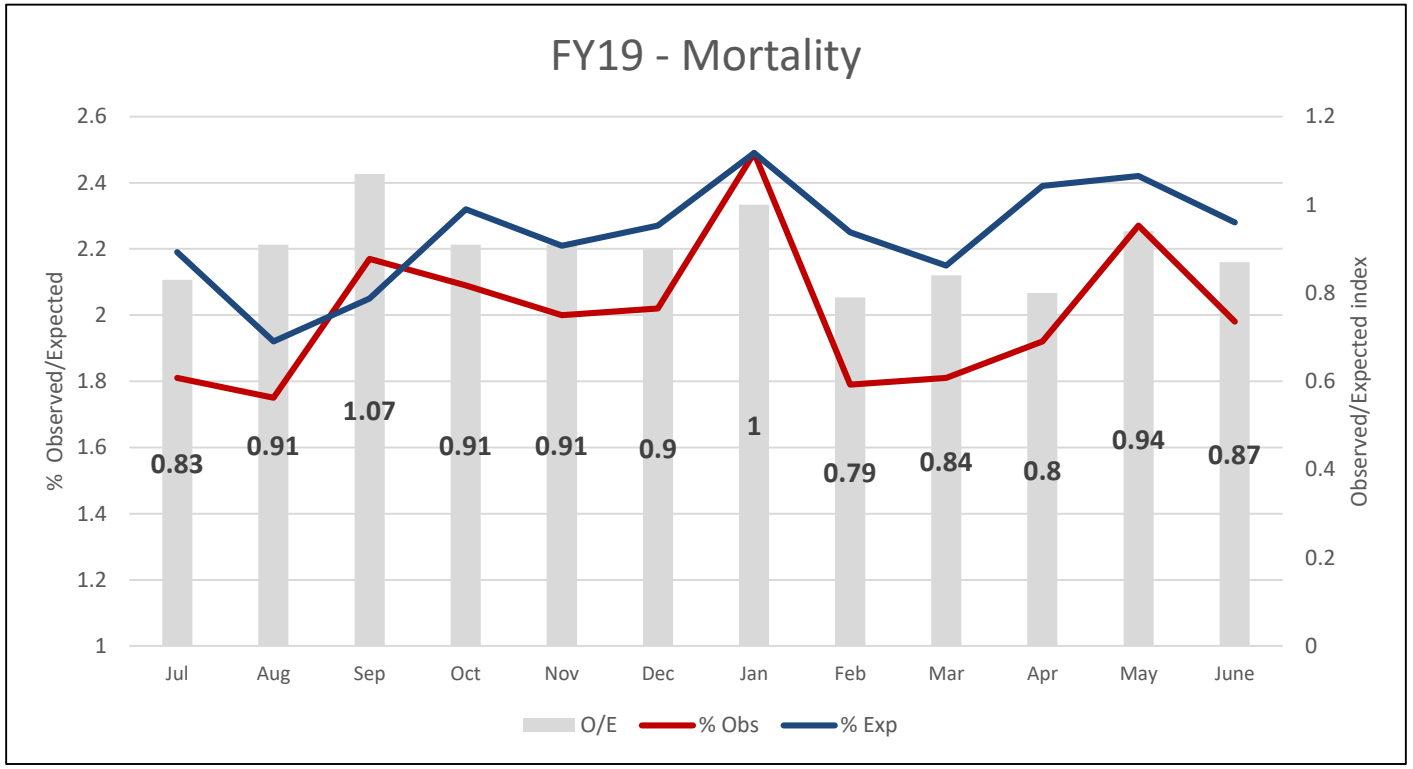
$$\frac{\text{Observed Mortality}}{\text{Expected Mortality}}$$

Those patients with high risk of mortality, increase severity of illness & medical complexity - discharged alive.



Improving the accuracy of clinical documentation

Optimizing the documentation of the “Expected”



Capturing underlying co-morbidities: PMH, present on admission status, active chronic conditions, all secondary diagnoses affecting overall health - nutrition, cardio/pulmonary/hepatic/renal, etc.

FY19 – Countermeasures and Lessons learned

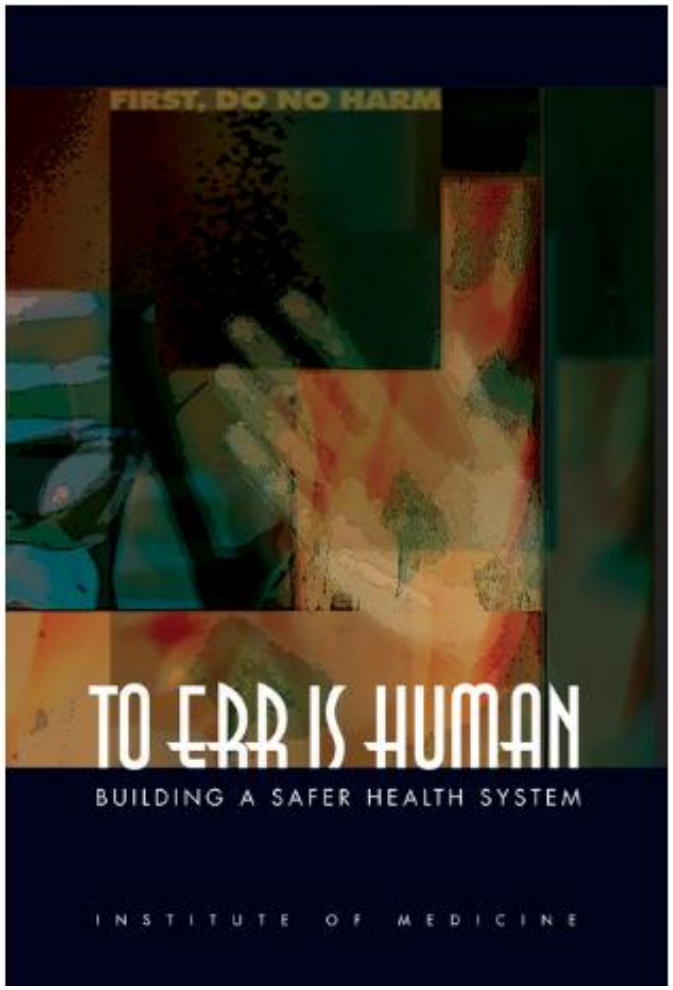
- Countermeasures
  - Increased case reviews focused on strategic partnerships
  - Enhanced current partnerships and APeX support tools resulting in improved query response rates/timeliness and overall reduction in queries
  - Expanded CDI to BCH West Bay, included all Neonatal and Pediatric mortalities
  - Initiated a multi-disciplinary work group for admission source accuracy

- Lessons learned
  - Intense time required for high level CDS onboarding
  - Positive impact of the increase in overall concurrent CDI case reviews
  - Shared learnings among leaders of CDI, Sepsis, Centralized Mortality Review and Transfer Center led by CQO
  - Collaborative partnership with coding team is imperative to ensure accuracy in all diagnoses & procedures that influence Quality outcomes

FY 20: Opportunities, Priorities and Strategies

- Continue to benchmark service line data & align with organizational priorities to support improving Quality metrics
- Strengthen surgical sub-specialty partnerships
- Maintain higher level of discharges receiving a CDI review
- Ongoing development of CDI team around Vizient risk models
- Increase our expansion into BCH West Bay
- Continue partnership with Sepsis & Centralized Mortality review team

Mortality Index - Observed



Within the context of reducing mortality O/E, what can we learn from observed mortalities across services to improve care and reduce preventable harm?

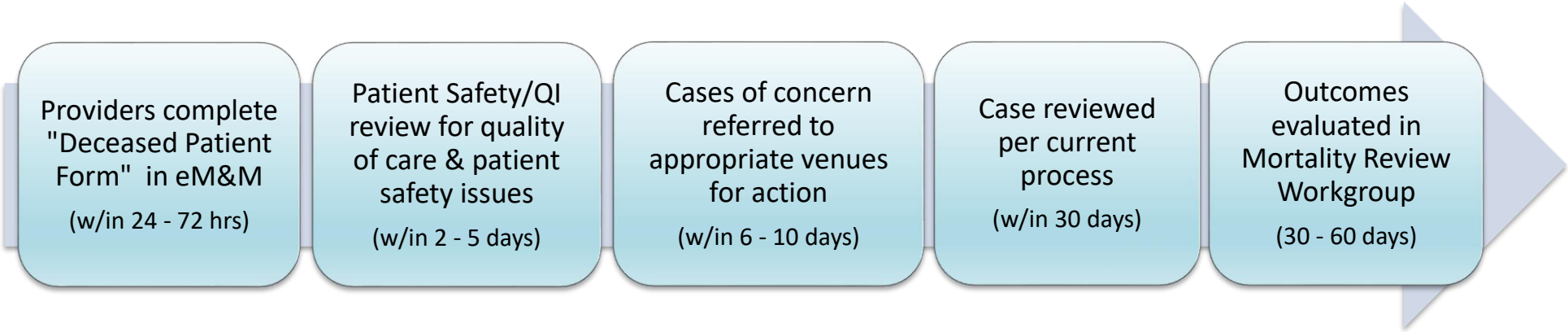
What problem are we trying to solve?

- Prior process for centrally reviewing observed deaths characterized by delays, fragmentation, inefficiency, provider dissatisfaction, and failure to rapidly identify and correct important systems issues

- Multidisciplinary working group convened to develop and pilot a new process that:
  - Includes all deaths
  - Engages frontline providers including trainees
  - Allows for rapid identification of improvement opportunities, appropriate escalation of concerns, aggregation of data across services, multidisciplinary review
  - Supports existing department/service M&M case review processes

Results from Mortality Review Pilot

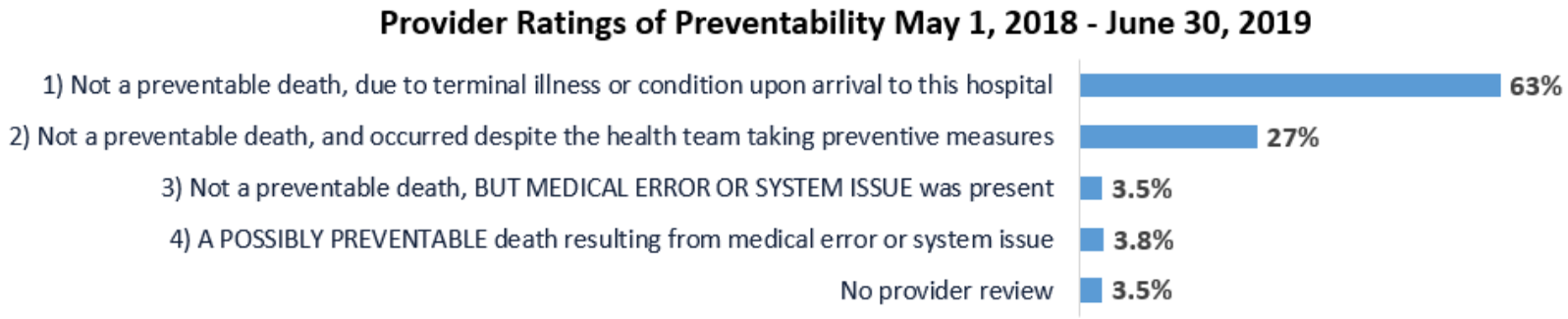
Services: Hospital Medicine, Cardiology, General Surgery, Liver Transplant, Kidney Transplant (Critical Care and ED participate if primary service is a pilot participant)



- May 1, 2018 – April 30, 2019 Results
  - 452 deaths occurred on participating services (58% of IP deaths)
    - 96% (n=436) received initial review by at least ONE provider
    - 3.5% (n=16) rated NOT preventable, but medical error/system issue present
    - 3.8% (n=17) of deaths rated as "possibly preventable" (preliminary)
    - 17% (n=76) were referred for further review and action

Phased Rollout to All Services

Case Findings & Referrals



Service	Start (Yr/Mo)	# Deaths	Highest Preventability Rating					No. of Deaths Occurring Within:					# Cases Referred for Further Action[2]
			1	2	3	4	No Provider Review	48 Hrs of IP Admit	Tx from OSH[1]	24 Hrs of ED Admit[1]	48 Hrs of Surgery or Procedure	24 Hrs of Tx from ICU *(NOT comfort care)*	
Hospital Medicine	18-May	403	258	103	17	10	15	83	5	47	3		54
Cardiology	18-May	76	45	24	1	4	2	14	4	5	6		15
Liver Transplant	18-May	33	15	13	1	3	1	3	2		1 (OR Death)	1 (OR Death)	8
General Surgery	18-May	17	4	8	3	2		3	1	1	4		9
Neurosurgery	19-May	6	6					2	2	1	2		
Critical Care Med	19-May	5	2	3							1		
Emergency Med	19-May	4	3				1			4			
Neurovascular	19-May	2	1		1								1
Kidney Transplant	18-May	1		1									1
GRAND TOTAL	–	**547**	**334**	**152**	**23**	**19**	**19**	**105**	**14**	**58**	**17**	**1**	**88**

[1] *Deaths occurring within 24 Hrs of ED Admit or 48 of Tx from OSH are a subset of those occurring within 48 Hrs of IP admit.*
[2] *Excludes Sepsis and Risk Management referrals*

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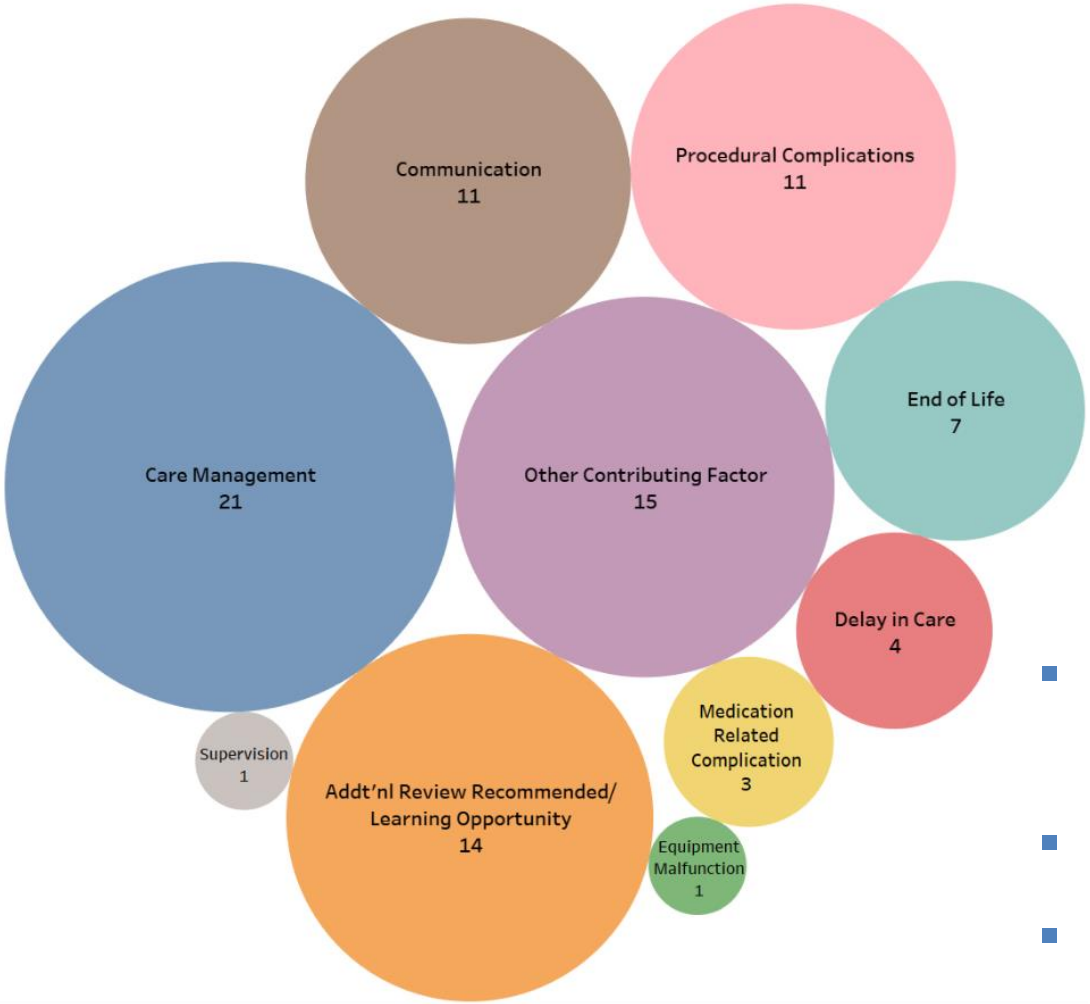
Systems Issues Identified

Reasons for Case Referral (May 1,2018 – Jun 30, 2019)



- Safety/quality of care concerns related to census, ED capacity and extended boarding (9 cases)
  - Coordination of care for critically ill patients
  - Availability of ICU beds
  - Unrecognized patient deterioration
  - Utilization of ED beds for comfort care patients
- Communication surrounding OSH transfers
- RN/Provider communication
- Overnight clinical deteriorations

Examples of Provider Comments

Transfers

- "This patient was transferred to UCSF for further evaluation…and on arrival to UCSF he was found to be unarousable…I am highly concerned that the OSH missed the beginning of acute decompensation prior to transfer, did not appropriately communicate…to the admitting team and then sent the patient to UCSF in a medically unsafe transfer…I am left wondering if in the bigger picture of the health system that if there was some communication or care coordination among specialists that could have happened, this patient's [condition] could have been preventable…"

Throughput Challenges

- "Pt presented with one week of increased weakness and recent n/v without hx of fever and with normal vital signs…She was triaged level 3. Had she been roomed sooner (all beds were full) she could have been diagnosed sooner and treatment started sooner…"
- Provider comments permitted identification of 9 cases in which they perceived throughput challenges to adversely impact quality of care provided

Delays in Care

- "Met…cancer on chemo with neutropenia…became tachycardic and then hypotensive…initially thought due to hypovolemia…Abx not initiated until 12hrs after hypotension…Delayed diagnosis of sepsis as team anchored on hypovolemia and pain as etiology of tachycardia and hypotension."

Lessons Learned & Next Steps

- Successes
  - Allows for rapid identification of improvement opportunities and escalation of concerns to appropriate entities
  - Providers engaged and seem comfortable sharing their perspective
  - Supports Department/Service M&M case review processes

- Challenges
  - Variable use of the eM&M platform by services
  - Addressing identified complex systems issues

- Next Steps
  - Finalize expansion of centralized review process to all inpatient services
  - Continue collaboration with CDI and Sepsis in reducing observed mortality

Discussion

How can we use clinical review and documentation efforts to facilitate improvement work with regard to complex systems issues impacting mortality O/E?