2017-2018 Resident and Fellow Quality Improvement Incentive Program

Participating Programs:

- Anesthesiology Residency
- Cardiology Fellowship
- Dermatology Residency
- Emergency Medicine Residency
- General Surgery Residency
- Gyn Onc Fellowship
- Hematology/Oncology Fellowship
- Hospice and Palliative Care Medicine Fellowship
- Internal Medicine Residency
- Medical Genetics Residency
- Neonatology Fellowship
- Neurological Surgery Residency
- Neurology Residency
- OB/GYN Residency
- Ophthalmology Residency
- Orthopaedic Surgery Residency
- Otolaryngology Residency
- Pediatric Anesthesia Fellowship
- Pediatric Cardiology Fellowship
- Pediatric Critical Care Fellowship
- Pediatrics Residency
- Plastic Surgery Residency
- Psychiatry Residency
- Pulmonary & Critical Care Fellowship
- Radiation Oncology Residency
- Radiology and Biomedical Imaging Residency
- Reproductive Endocrinology and Infertility Fellowship
- Urology Residency

Program	Target/Goal	Resident/Fellow	Name of the Faculty QI lead:	
Anesthesiology Residency	Appropriate use of neuromuscular monitoring and reversal agents in patients who have received neuromuscular blocking drugs (NMBDs) in at least 75% of patients cared for by residents, cumulative over the 2017-18 year.	Jack Jeng; Lei Xu; Jake Cecil; Shona Lee	Matthias Braehler, Alexandra Anderson	
Cardiology Fellowship	Screen at least 80% of adult outpatients for active tobacco use. and provide at least 80% of patients who self-identify as active tobacco users with smoking cessation counseling and resources, cumulative over the 2017-18 year.	Jeremy Tietjens; Blake Charlton	Krishan Soni	
Dermatology Residency	Decrease the amount spent on unnecessary testing per patient on isotretinoin by 25%, from $217 (baseline) to less than $163, cumulative over the 2017-18 year	Jason Meyer; Tim Schmidt	Jack Resneck	
Emergency Medicine Residency	Provide language-specific discharge instructions to at least 42% of patients with non-English preference, cumulative over the 2017-18 year.	Jessica Paz; Julia Chang; Cortlyn Brown	Steve Polevoi; Jacqueline Nemer	
Gastroenterology Fellowship	Improve the percent of patients who have an acceptable bowel prep to 90% cumulative over the 2017-18 academic year.	Roshan Patel	Aparajita Singh	
General Surgery Residency	75% resident compliance in ordering the “MD Delirium orderset” either in the post-operative order set or within 6 hours of admission, cumulative Oct 1-June 30.	Jenny Kaplan; Steve Wisel; Michael Zobel	Ryutaro Hirose	
Gyn Onc Fellowship	Screen and document financial toxicity risk for at least 30% of eligible patients cumulatively over academic year. Patients who screen positive will be referred to appropriate resources, cumulative over the 2017-18 year.	Megan Swanson	Pelin Cinar	
Hem/Onc Fellowship	Screen and document financial toxicity risk for at least 30% of eligible patients cumulatively over academic year. Patients who screen positive will be referred to appropriate resources, cumulative over the 2017-18 year.	Hala Borno; Li-Wen Huang; Sam Brondfield; Claire Mulvey	Pelin Cinar	
Hospice and Palliative Care Medicine Fellowship	Among palliative care consultations for the indication of “Advance Care Planning/Goals of Care,” fellows will increase the documentation of GOC and treatment preferences, or an attempt to discuss these topics, in the Advance Care Planning from 54% to 80%, cumulative over the 2017-18 year.	Jessi Humphreys; Brieze Keeley; Laura Schoenherr; Jennifer Olenik	Giovanni Elia	
Internal Medicine Residency	75% of all patients screening at risk for delirium (AWOL+) or positive for delirium (Nu-DESC+) will have delirium order sets implemented within 12 hours in 3 out of 4 best performing quarters.	Jin Ge; Nicole Kim; Leslie Suen; Serge Gajic	Cat Lau; Stephanie Rogers	
Medical Genetics Residency	A 20% decrease in “time to run” from the date that the patient is seen to the date on which the test is actually run.	Daniah Beleford; Victoria Berger	Shilpa Chetty	
Neonatology Fellowship	Increase the percentage of families receiving written communication from the NICU team on the medical status of their baby from from 0% to 80% or greater by June 30, 2018.	Rachael Beckert	Janet Shimotake	
Neurological Surgery Residency	Document presence of drains and indications/requirements for the drains in at least 80% of patients, cumulative over the 2017-18 year.	Derek Southwell; Ramin Morshed	Sujatha Sankaran	
Neurology Residency	Ensure POLST form in medical record for 75% of patients discharged from neurology services who are not “Full Code,” cumulative over the 2017-18 year.	Jessamyn Conell-Price; Thomas Ragole; Brian Sauer; Jeremy Tanner	Andy Josephson	
OB/GYN Residency	Document completion of cesarean section postoperative debriefing process in 65% of cesarean sections in the UCSF Birth Center, for 3 of 4 quarters, over the 2017-18 year.	Martha Tesfalul	Dr. Ben Li	
Ophthalmology Residency	Increase the outpatient follow-up adherence from 33% to 50% for 3-out-of-4 quarters for Moffitt-Long inpatients seen as ophthalmology consults with follow-up scheduled in ophthalmology clinic.	Catherine Sun	Reza Vagefi	
Orthopaedic Surgery Residency	Reduce total opiates prescribed by 10% in orthopaedic surgery patients admitted post-surgery (excluding patients with chronic opioid dependence or abuse), cumulative over the 2017-18 year.	Patrick Curran; Trevor Grace	Bobby Tay	
Otolaryngology Residency	Communication tool for inpatient surgical cases will be utilized in at least 80% of patient care episodes over the 2017-18 year.	Elizabeth Cedars; Sean Alemi; Molly Naunheim; Conor McLaughlin	Patrick Ha	
Pediatric Anesthesia Fellowship	To reduce spending on protective garments ("bunny suits") for family members in the Children’s Pre-operative areas by 10% cumulative over FY17 (adjusted to 9/15-6/30).	Denise Chang; Masood Memarzadeh	Marla Ferschl; Jina Sinskey	
Pediatric Cardiology Fellowship	Fellows will achieve 75% compliance with the Post Catheterization Vascular Occlusion Protocol, cumulative over the 2017-18 year.	Fatemat Hassan; Anyir Hsieh; Christiana Tai; Diwakar Turaga; Samuel Keller	Phillip Moore	
Pediatric Critical Care Fellowship	Increase total procedural sedation log completion from 5.5% to 75% completion, cumulative over the 2017-18 year.	Helayne Feferman	Deborah Franzon	
Pediatrics Residency	Increase in the percentage of patients discharged before noon to a target goal of 24%, cumulative over the 2017-18 year.	David Chen; Matthew Nordstrom	Darren Fiore	

Plastic Surgery Residency	75% of wound care consult requests will receive initial recommendations within 24 hours, cumulative over the 2017-18 year.	Eric Wang; Daniel Balkin; Michael Holland; Rachel Lentz; Laura Wong;	Mary McGrath	
Psychiatry Residency	Increase monthly completion rate of PHQ-9 for adult psychiatry follow-up encounters to greater than 25%, cumulative over the 2017-18 year.	A. Ning Zhou; Elizabeth Rawson; Ellie Elmschig; Josh Carroll	Weston Fisher	
Pulmonary & Critical Care Fellowship	Achieve 75% completion rates for the discharge template, indicating clearly specify in the time-frame needed and prerequisites before follow-up, cumulative over the 2017-18 year.	Lekshmi Santhosh; Alyssa Perez;Bhavika Kaul	Lorri Leard	
Radiation Oncology Residency	Documentation of "plan of care for pain" will be documented in >50% of new patient consultations seen by residents for bone metastases in the department of Radiation Oncology for 3 out of 4 best performing quarters in the 2017-2018 academic year.	Lauren Boreta; Christopher Chapman; Jason Chan	Shannon Fogh	
Radiology and Biomedical Imaging Residency	Ensure that ≥75% of significant adverse contrast events are documented in the radiology imaging report using a standard reporting template, or in Apex as a note, cumulative over the 2017-18 year	Molly Chapman	Christopher Hess	
Reproductive Endocrinology and Infertility Fellowship	Acheive a 50% reduction in delayed preoperative H&P completion to improve clinic efficiency, cumulative over the 2017-18 year.	Amanda Adeleye	Heather Huddleston	
Urology Residency	75% resident compliance in ordering the "MD Delirium orderset" either in the post-operative order set or within 6 hours of admission, cumulative Oct 1-June 30.	Bogdana Schmidt	Max Meng	

Goals of Care Documentation in Inpatient Palliative Care Consultations

Brieze Keeley, MD

Jennifer Olenik, MD

Jessi Humphreys, MD

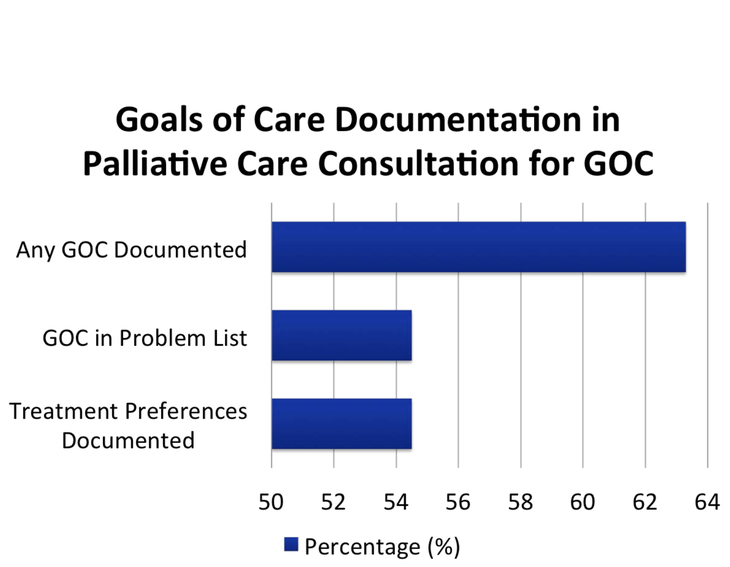
Laura Schoenherr, MD

Hospice and Palliative Medicine Fellowship

Background

- In June 2017, a baseline analysis of a sample of 20 patients seen by the Palliative Care Service (PCS) over prior 4 months revealed that **55%** were seen for goals of care (GOC) discussions.

- Among patients seen for GOC:
  - **63.3%** had goals documented anywhere in the chart by PCS (e.g., in the note or in the problem list).
  - Only **54.5%** had documentation of overall goals of care (e.g., curative, comfort-focused) and at least one specific treatment preference (e.g., code status, dialysis).



Project Goals

Primary Outcome

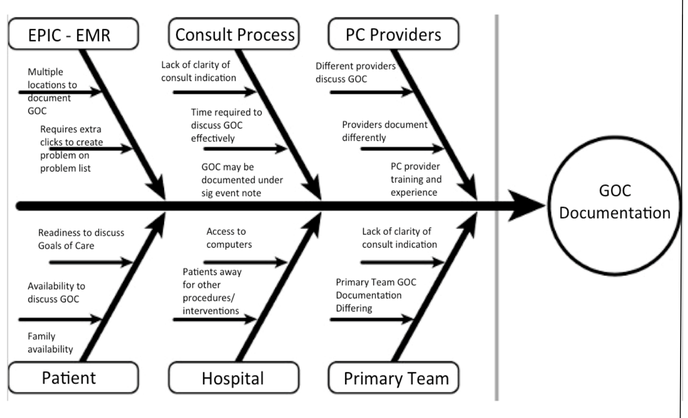
Among palliative care consultations "Advance Care Planning/Goals of Care," who are discharged from UCSF Medical Center at Parnassus between September 1, 2017 and May 31, 2018, HPM fellows will increase the overall percentage of patients **with documentation of GOC and treatment preferences, or an attempt to discuss these topics, in the palliative care consult note from 54% to 80%.**

Secondary Outcome

Among palliative care consultations for "Advance Care Planning/Goals of Care" above, HPM fellows will increase the overall percentage of patients with **dot phrase (.PCSACP) documentation of GOC and treatment preferences in the permanent problem list ("Overview").**

Project Plan and Intervention

Root Cause Analysis

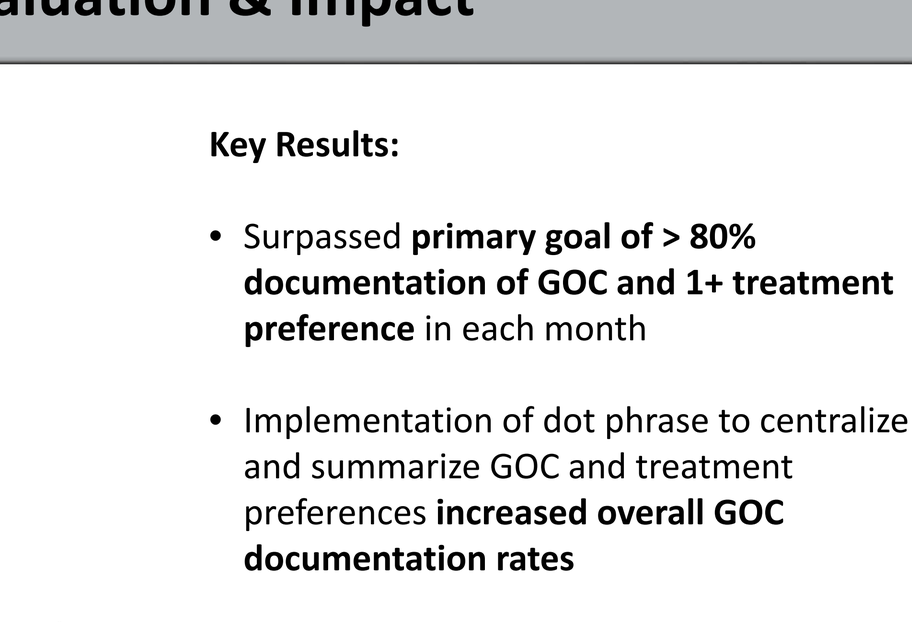


- PCS providers document goals of care in **varied locations without standardized of content**
- Providers on non-PCS services do not have a standardized way to identify GOC in the EMR
- Intervention **must not increase note-writing burden**

Intervention

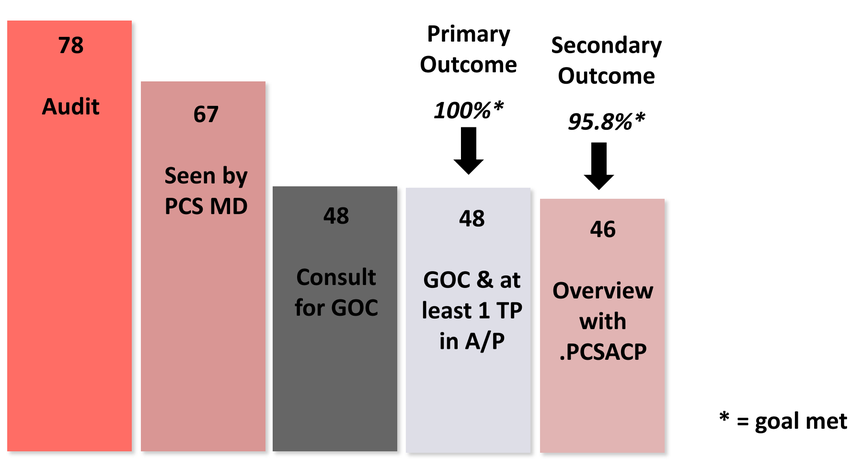
- The team **created a dot phrase (below)** to encourage consistent, succinct, and time-saving documentation of GOC and at least one treatment preference

- The project and dot phrase were introduced at **monthly palliative care meetings** and through **monthly emails to the division** to encourage dot phrase use



Project Evaluation & Impact

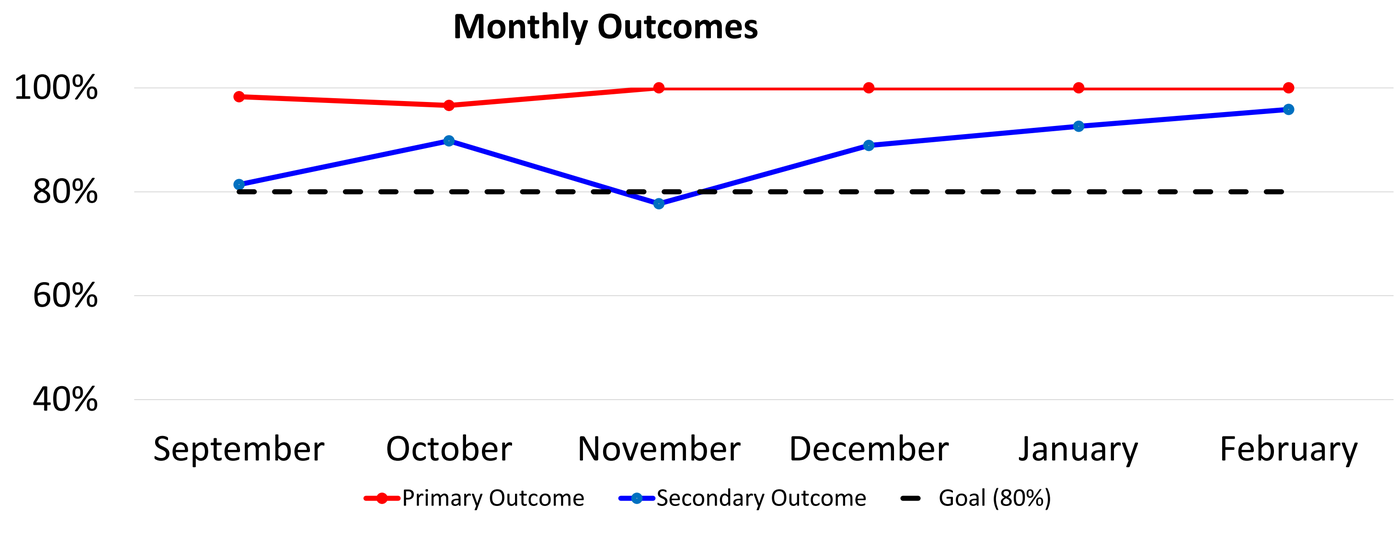
Example Month: February 2018



Key Results:

- Surpassed **primary goal of > 80% documentation of GOC and 1+ treatment preference** in each month

- Implementation of dot phrase to centralize and summarize GOC and treatment preferences **increased overall GOC documentation rates**



Next Steps, Dissemination & Lessons Learned

Next Steps:

1. Improve orientation materials on the ACP dot phrase for residents and fellows rotating on PCS
2. Investigate ways to automatize the use of the ACP dot phrase
3. Incorporate overview of the ACP problem on problem list into ACP Navigator

Dissemination:

1. Submission to the American Academy of Hospice and Palliative Medicine national conference for presentation in Spring 2019
2. Collaborate with non-PCS services at UCSF the ACP dot phrase for improved standardization of GOC documentation

Lessons Learned:

1. MD-focused intervention undervalues work and documentation of PCS team members of other disciplines who lack access to problem list

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program

in partnership with the 2018 UCSF Health Improvement Symposium

"Reverse to avoid the adverse:" Improving compliance to evidence-based reversal of non-depolarizing neuromuscular blockade

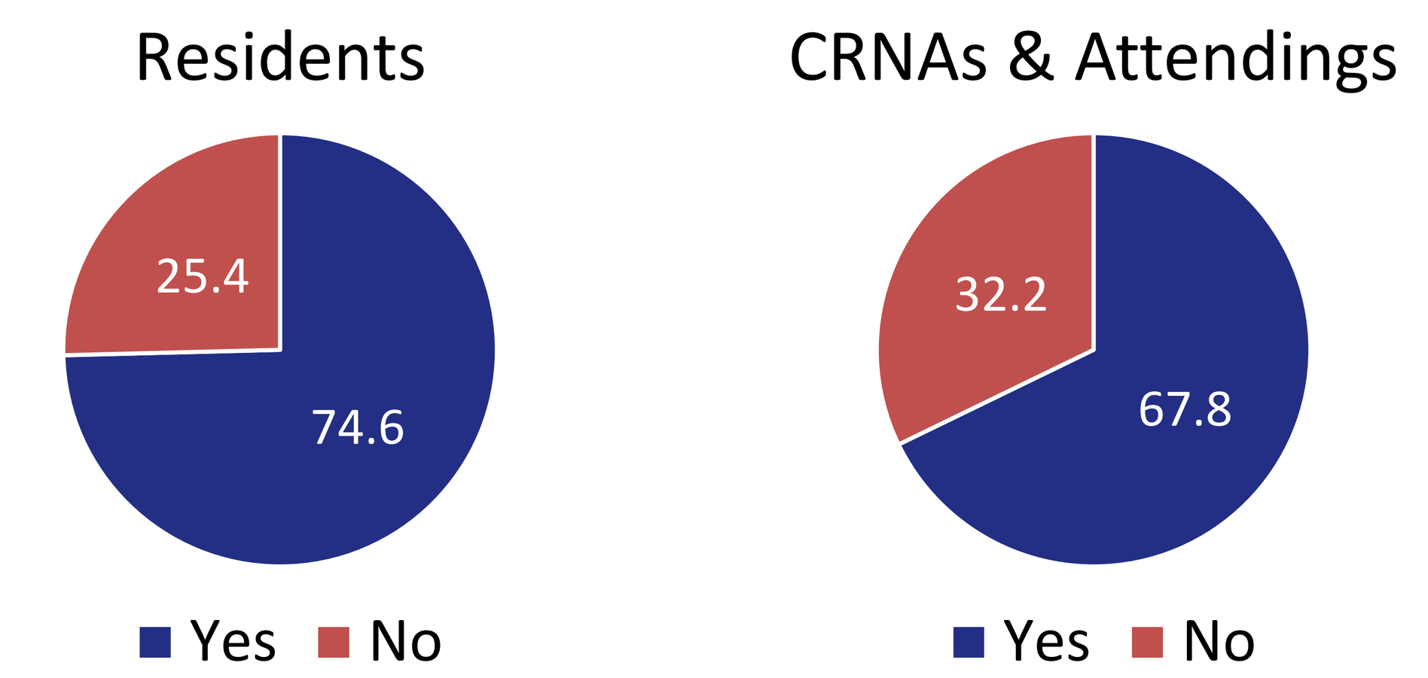
Residents: J. Jeng, L. Xu, J. Cecil, S. Lee, T. Wang, J. Libaw

Faculty: L. Liu, A. Anderson, M. Braehler

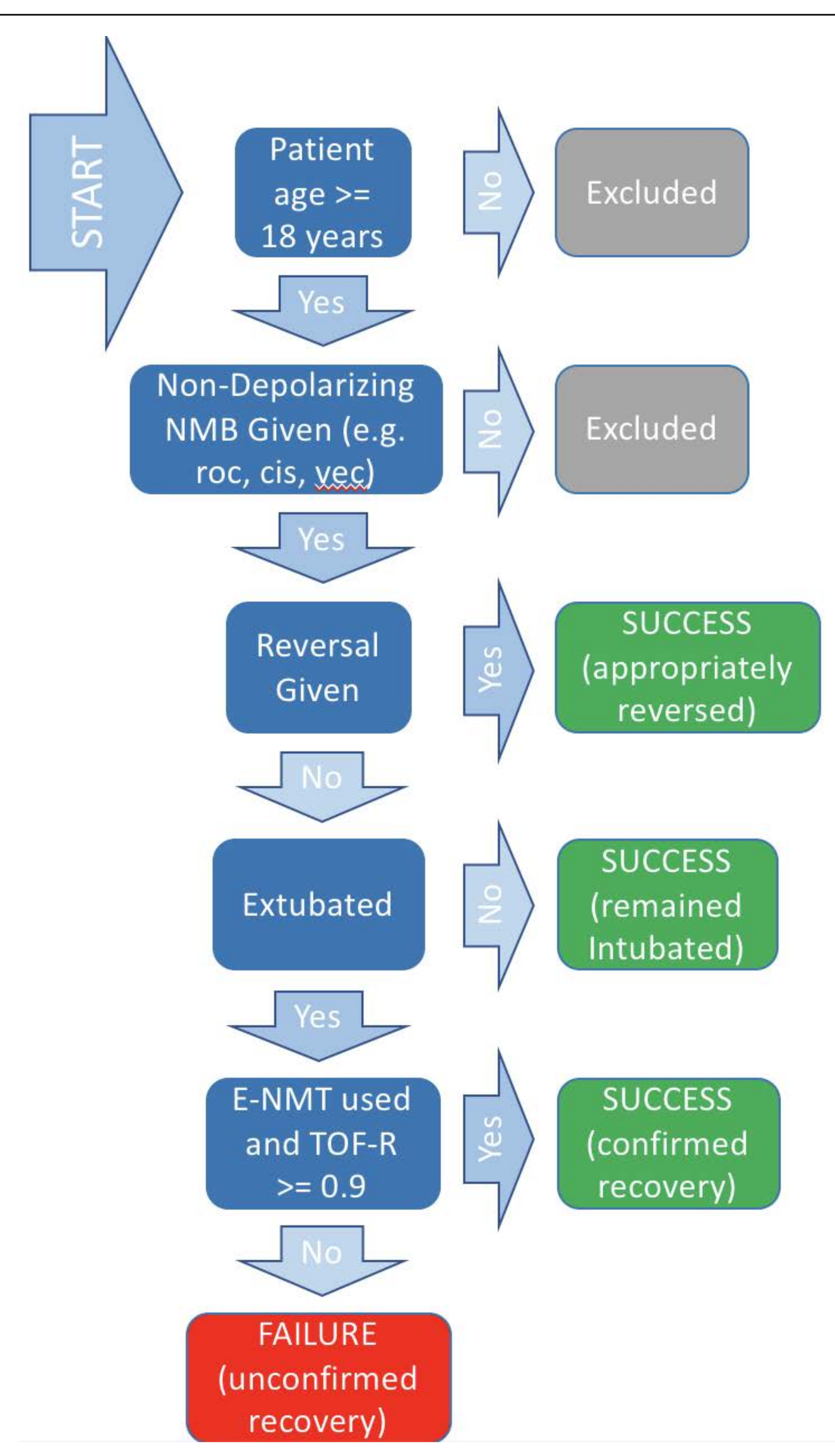
Department of Anesthesia and Perioperative Care

Background

- Non-depolarizing neuromuscular blocking drugs (NDNMBDs) are commonly used in ORs
- Evidence-based guidelines to prevent residual neuromuscular blockade include:
  - Quantitative monitor showing TOF-R ≥ 0.9 or
  - Administration of reversal agent (e.g. neostigmine or sugammadex) or
  - Leaving patient intubated
- Important because residual neuromuscular blockade associated with:
  - Postoperative adverse respiratory events (i.e. hypoxia, aspiration, pneumonia)
  - Prolonged PACU stay
  - Unintended ICU admission
  - Increased utilization of resources
- Literature: 20-40% of PACU patients found to have residual neuromuscular blockade
- 2016 UCSF baseline rates of adherence to evidence-based guidelines:



Project Goals



Goal: Increase resident adherence to evidence-based guidelines on preventing residual neuromuscular blockade by **10%**

- 2016 Resident Baseline: **74.6%**
- Resident Goal: 74.6% x 110% = **82.1%**
  - Cumulative rate from July 2017 – June 2018

Project Plan and Intervention(s)

Outcome

- % of patients who received NDNMBDs treated according to evidence-based guidelines:
  - Spontaneous neuromuscular recovery with quantitative TOF ratio ≥ 0.9 prior to extubation
  - Reversal agent administered prior to extubation
  - Patient remained intubated

Inclusion criteria

- Patients ≥ 18 years of age
- Patients who received NDNMBDs

Exclusion criteria

- Patients < 18 years of age
- Patients with a medical contraindication to reversal or where reversal was clinically inappropriate

Interventions

- Departmental education on evidence-based guidelines for monitoring and reversal of NDNMBDs
  - Quarterly presentations at Grand Rounds with performance updates
  - Email reminders with educational materials
  - Reminder pages to anesthesia residents
  - Reference cards on anesthesia carts in operating rooms
- Acquisition of additional quantitative neuromuscular monitors (STIMPOD and E-NMT)

Project Evaluation & Impact

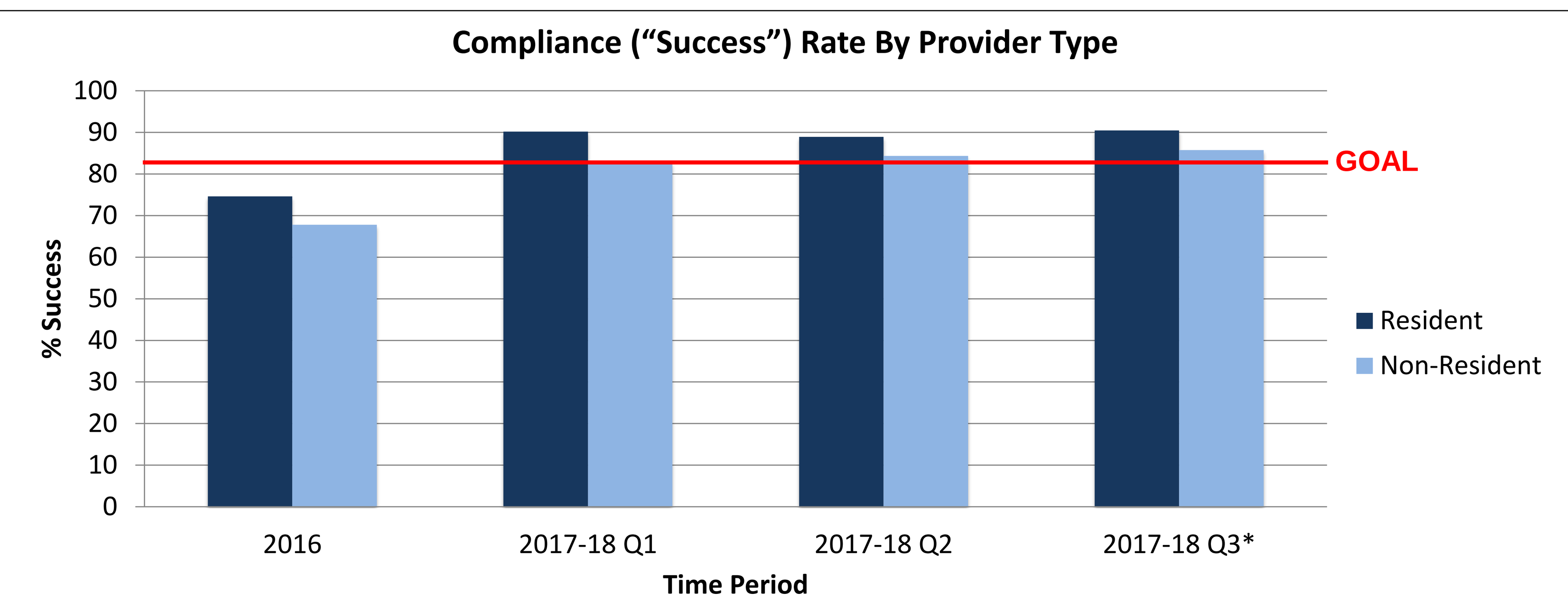


Figure 1. Historical compliance or "success" rate for the year 2016 (prior to onset of QI project) was 74.6% and 67.8% for resident and non-resident (CRNA or attending only) providers, respectively. After the QI project started, residents increased their compliance rate to ~90% in Q1 and have sustained this in subsequent quarters. This is above the target goal of 82.1% for residents (red line). Non-resident providers also increased and maintained their compliance rate at ~83-84%.

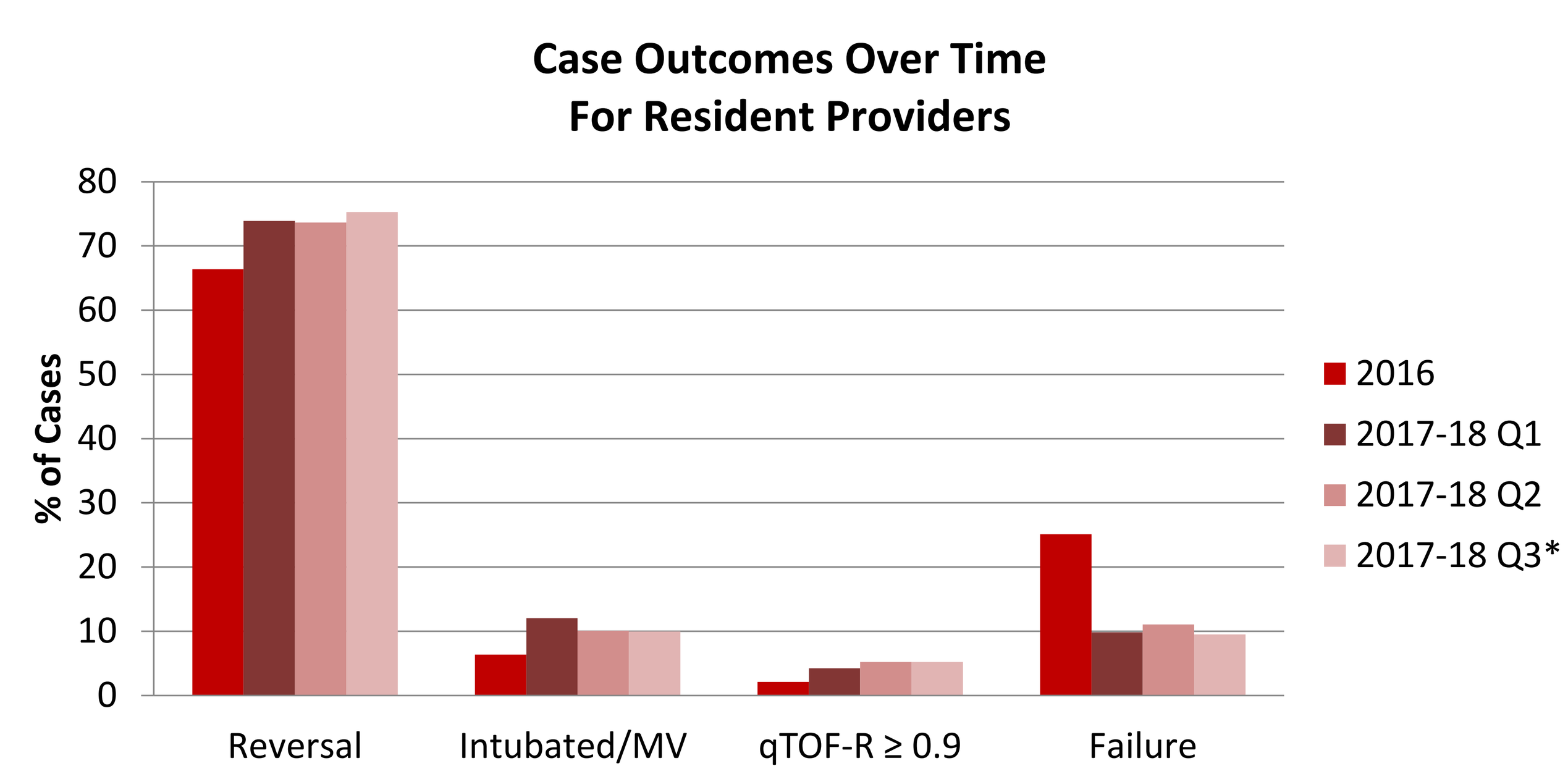


Figure 2. In 2016, for adult patients undergoing GA with use of NDNMBDs, residents gave reversal 66% of the time. Of the remaining patients not reversed, 6.4% remained intubated and 2% did not need reversal as shown by qTOF-R ≥ 0.9. Residents failed to reverse or demonstrate recovery prior to extubation 25% of the time. In 2017-2018, the failure rate decreased to 10% as 1) residents gave reversal in 73-75% of the cases, 2) 10-12% of patients remained intubated, and 3) qTOF-R ≥ 0.9 demonstrated recovery without reversal 5% of the time.

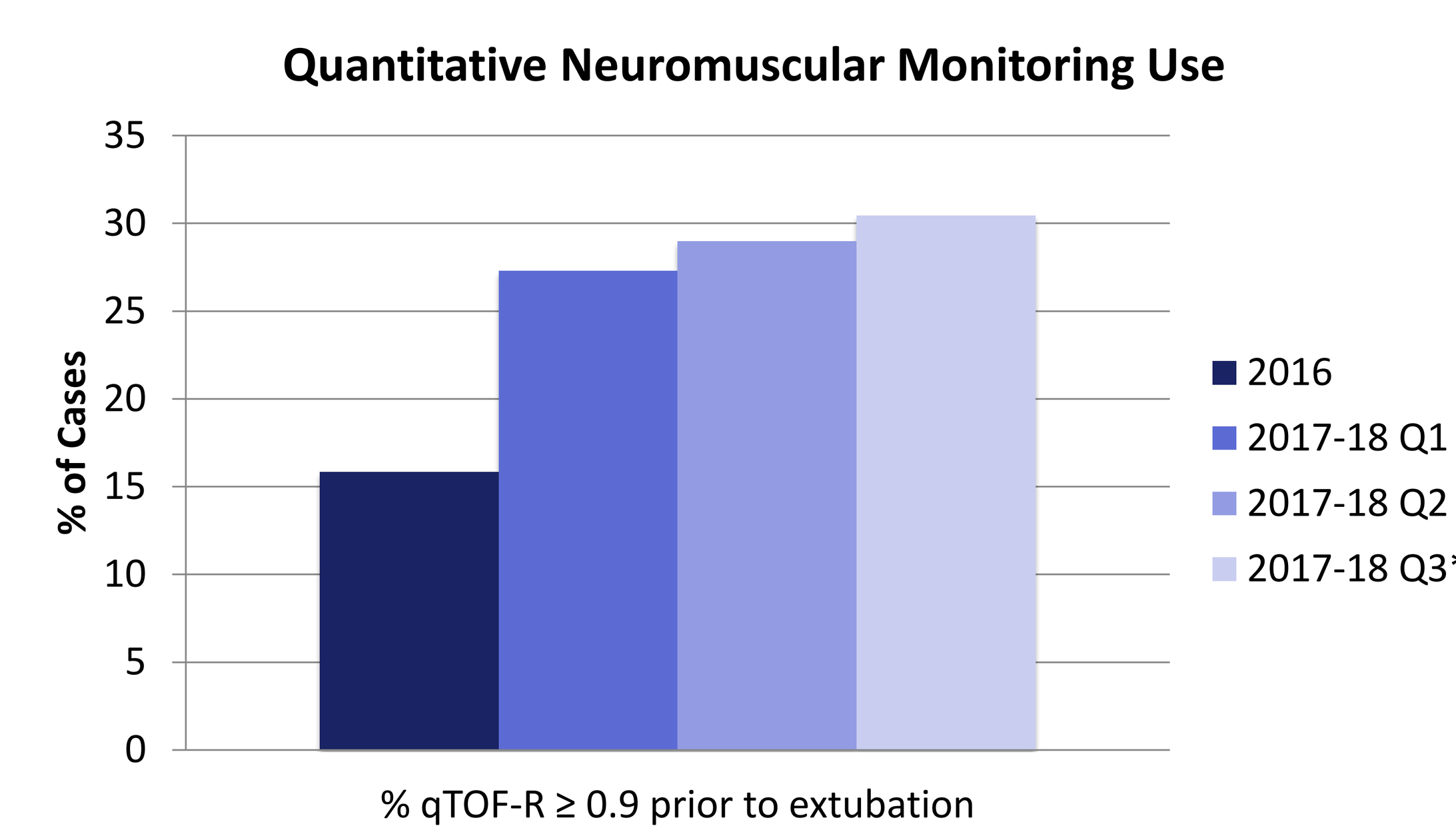


Figure 3. In 2016, quantitative neuromuscular monitoring prior to extubation was only being used in 15% of all resident cases (regardless if patients were given reversal or not). During the 2017-18 QI project, this percentage increased over time from 27% in Q1 to 30% in Q3.

*Only partial quarterly data was available for Q3 2017-18.

Next Steps, Dissemination & Lessons Learned

Next Steps:

- Compare pre and post survey results on provider knowledge and practices regarding monitoring & reversal
- Correlate reversal/no reversal with PACU length of stay
- Correlate reversal/no reversal with PACU desaturation events and supplemental O_2 requirement
- Evaluate cost effectiveness of monitoring & reversal with respect to drug usage and OR time utilization

Dissemination:

- Encourage same practice guidelines in ICU and pediatric populations when using NDNMBDs
- Present QI project and results at national conferences to help spread best practices

Lessons Learned:

- Provider education on evidence-based guidelines is key to changing clinical practice and achieving sustained compliance
- Launching a successful project and attaining buy-in required the coordinated efforts of a multi-disciplinary team, which included administration, faculty, CRNAs, residents, anesthesia techs, and IT support

2018 UCSF Health Improvement Symposium

Smoking Cessation Screening & Education in the Cardiac Cath lab

Team: Cardiology

Lead Fellows:

Blake Charlton, MD

Jeremy Tietjens, MD

Faculty Mentor:

Krishan Soni, MD

Background

- Tobacco use contributes to the global burden of cardiovascular disease.
  - Prevalence of smoking among Californian Adults was 11.6% in 2014 according to the Behavioral Risk Factor Surveillance System, 1988-2014
- Therefore, reduction of smoking rates are an important aim at both the public health and individual level.
- Systematic screening of patients for tobacco use and provision of counseling and cessation resources for active smokers have been shown to reduce the use of tobacco products.
- UCSF has prioritized tobacco cessation by implementing systematic screening and cessation counseling for adult inpatients.
- Outpatients referred for coronary angiography have significantly higher baseline cardiovascular risk as compared with the general population and therefore would particularly benefit from tobacco screening.
  - However, these patients are not systematically screened for active tobacco use and are rarely offered cessation counseling.

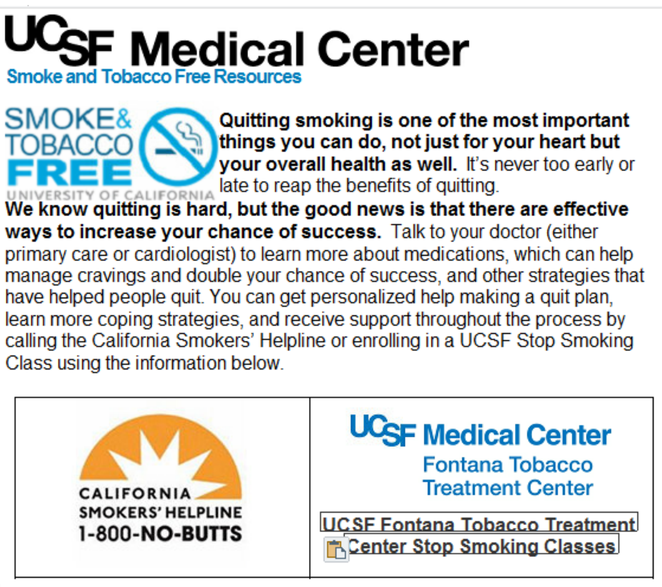
Project Goals

Goal #1: Screen at least **80%** of adult outpatients referred to the UCSF cardiac catheterization lab for coronary angiography for active tobacco use.

Goal #2: Provide at least **80%** of patients who self-identify as active tobacco users with **brief counseling** as to the importance of smoking cessation and **printed resources** for further assistance with cessation.

Project Plan and Intervention(s)

- Integrate tobacco screening & counseling into the daily cath lab workflow.
  - Fellows educated about importance of screening & counseling.
  - Identified tobacco cessation as a departmental priority.
  - Document current tobacco use status into pre-procedure H&P.
  - Aid provider compliance by providing reminder for tobacco use.
  - Provide a reliable mechanism for measuring provider compliance.
- Create standardized tobacco cessation materials to provide smokers.
  - Ensure that all tobacco users are provided with high quality information about cessation resources (pictured right)
  - Standardizing resources is also optimally efficient from workflow perspective.



UCSF Medical Center
Smoke and Tobacco Free Resources

SMOKE & TOBACCO FREE UNIVERSITY OF CALIFORNIA

Quitting smoking is one of the most important things you can do, not just for your heart but your overall health as well. It's never too early or late to reap the benefits of quitting.

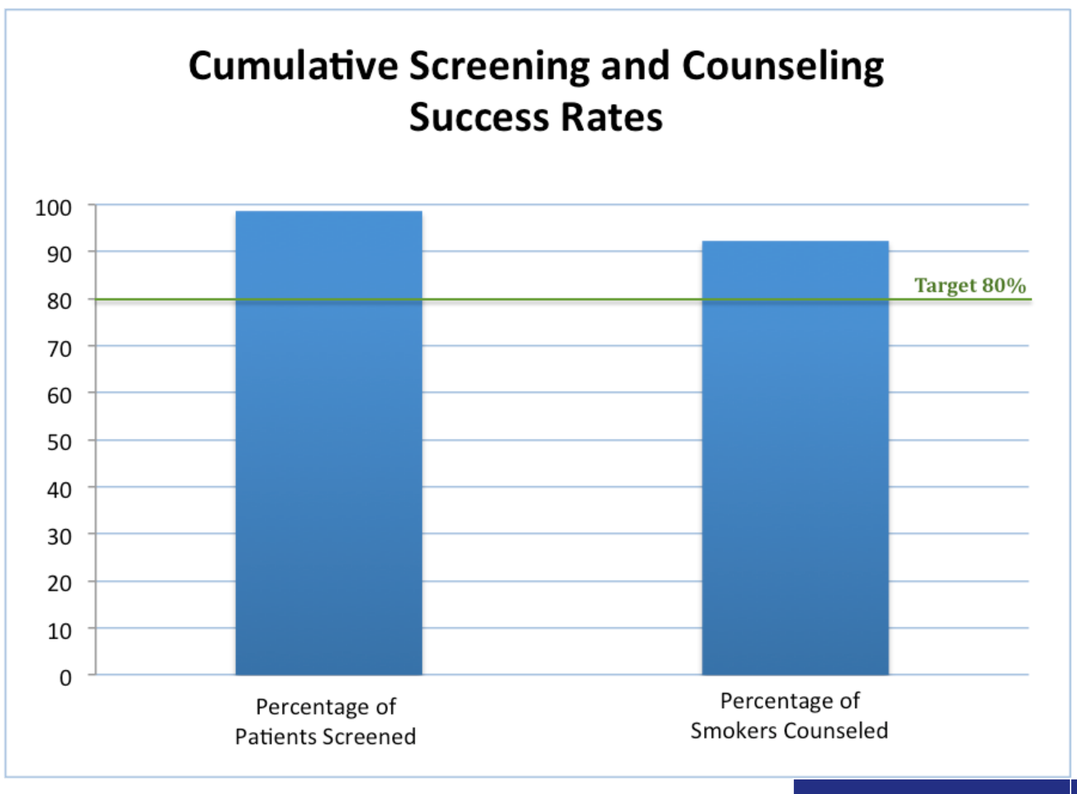
We know quitting is hard, but the good news is that there are effective ways to increase your chance of success. Talk to your doctor (either primary care or cardiologist) to learn more about medications, which can help manage cravings and double your chance of success, and other strategies that have helped people quit. You can get personalized help making a quit plan, learn more coping strategies, and receive support throughout the process by calling the California Smokers' Helpline or enrolling in a UCSF Stop Smoking Class using the information below.

CALIFORNIA SMOKERS' HELPLINE 1-800-NO-BUTTS

UCSF Medical Center
Fontana Tobacco Treatment Center

UCSF Fontana Tobacco Treatment Center Stop Smoking Classes

Project Evaluation & Impact



As shown in the bar graph to the left, our group was successful in meeting the project's prespecified improvement targets. Specifically, we achieved a 98.6% rate of screening outpatients for current smoking and a 92% rate of providing smoking cessation counseling to those patients who screened positive for active smoking – both of which were greater than the 80% target rate for both objectives.

While our group achieved both project goals, our data revealed a surprisingly low prevalence of active smoking in our target patient population. Of 442 patients screened, just 3.2% self-identified as active smokers. Therefore despite high rates of both screening and counseling, a net total of just 13 active smokers received counseling throughout the first 3 quarters of the year.

	1st Quarter	2nd Quarter	3rd Quarter	Totals
Number LHCs	149	139	160	**448**
Number screened	143	139	160	**442**
Number smokers	6	4	4	**14**
Number counseled	6	4	3	**13**

Next Steps, Dissemination & Lessons Learned

Next Steps:
Our immediate next step will be to collect and integrate data from the 4th quarter to ensure our screening and counseling rates remain high. Given the low prevalence of active smokers in our target patient cohort, the crucial next steps will be to determine whether the unexpectedly low number of active smokers to whom counseling was delivered justifies the provider-level workload necessary to continue carrying out the project in future years.

Dissemination:
All outpatient procedures performed at UCSF Medical Center require a pre-procedure H&P, and thus dissemination to other departments and settings could be performed in a relatively straightforward fashion by adapting our SmartPhrase to the respective H&P template.

Lessons Learned:
The most unexpected aspect of our project thus far was the surprisingly low number of active smokers who ultimately received counseling due to the lower than expected smoking prevalence, despite succeeding in our goals of screening and counseling the majority of patients in our target cohort. Potential explanations for this include inaccurate reporting/data collection and/or a real discrepancy between our expected and real-world smoking prevalence. We performed two quality control checks by independently reviewing individual Apex charts during a given month to verify current smoking status using documentation outside the cath lab visit. We found no cases during the two months reviewed in which current smoking was documented in Apex outside the pre-cath H&P. Plausible explanations for a smoking prevalence lower than projected include possible referral bias - outpatients patients referred to our cath lab may be less likely to be active smokers than would be expected based on data published by the Department of Health pertaining to California smoking rates (11.6% in 2014). Additionally, we observed a very high proportion of patients who had been referred for angiography as a component of evaluation for solid-organ transplantation. While we did not formally collect data on this in order to precisely quantify, our estimate is that roughly 1/3 of patients in our target cohort met this criteria. The true smoking prevalence in this subgroup would undoubtedly be 0% as active smoking would preclude transplant candidacy.

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
in partnership with the 2018 UCSF Health Improvement Symposium

Acne Wisely

Reducing unnecessary laboratory costs for isotretinoin

Jason Meyer, MD, PhD

Timothy Schmidt, MD, PhD

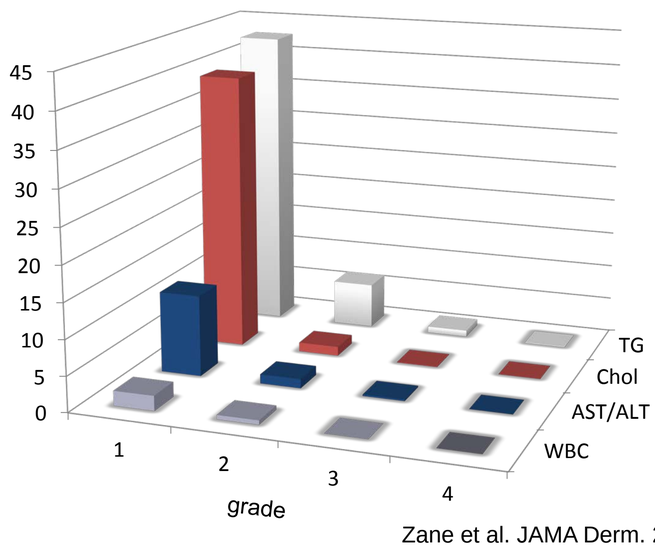
Department of Dermatology

Background

Laboratory monitoring is expensive!

True North Pillar: Financial Strength (Lower our costs)

Isotretinoin lab abnormalities: typically mild



Zane et al. JAMA Derm. 2006.

Serious adverse effects are very rare
(case reports only for pancreatitis, hepatitis, agranulocytosis)

Project Goals

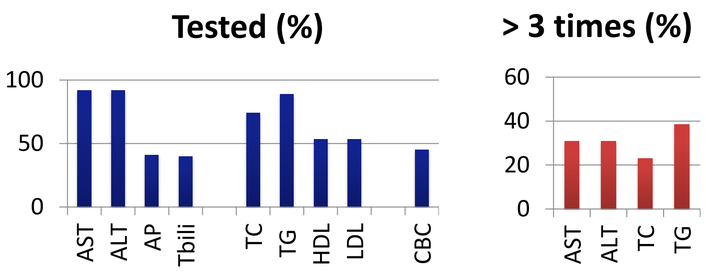
Routine acne patients
No risk factors, normal baseline labs

Recommended tests
Baseline: Fasting lipid panel + ALT
1 or 2 months: Triglycerides + ALT

***Unnecessary* testing (definition):**
Any testing beyond the above

Goal: Reduce unnecessary laboratory costs by 25%

Testing at UCSF Dermatology (baseline)



$11,500 in unnecessary testing ($217/pt)

Project Plan and Intervention(s)

Root causes and barriers to appropriate laboratory testing:
- Non-evidence based recommendations (e.g. package inserts)
- Uncertainty and lack of evidence, education on the topic
- Habit, custom or institutional teaching
- Fear of litigation, defensive medicine
- Patient concerns

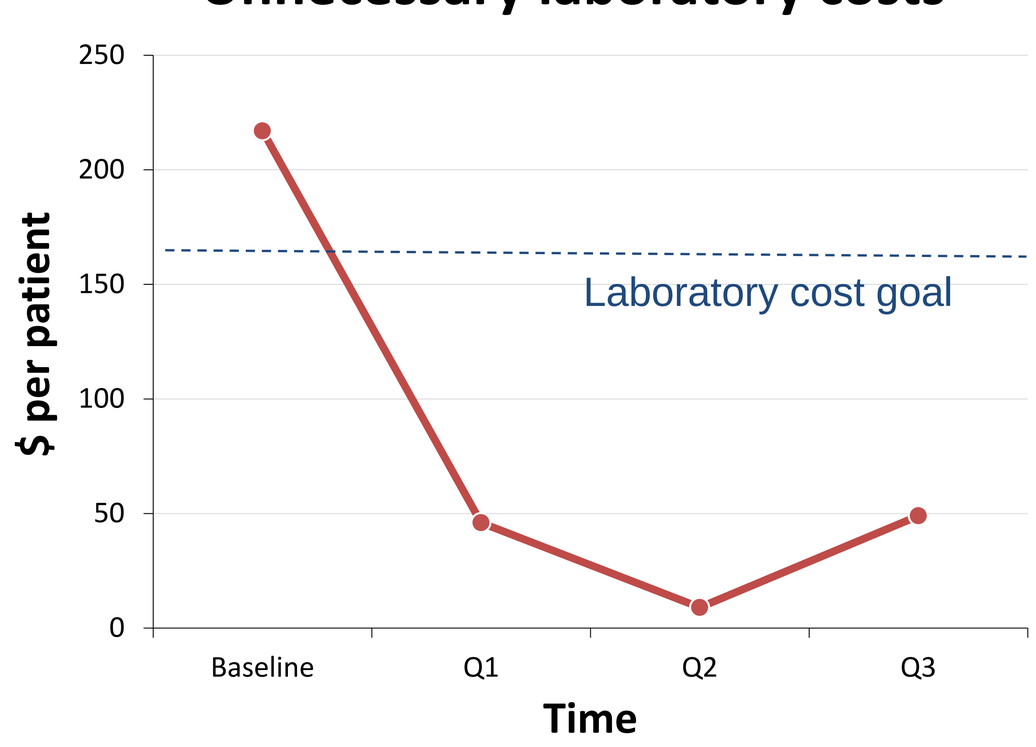
Intervention: short lecture presentation with discussion
- Live presentations may have a greater impact on retention and behavior than other modalities
- Comprehensive literature review performed to strengthen evidence basis
- Meetings and consultation with department faculty

Supplementary Intervention: APEX dot phrase for progress notes
- Reminder of monitoring recommendations while saving time documenting
- Presented during lecture

Alternative interventions considered: handout, email reminders, APEX tools

Project Evaluation & Impact

Unnecessary laboratory costs



Cost reductions of at least 76% sustained through Q1 – Q3
Certain individual providers were over-represented in excess testing
Random surveys: Recommendations were forgotten

Next Steps, Dissemination & Lessons Learned

Next Steps:
- Systematize reminders (by email, grand round announcements) to maintain cost reductions
- Extend the project to monitoring for other retinoids (acetretin, bexarotene)

Dissemination:
- Literature review and educational lecture to reduce cost of monitoring for other medications

Lessons learned:
- Literature review is important in evaluating the rationale for laboratory monitoring
- Educational interventions can be very effective in reducing laboratory costs
- Reminders are important to maintain good practices

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
in partnership with the 2018 UCSF Health Improvement Symposium

Language specific discharge instructions

Jessica Paz, Julia Chang, Cortlyn Brown

Mentors: Jacqueline Nemer, Steve Polevoi

UCSF Department of Emergency Medicine

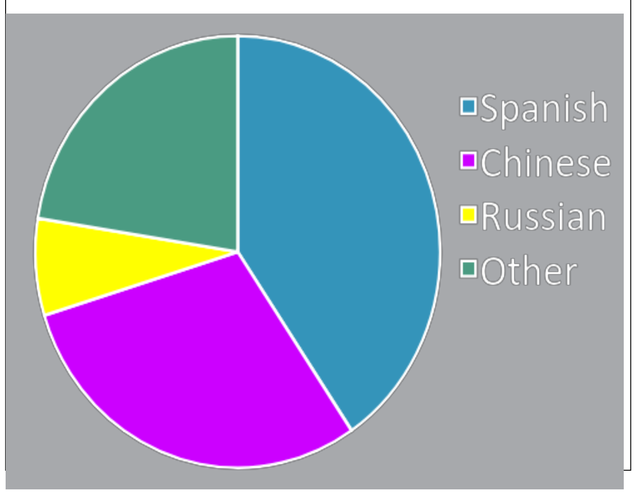
Background

Discharge instructions (DCI) are an essential component of all emergency department (ED) visits. Written discharge instructions allow patients to understand what happened in the ED, the next steps that need to be taken for their health (follow up plan, medications, etc), and the concerning symptoms to prompt a return visit.

8% of UCSF ED patients report that English is not their primary language, yet at the beginning of our QI period, nearly all DCI were given in English.

Studies show that DCIs written in patients' preferred language lead to better compliance and satisfaction.

Figure 1.
Breakdown of most common non-English primary languages spoken by UCSF ED patients



Project Goals

Primary outcome:
Increase the percentage of patients who receive language-specific discharge instructions by 30% among patients with non-English preference.

Numerator= # visits by non-English preferring patients who receive DCI in their preferred language.

Denominator= # visits by non-English preferring patients.

Secondary outcome:
Increase the understanding of DCI during callbacks for emergency department visits.

Project Plan and Intervention(s)

- Residents developed discharge instructions for the 6 most common ED chief complaints in Spanish, Chinese, and Russian (the three most common non-English languages in our patient population).
- DCI were vetted by the UCSF Patient Education Committee, then translated by certified UCSF Medical Translation Services
- DCI were imported into Apex as dotphrases for use by MDs, AHPs
- Performed mid year evaluations for barrier to use of DCI dotphrases and incorporated visual alerts on computers, email reminder

Figure 2. Root cause analysis for barriers to patients receiving language specific DCI

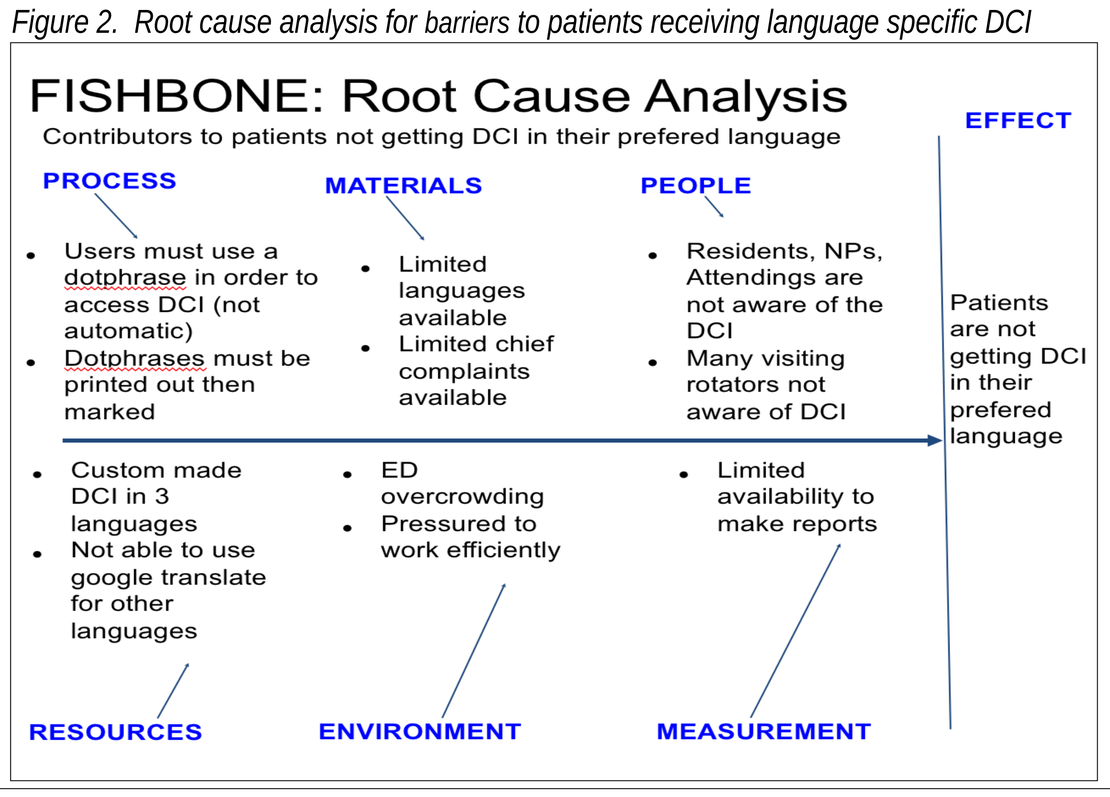


Figure 3. Sample DCI for chest pain, Chinese

You were seen today in the Emergency Department for chest pain.	您今天因為胸口痛來急診室就診。
The following tests were performed: ☐ Blood tests ☐ X ray (picture of your bones) ☐ Electrocardiogram (rhythm picture of your heart) ☐ CT scan (picture of your organs)	我們做了以下測試： ☐ 驗血 ☐ X光（骨骼圖像） ☐ 心電圖（心臟節律圖） ☐ 電腦斷層掃描（器官圖像）
Based on our evaluation, it is not necessary for you to stay in the hospital today.	根據我們的評估，您今天不需要住院。
Please follow up with your regular healthcare provider in the next _____ days. Write down any questions you may have before then. You may require future testing while under their care.	請在接下來 _____ 天向您的常規醫生做追蹤。 在那之前寫下您的所有疑問。 您在他們照護之下可能需要接受測試。
Follow the marked directions for your medications until you see your regular provider: ☐ No medication changes except as below ☐ Take these new medications as prescribed: _____ ☐ Stop taking these medications: _____	在您去看常規醫生之前，請遵循以下標出的藥物指示： ☐ 不需要修改藥物，但是以下除外 ☐ 按照處方服用這些新藥物： _____ ☐ 停止服用這些藥物： _____

Project Evaluation & Impact (First Quarter)

Table 1. Percentage of non-English speaking patients in Q1 that received language specific DCI

Language	Discharge instructions that used language specific DCI	Total N of patients who list this as their primary language	Percentage of language specific DCI used
Russian	2	55	3.6%
Chinese	37	249	14.9%
Spanish	5	572	1.9%
Total	44	572	7.7%

Table 2. Frequency of chief complaint DCIs utilized

Breakdown of top language specific DCI used- chief complaint/language	
BACK PAIN - Russian	2
LACERATION - Chinese	2
SHORTNESS OF BREATH - Chinese	2
BACK PAIN - Chinese	3
ABDOMINAL PAIN - Spanish	5
CHEST PAIN - Chinese	5
HEADACHE - Chinese	5
ABDOMINAL PAIN - Chinese	8
Department visit - Chinese	12

Next Steps, Dissemination & Lessons Learned

Challenges:

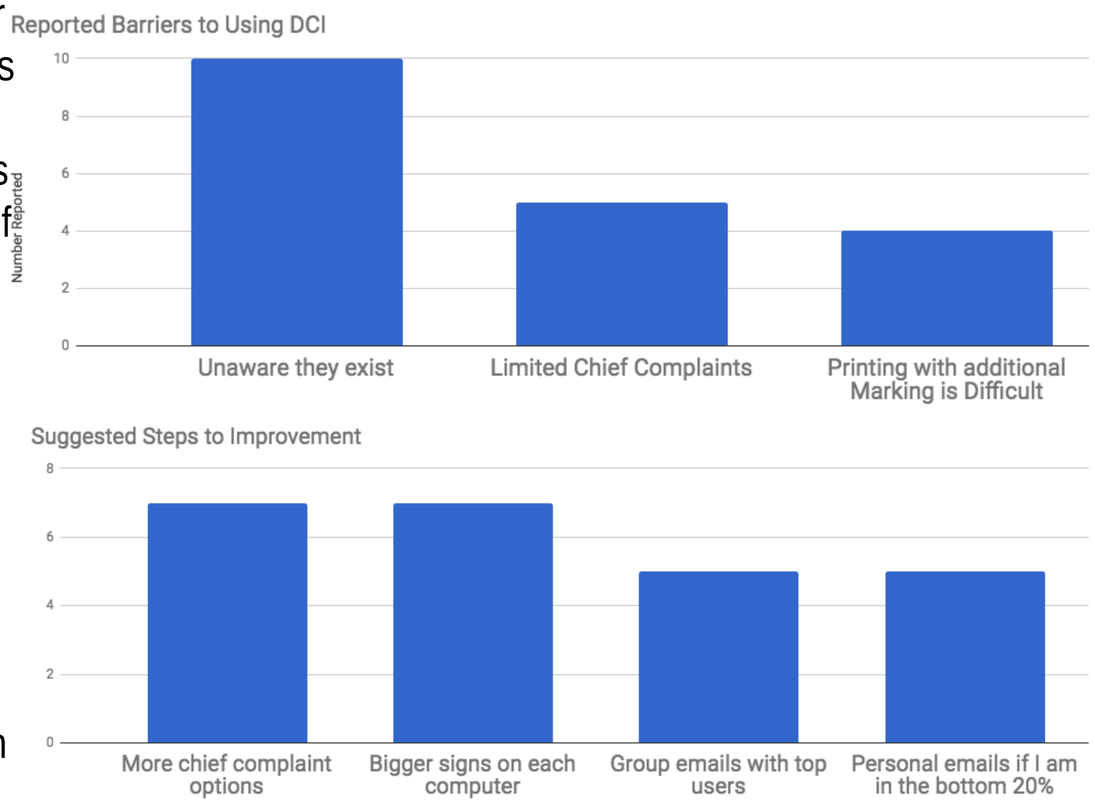
- With unexpected upgrade of EPIC (UCSF Apex), we were unable to continue to track our data by searching for the use of the dotphrases beyond Q1.
- Some users were unaware that the dotphrases existed and others would have liked more chief complaints .

Next Steps:
Encourage residents to continue to use the discharge instructions and develop process in EPIC to track use.

Possibilities to increase awareness:

- Embedding champion like charge nurses or senior residents who can audit and educate in real time.
- Consider using an EPIC notification that the patient might need language specific discharge information.

Figure 4. Results of staff-wide Q1 survey on suggested steps to improvement and perceived barriers to language-specific DCI



Dissemination:
These DCIs will be accessible to all providers using UCSF Apex since these DCIs will be beneficial to other specialties, particularly primary care as there is significant overlap between the ED and primary care chief complaints.

Special Thanks
Dr. Glenn Rosenbluth, Alexis Stanley, and the UCSF Patient Care Fund for their generous support, Tobias Schmelzinger for technical support, and the UCSF Patient Education Materials Committee for their time and input

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
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Delirium Prevention in General Surgery Patients

Jenny Kaplan and Steve Wisel

Mentor: Ryutaro Hirose

General Surgery

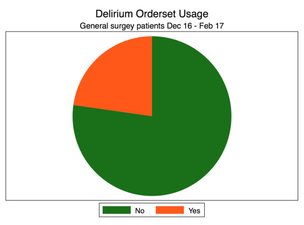
Background

Postoperative patients are at high risk for development of delirium - up to 65% of surgical inpatients and up to 80% of surgical inpatients in the ICU experience some degree of postoperative delirium (1).

Postoperative delirium can lead to a host of complications:

- Safety: Delirium leads to increased rates of falls, pneumonia, and mortality (1).
- Financial: Cognitive impairment and functional decline related to delirium can increase the overall cost per case, increasing utilization of resources such as rehabilitation and physical therapy.
- Systematic Growth: Complications related to delirium increase the overall length of hospital stay.

UCSF nursing units have begun delirium screening. Surgery residents will need to learn how to interpret these tests and respond appropriately in the form of preventative nursing care orders and appropriate workup and management should delirium occur.



General Surgery Pilot Data

- We generated our pilot data while the AWOL screening went into effect (2).
- We developed a delirium prevention orderset and accompanying resident education concurrent with hospital-wide implementation of the NuDESC (3) which is part of Mission Bay ERAS orderset.
- In pilot data from December 2016 – February 2017; 123 general surgery patients were screened for delirium, 23% had the prevention orderset and in only 14% of those patients was the orderset in place at the time of their hospital admission.

1. Chevillon C, et. al. Preoperative Education on Postoperative Delirium, Anxiety, and Knowledge in Pulmonary Thromboendarterectomy Patients. Am J Crit Care. 2015 Mar; 24(2): 164-71.
2. Douglas VC, et. al. The AWOL tool: derivation and validation of a delirium prediction tool. J Hosp Med. 2013 Sep; 8(9): 493-9.
3. Gaudreau JD, et al. Fast, systematic, and continuous delirium assessment in hospitalized patients: the nursing delirium screening scale. J Pain Symtom Manage. 2005 Apr;29(4):368-75.

Project Goals

With development and implementation of the AWOL screening as a reliable predictor of delirium, our goal is to improve physician utilization of delirium prevention measures in at-risk patients

Goal Target State:

- Surgical services to use delirium orderset in 75% of at risk patients (based on clinical suspicion or AWOL score)
- Delirium orderset to be used in a timely fashion so as to be preventative, within 3 hours of unit admission

Project Plan and Intervention(s)

Target Services: acute care surgery, colorectal surgery, general surgery – Dunphy, general surgery-Galante, thoracic surgery, surgical oncology, vascular surgery.

Interventions:

- Monthly emails with reminders and results
- Intern education
- Handouts in all call and work rooms

Barriers:

- No communication around AWOL screening score
- Not all patients who received delirium orderset also were screened for AWOL
- No development of surgery-specific AWOL score
- Many services included in project

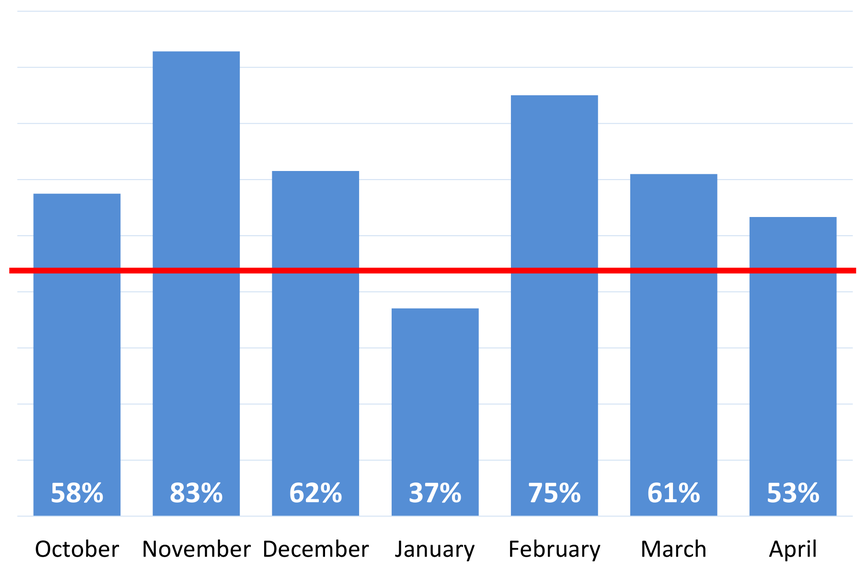
New Goal Identified in February 2018

Given difficulty with implementation new goal of 50% compliance with orderset usage in patients who either screened positive for AWOL or scored positive on NuDESC at any time during admission.

Project Evaluation & Impact

Main outcome measure #1:

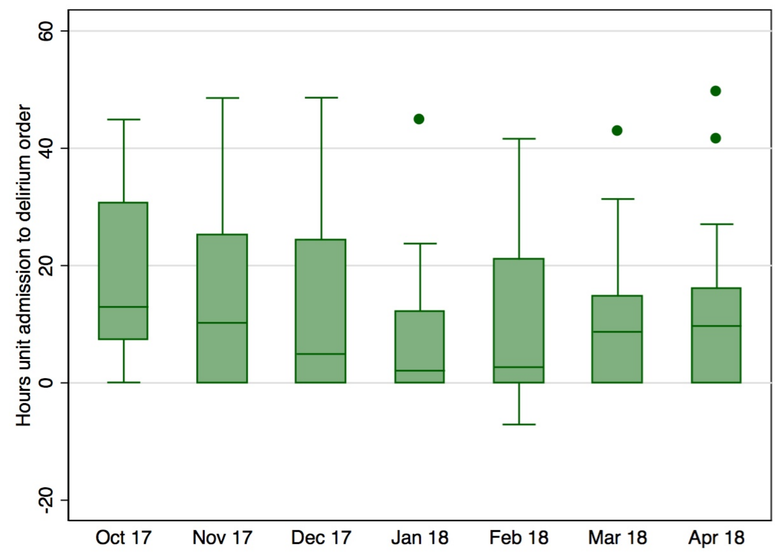
Use of orderset in patients screening AWOL positive or testing positive on NuDESC



Revised goal of 50% met in 6/7 months

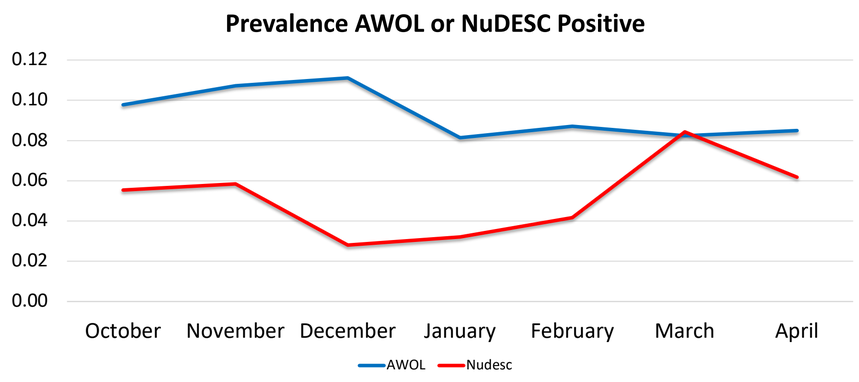
Main outcome measure #2:

Time from unit admission to placement of delirium orderset

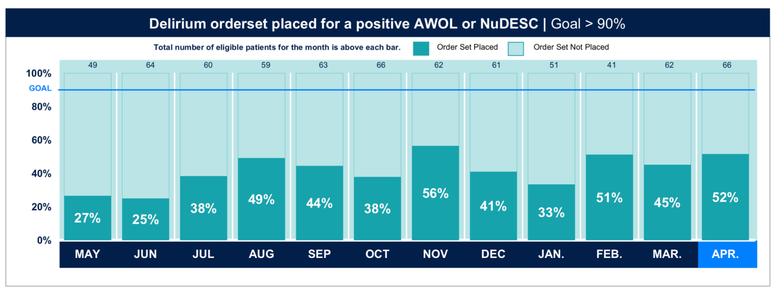


Initial goal of 3 hours not met

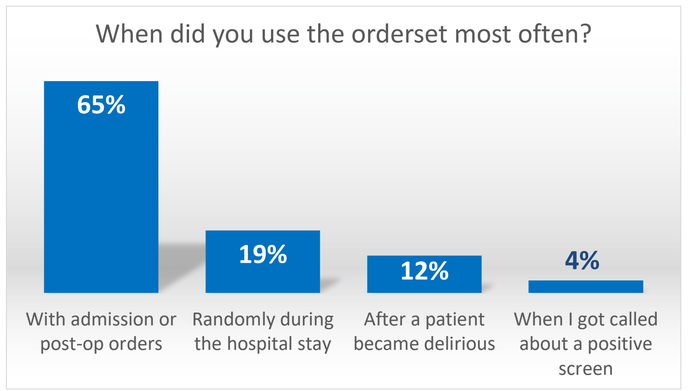
Additional data:

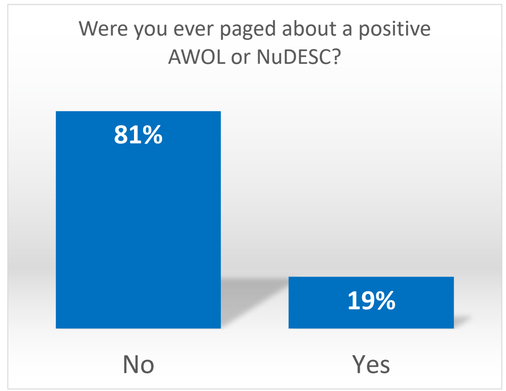


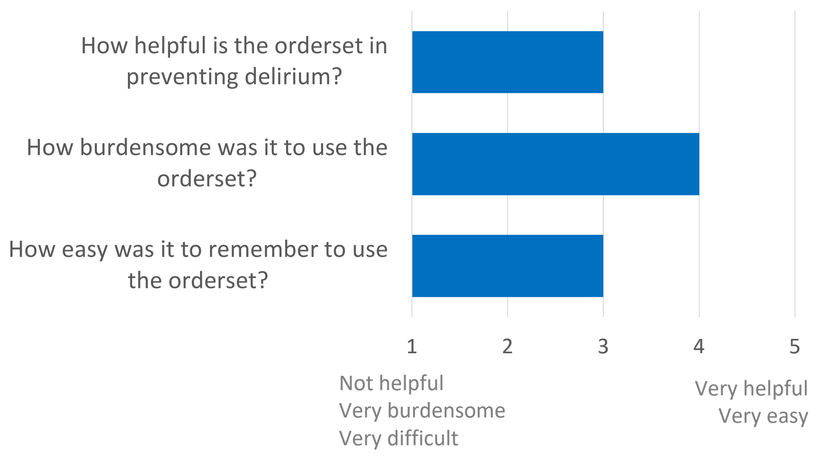
Medical center report: *Includes cardiac, transplant plastic, ambulatory, breast, and endocrine surgery*

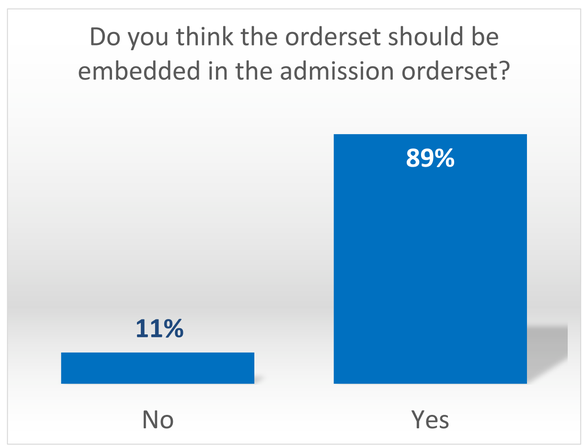


Resident survey results:









Next Steps, Dissemination & Lessons Learned

Next Steps:

- Work with department to identify a report writer for general surgery
- Embed delirium order in admission order set
- Work with delirium team on surgery specific AWOL score
- Work with PACU and floor nurses around communication of positive screening scores

Dissemination:

Surgical teams can work together with nurses to streamline paging workflow and identify communication barriers. Creation of care pathways (i.e. colorectal ERAS) is the best way to improve compliance.

Lessons Learned:

Placing the onus on residents to remember to use an orderset when no reminder system is in place, and when the screening tool does not perform well in their target population, is difficult and was unsuccessful.

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Universal Financial Toxicity Screening in Medical Oncology Clinics

Sam Brondfield, Hala Borno, Claire Mulvey, Li Wen Huang, Pelin Cinar

Division of Hematology/Oncology; Helen Diller Family Comprehensive Cancer

Background

Financial toxicity is an increasingly recognized problem for patients receiving cancer treatment and is defined as the "unintended financial consequences of patients embracing expensive treatments."

This is a problem because: Financial toxicity can include the objective financial burden and the subjective financial distress. In the era of precision medicine, the rise in the cost of cancer care may have serious potential effects on the delivery of high-quality, patient-centered care.

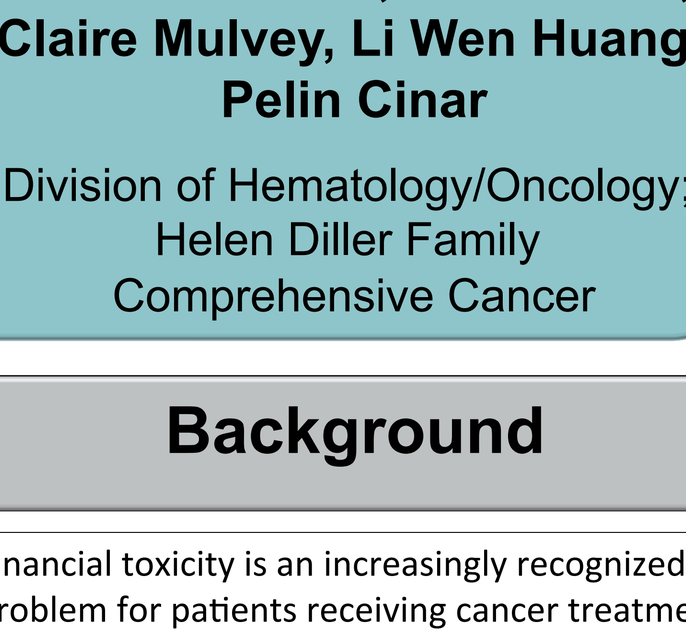


Figure 1. *Schematic framework relating severe illness, treatment choice, and health and financial outcomes. Scott Ramsey*

Project Goals

ACGME fellows at the University of California San Francisco rotating in a 1-month immersion block in solid oncology outpatient clinic prospectively performed a three-item physician-initiated verbal screening tool among patients seen for new or follow-up visits. The financial toxicity screening result was documented in the medical record and triggered physician referral to social work if elevated. The cumulative goal for the quality improvement project was to screen 30% of all eligible patients seen over the intervention period.

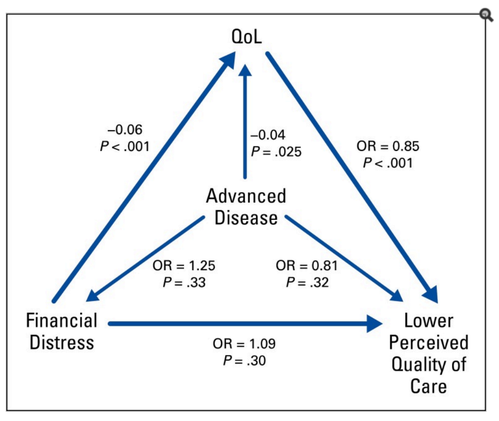


Figure 2. *Financial burden is prevalent among cancer survivors, related to QOL. (Zafar, 2015)*

Project Plan and Intervention(s)

Figure 3. *The screening tool was developed by multiple conversations with the HDFCCC social work team to identify themes that may inform a financial toxicity screening tool.*

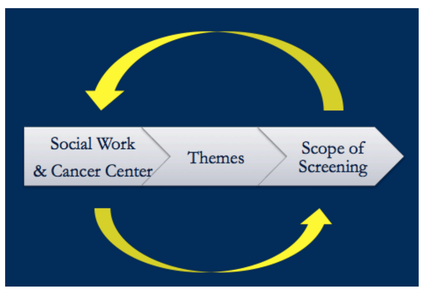


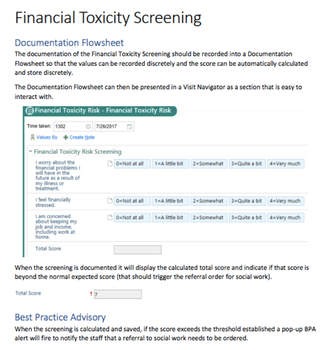
Figure 4. *The initial intervention was a dot smart phrase in Apex.*

Financial Toxicity Risk Screening

1.	I worry about the financial problems I will have in the future as a result of my illness or treatment.	{Financial Toxicity Risk - Question 1:29607}
2.	I feel financially stressed.	{Financial Toxicity Risk - Question 2:29608}
3.	I am concerned about keeping my job and income, including work at home.	{Financial Toxicity Risk - Question 3:29609}
	Total Score:	***

If the total score is 6 or greater the patient should be referred to social work.

Figure 5. *The refined intervention became an Apex tab.*


Financial Toxicity Screening

Documentation Flowsheet

The documentation of the Financial Toxicity Screening should be recorded into a Documentation Flowsheet so that the values can be recorded discretely and the score can be automatically calculated and store discretely.

The Documentation Flowsheet can then be presented in a Visit Navigator as a section that is easy to interact with.

Financial Toxicity Risk - Financial Toxicity Risk

Time taken: 1302 7/26/2017

Values By Create Note

Financial Toxicity Risk Screening

I worry about the financial problems I will have in the future as a result of my illness or treatment.	0=Not at all	1=A little bit	2=Somewhat	3=Quite a bit	4=Very much
I feel financially stressed.	0=Not at all	1=A little bit	2=Somewhat	3=Quite a bit	4=Very much
I am concerned about keeping my job and income, including work at home.	0=Not at all	1=A little bit	2=Somewhat	3=Quite a bit	4=Very much
Total Score					

When the screening is documented it will display the calculated total score and indicate if that score is beyond the normal expected score (that should trigger the referral order for social work).

Total Score * ?

Best Practice Advisory

When the screening is calculated and saved, if the score exceeds the threshold established a pop-up BPA alert will fire to notify the staff that a referral to social work needs to be ordered.

Figure 6. *PDSA cycle we changed from screening all new or established patients to only screening established patients.*

Project Evaluation & Impact

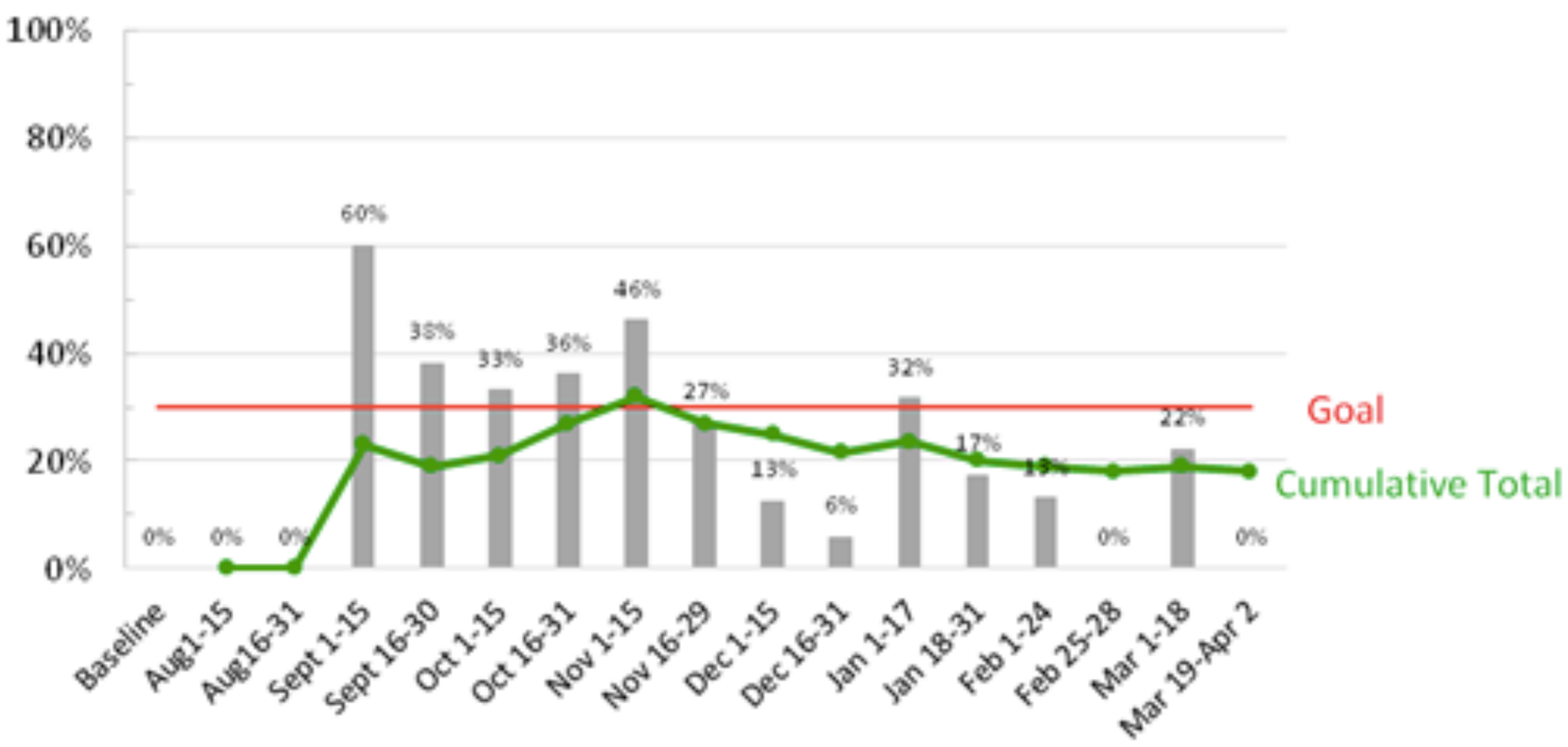


Figure 7. *Participating fellows (N=8) rotated in five disease-specific medical oncology practices (gastrointestinal, thoracic/sarcoma, genitourinary, breast, and melanoma/head and neck) and worked with 26 medical oncology attending physicians. At baseline, 0% of fellows documented financial toxicity measures among patients seen in clinic. At the mid-point of the intervention the cumulative goal was achieved at 32% however at the end of the intervention the screening total decreased to 18%.*

Next Steps, Dissemination & Lessons Learned

Next Steps: Based on qualitative feedback obtained from participating fellows.

- Explore financial toxicity screening by non-fellow clinic staff prior to the clinical encounter.
- Augment provider financial toxicity training in improve provider comfort with this topic.
- Improve financial toxicity screening adherence with continual reminders.

Dissemination:

- Develop institutional best practices for detecting financial toxicity for high cost chronic conditions.

Lessons Learned:

- Fellows felt financial toxicity was an important subject that impacted patients significantly.
- Fellows were generally unfamiliar with financial toxicity and felt uncomfortable discussing it with patients.
- Packed clinic visits and difficulty remembering to screen were significant barriers to effective screening.
- Fellows felt that other clinic staff might be better suited to screen patients for financial toxicity.

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#DeleteDelirium: A Internal Medicine Residency Program's Efforts to Reduce In-Hospital Delirium

Carine Davila, MD, Lev Malevanchik, MD, Leslie Suen, MD, Serge Gajic, MD, Janet Chu, MD, Connie Wang, MD, Sharmin Shekarchian, MD, Cary Kraft, MD, Amanda K. Johnson, MD, Katie Raffel, MD, Bradley Monash, MD, Catherine Lau, MD, Stephanie Rogers, MD,
Department of Medicine,
University of California San Francisco

Background

- Delirium is a syndrome that develops acutely & fluctuates, characterized by disturbed attention, awareness, and cognition.
- Delirium is a serious illness which impacts the experience and safety of our patients. It prolongs their length of stay and cost of hospitalization.
- In hospitalized patients, the AWOL and NuDESC tools are used by nurses to screen for delirium risk and active delirium, respectively.
- The delirium orderset (DO), a non-pharmacological delirium pathway, has been implemented at UCSF for patients with positive AWOL and NuDESC scores. This has led to decreased length of stay and improved outcomes.
- However, the DO has been under-utilized for patients on the hospital medicine teaching service.

Project Goals

Primary Goal: to decrease delirium rate and subsequent morbidity for patients with delirium

- **Specific Measure:** For patients who screen (+) for AWOL or NuDESC, increase % who have DO placed to >75% in 3 of 4 quarters from 7/1/2017-6/30/2018
- **Baseline**: From the period of January to June 2017, medicine residents successfully placed the DO on 63% of AWOL- and NuDESC-positive patients during their hospitalizations.

Secondary Goals:

- Improve recognition and management of delirium by internal medicine residents
- Improve outcomes (e.g. decrease length of stay (LOS)) for patients with delirium (NuDESC-positive)

Project Plan and Intervention(s)

Delirium Pathway

Pt admitted to hospital floor → RN calculates AWOL & NuDESC → If +, resident is paged by RN or resident finds score in EMR → Resident orders DO → Care Team works to provide DO

Key Project Interventions

Education	1 Disseminating bimonthly progress dashboards to residents
	2 Resident education at conferences and via email
Tech	3 Adding NuDESC and AWOL scores to EMR to allow for daily checks of all medicine residents' patients
Feedback	4 Directly contacting medicine teams that performed well and poorly to help identify barriers and successes
Outreach	5 Proactively paging residents about patients with delirium
	6 Incorporating paging into existing resident role (Bat)

The Delirium Orderset (DO)

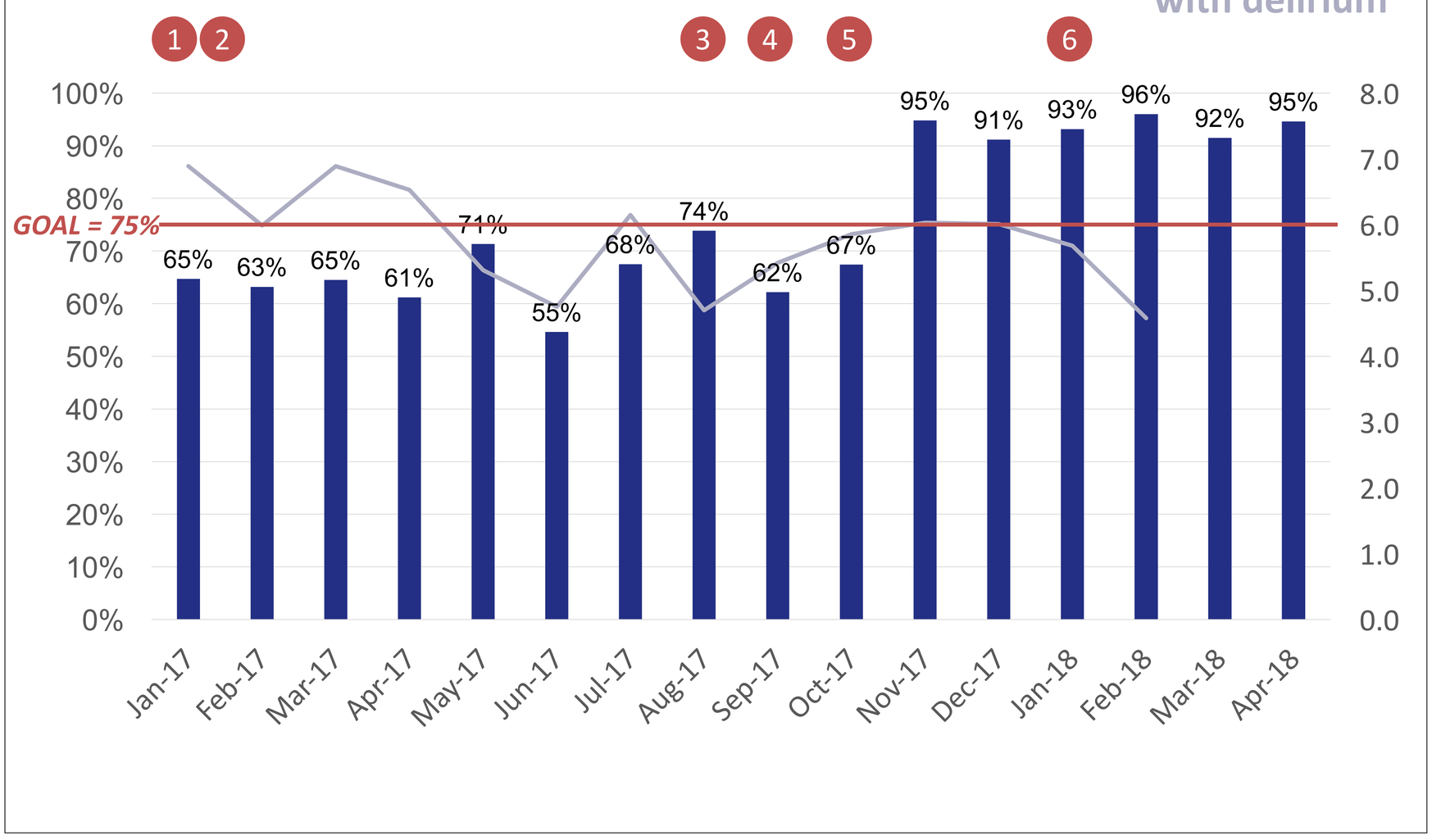
- Notify provider if no BM > 48 hours
- Initiate fall precautions
- Up to chair for all meals, ambulate in halls
- Provide patient with therapeutic activities appropriate for cognitive status
- If no foley, bladder scan x 1; straight cath for > 300cc
- Reorient patient to location and date
- Nursing care bundle – fluids within reach, hearing aids to bedside, close blinds at night, encourage daytime family visitors
- Non-pharmacologic sleep protocol – provide warm drink, relaxing music, eye mask, minimize interruptions between 11pm to 5am

Project Evaluation & Impact

% Orderset Compliance

● *Time intervention launched*

Mean LOS for patients with delirium



Next Steps, Dissemination & Lessons Learned

Next Steps:
While placement of the DO is an important place to start, it would be interesting to better understand how effectively the individual elements of the DO are being executed for patients with the DO on hospital units.

Dissemination:
The delirium work done by internal medicine residents is also being implemented in the general surgery and urology departments. The delirium working group has broadened efforts to nearly all of the floors of the UCSF Moffitt-Long Hospital. Our work could be included in a how-to guide for other institutions looking to tackle delirium in a similar way.

Lessons Learned:
Tackling delirium reduction is a multidisciplinary effort requiring buy-in from the front-line providers – physicians, nurses, patient care associates, physical and occupational therapists, alike. DO placement is merely one component, but we need to engage all providers to help execute the plan for at-risk or delirious patients to create meaningful improvements.

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Improving Parent Communication Around Time of Infant Delivery and Intensive Care Nursery Admission

Rachael Beckert

Janet Shimotake, Elizabeth Rogers, Kimberly Johnston, and the rest of the ICN UBLT

Neonatology Fellows

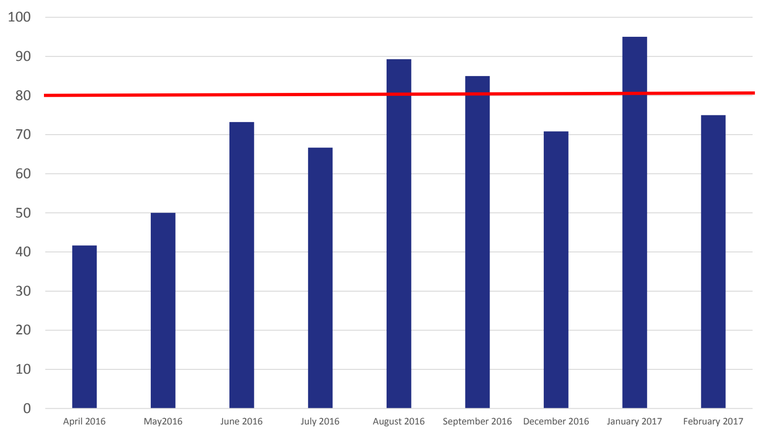
Background

Parents of infants taken to the Intensive Care Nursery (ICN) after delivery often do not have an understanding of the status of their infant, or where their infant is located in the hospital. This creates a poor patient experience. Often, the mother is still recovering from surgery, and the father is overwhelmed with caring for both his wife and child, so they cannot adequately retain spoken information provided by the ICN staff. This problem has the greatest effect on the first day of an infant's hospitalization, before the parents have had the chance to visit the ICN, or attend rounds.

Project Goals

Increase the percentage of families receiving written communication from the ICN team on the medical status of their baby from from 0% to 80% or greater by June 30, 2018.

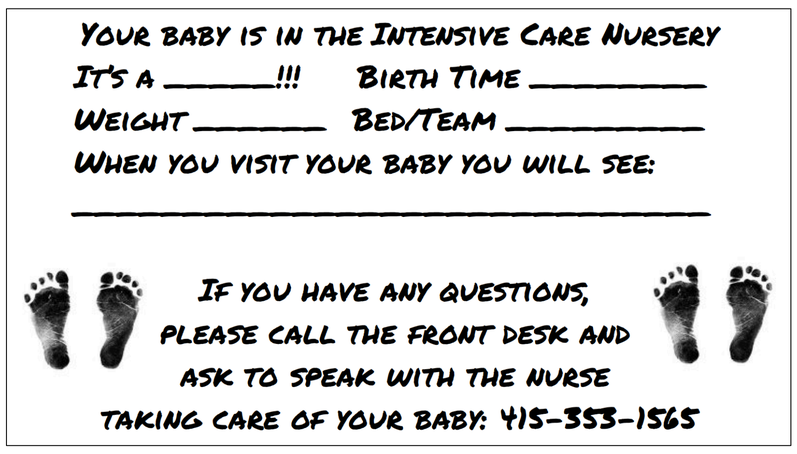
According to Press Ganey survey, prior to our intervention, we have only provided adequate (>80%) information about the baby's medical condition at birth for 3 out of the last 11 months (see graph below).



** October and November 2016 surveys were removed due to delayed in distribution and low responder rate

Project Plan and Intervention

Provide a paper "half sheet" with written status of baby, location of baby in ICN, ICN contact information, and pertinent birth information that parents may refer to.

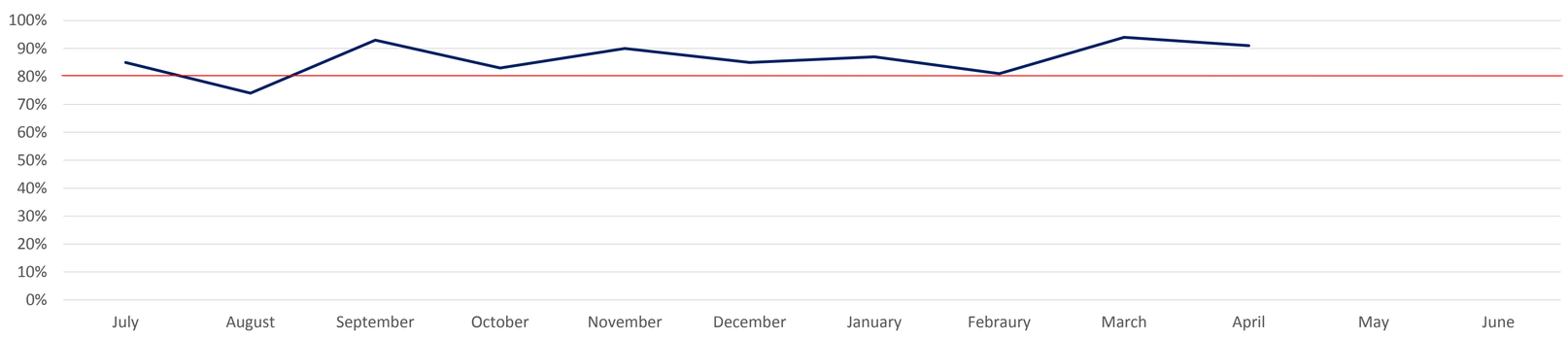


A member of the ICN team will return to parents' room to provide further updates on infant multiple times through stabilization period of infant

We predict these interventions will help the parents feel more informed on the status of their infant and they will have a better patient experience.

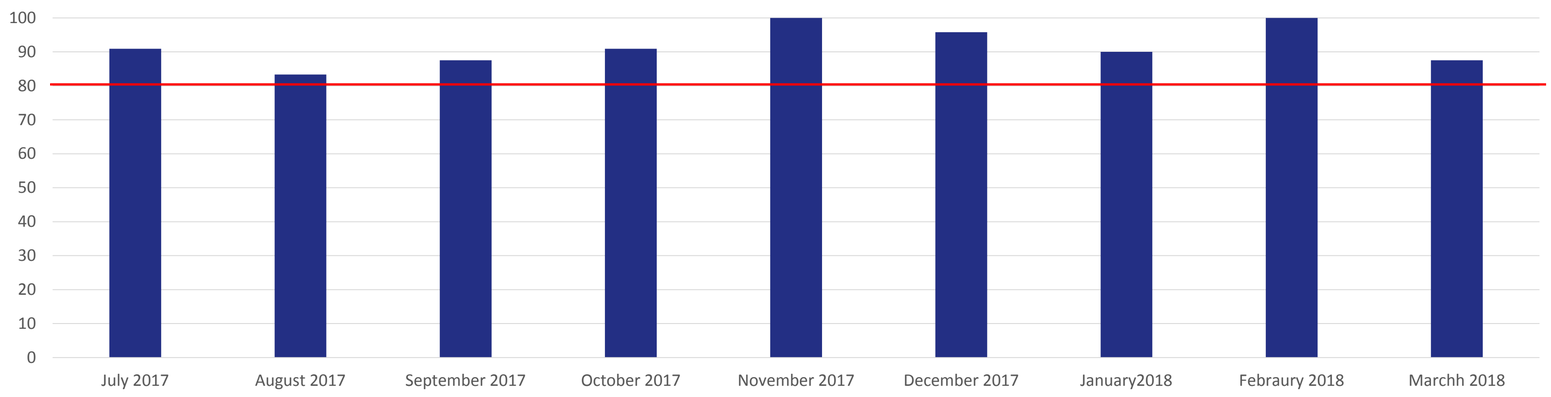
Project Evaluation & Impact

Percentage of Families Receiving Written Communication from ICN Team on Medical Status of Their Baby at Time of Delivery



We have provided half sheets to >80% of patients admitted to the ICN at time of delivery for 9 out of the past 10 months. Cumulatively, 87% of infants admitted to the ICN since July 1, 2017 have received half sheets.

Press Ganey Scores Post Intervention
Information About Baby's Medical Condition at Birth



According to our Press Ganey Scores we provided adequate (>80%) information about baby's medical condition at birth for 100% of the last 9 months since starting our intervention

Next Steps, Dissemination & Lessons Learned

Next Steps:
We are going to continue giving out written communication, in the same form as the half sheet shown above, for any infant admitted to the ICN at time of delivery.

Dissemination:
Written communication could be given to parents of children in the hospital for treatment plans, discharge requirements, or other complicated medical information.

Lessons Learned:
Good communication strongly impacts parent experience in the ICN and small interventions can make a big difference.

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Assessment and Improvement of Neurosurgical Drain Documentation

Derek Southwell

Ramin Morshed

Noah Nichols

Sujatha Sankaran

Dept. of Neurological Surgery

Background

Neurosurgical patients frequently undergo drain placement for management of post-operative fluid collections or removal of cerebrospinal fluid. Without close monitoring, neurosurgical drains may be left in place for longer than necessary. This may in fact pose harm to the patient as drains are foreign objects associated with increased infection risk, prolonged length of stay in higher level-of-care nursing units, and decreased patient comfort and mobility. Together, these factors impact quality and safety, as well as patient experience.

At the outset of this project, there were no standards for assessing and then documenting 1) length of drain application (i.e. duration of ongoing drain use) and 2) daily requirement/indication for continued drainage.

Project Goals

Our goal was to determine and improve upon the rate of drain documentation in resident progress notes.

This included:

1)The presence of drains (including number of drains and drain output)

2) The indication/requirement for ongoing drainage

Project Plan and Intervention

Providers manage a multitude of postoperative treatment factors, of which drain management if an essential component. Without a simple method for identifying patients undergoing drainage, nor a trigger/prompt for documenting drainage, providers may not reliably assess and document drain presence/indication for drainage .

In part, these problems exist because we lacked a charting method that allows providers to easily and remotely identify which patients are undergoing drainage. Additionally, we lack a method for prompting providers to document drainage on a daily basis.

We hypothesized that by increasing daily drain documentation and developing a drain-identifier within the electronic medical record, we would improve the reliability of drain assessment by care providers, and thereby achieve a secondary reduction of unnecessarily prolonged drain use.

Our interventions included 1) modification of the Apex Patient List to include a column that denotes presence of a drain, which allows care providers to quickly and remotely identify which patients are undergoing drainage, and, 2) frequent verbal reinforcement and assessment of drain documentation compliance within the neurosurgical service.

Project Evaluation & Impact

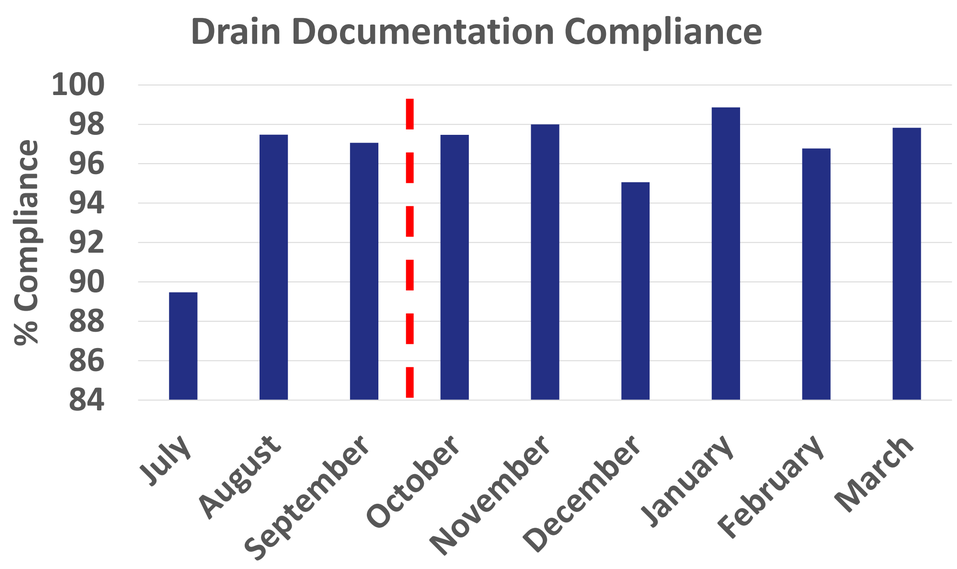
Name/Age/Sex	Room/Bed	Length of Stay (Days)	Neuro Drains	Attending
	11IC/11IC-1	9	0	Jessica Scott Fuller, MD
	L610/L610-01	0	0	Michael W. McDermott, MD
	11IC/11IC-10	6	0	Christopher P. Ames, MD
	L772/L772-01	14	0	Christopher P. Ames, MD
	L756/L756-01	2	2	Michael W. McDermott, MD
	L762/L762-01	8	2	Aaron John Clark, MD
	11IC/11IC-16	3	2	Lee A Tan, MD
	L759/L759-01	10	0	Michael W. McDermott, MD
	L629/L629-01	5	0	Manish Kumar Aghi, MD

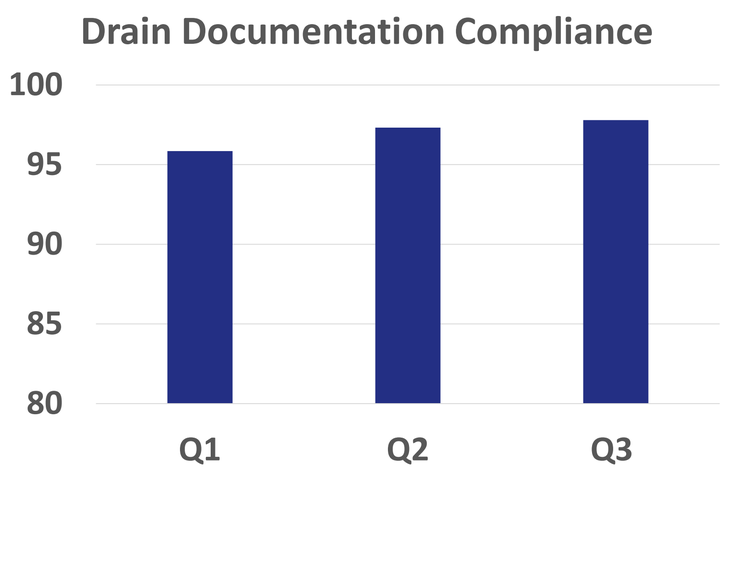
Neuro Drain Column:

- Identifies patients with drains as well as drain duration
- Part of daily rounding list to help quickly identify patients with a drain
- Implemented Oct 2017 with drain documentation compliance quantified starting July 2017 until present

Drain Documentation Compliance:

- Compliance appeared to increase steadily over sequential quarters
- Compliance also noted to be higher after implementation of the Apex Drain Column





Next Steps, Dissemination & Lessons Learned

Next Steps:
We will continue to assess drain documentation compliance and standardize the use of the Apex Patient List 'drain' column. In an effort to reduce unnecessary drain use, we will begin to quantify length of drain application for different surgical procedures, and attempt to develop standards for length of drain application.

Dissemination:
Our intervention, the Apex Patient List drain column, can be adapted and incorporated into Patient Lists used by other services.

Lessons Learned:
Prior to our intervention, drain documentation compliance was relatively high. While our efforts appear to have improved compliance, our experience indicates the importance of the Gap Analysis.

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
in partnership with the 2018 UCSF Health Improvement Symposium

POLST: Quality Improvement Initiative to Enhance Advance Care Planning and Transitions in Care

UCSF Health

UCSF Department of Neurology
Weill Institute for Neurosciences

Jeremy A. Tanner, Jessamyn Conell-Price, Brian Sauer, Thomas Ragole, Maulik P. Shah, Vanja C. Douglas

Neurology

Background

- ~1/3 of elderly and seriously ill patients lack advance directives[1]
- Only ~1/5 have such documents readily accessible to providers[2]
- Improving goals of care discussions, documentation, and accessibility can ensure patients' wishes are met
- Proposed as a quality metric for inpatient neurologic care[3]
- **Physician Orders for Life-Sustaining Treatment (POLST)**:
  - Medical form enabling patients to communicate their preferred medical treatments
  - Transforms patients' wishes into actionable physician orders
  - Transfers between facilities and applies in ALL settings

Project Goals

Target

- 75% of patients discharged from neurology services who are not "Full Code" have POLST forms completed and uploaded to their medical record

Status Quo

- Only 26% of patient discharged from neurology services had POLST forms completed and uploaded despite "code status" orders reflecting wishes against interventions
- Cases of patients inappropriately receiving emergency CPR against their wishes on re-presentation due to lack of accessible POLST form at time of initial discharge

Project Plan and Intervention

Preparation

1) Surveyed residents, nursing, and staff to identify baseline knowledge and perceptions
2) Outlined status quo workflow for completing and uploading POLST
3) Engaged unit and department leaders to identify gaps and opportunities
4) Strategized approach with field experts

Systems

1) Created and implemented a streamlined workflow with interdisciplinary team
2) Outlined team approach with fail-safes
3) Ensured accessible forms
4) Included reminders in note templates
5) Added to discharge checklist for multidisciplinary rounds

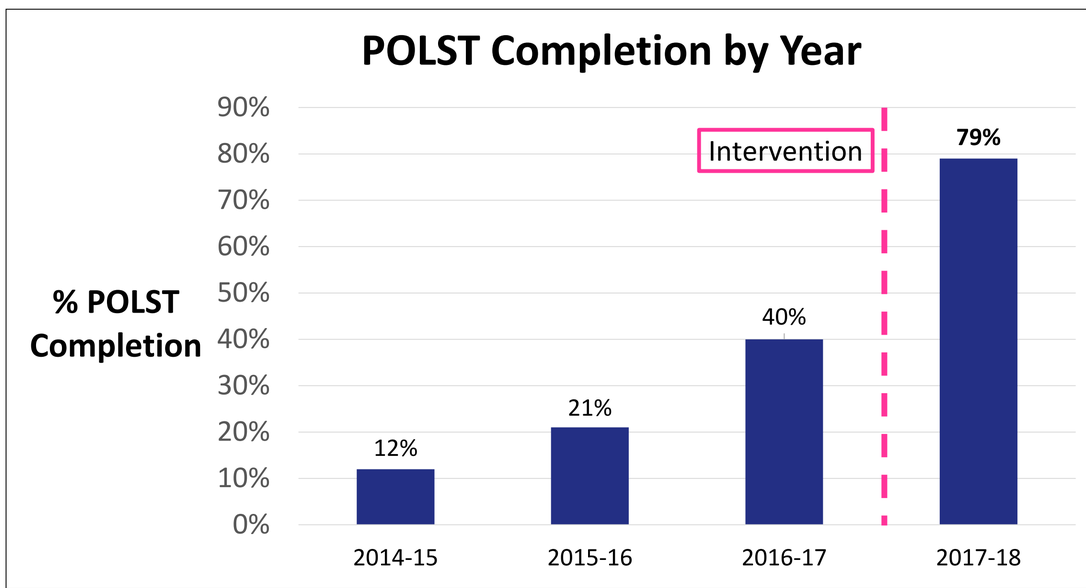
Education

1) Resident education via conference presentation, handouts, and email
2) Nursing and staff education via staff meeting presentations, handouts, and email
3) Created instructions for EMR resources
4) Informational flyers on neurology units
5) Bimonthly email reminders

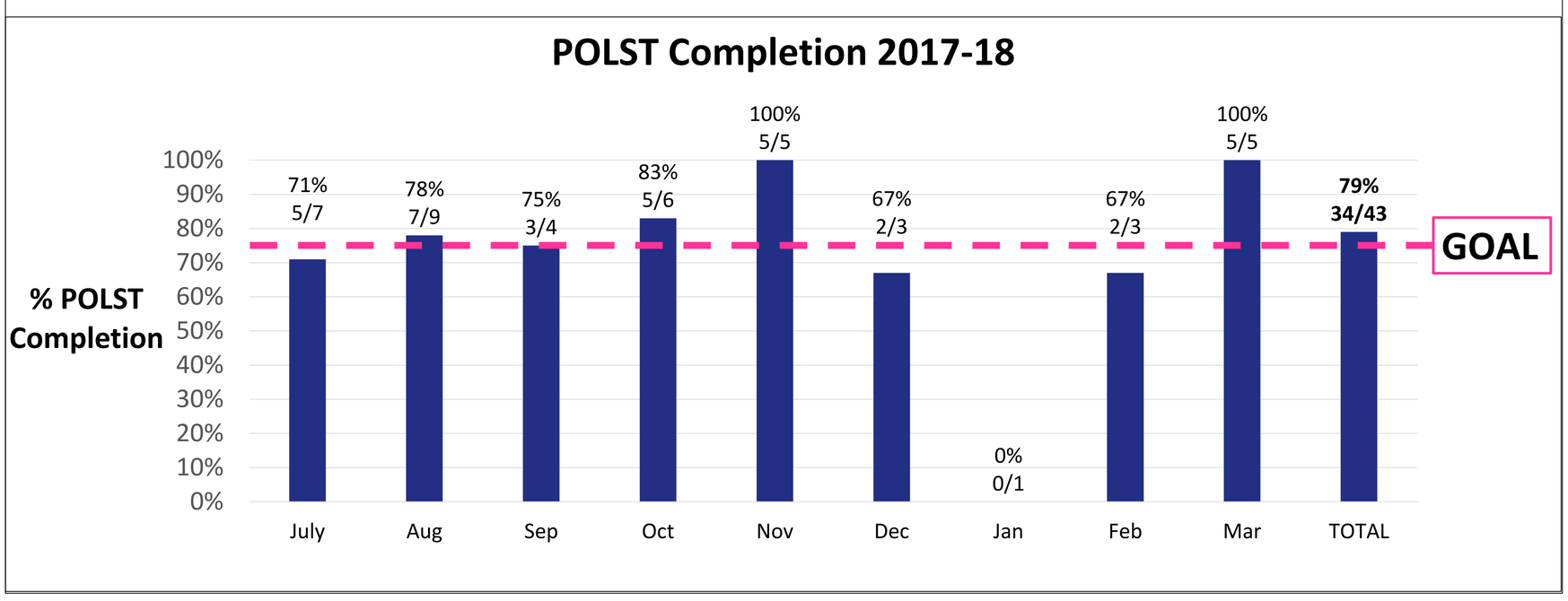
Evaluation

1) Created EMR report to tract measurements for all patients discharged from neurology units
2) Provided bimonthly results dashboard to teams
3) Shared positive public announcements for teams that surpassed goal
4) Results posted on neurology unit boards

Project Evaluation & Impact



- Post-intervention: 79% of patients who were not "Full Code" at discharge had POLST forms completed
- Significant improvement from pre-intervention 26% POLST completion ($p < 0.001$)



Next Steps, Dissemination & Lessons Learned

Next Steps:

- Design system to ensure sustainability including positive reinforcement and education

Dissemination:

- Creates an interdisciplinary model that can be applied to other inpatient units

Conclusions:

- Targeted educational and system-level interventions can improve advance care planning and transitions in care to promote treatment aligned with patients' wishes
- Interdisciplinary approach critical to creating and promoting a successful system change

References:

1. Silveira MJ, Kim SY, Langa KM. Advance directives and outcomes of surrogate decision making before death. N Engl J Med. 2010;362(13):1211-1218.
2. Wilson CJ, Newman J, Tapper S, et al. Multiple locations of advance care planning documentation in an electronic health record: Are they easy to find? J Palliat Med. 2013;16(9):1089-1094.
3. Josephson S, Ferro J, Cohen A, Webb A, Lee E, Vespa P. Quality improvement in neurology: Inpatient and emergency care quality measure set. Neurology. 2017;89(7):730-735.

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Head and Neck Surgery Complex Discharge Coordination

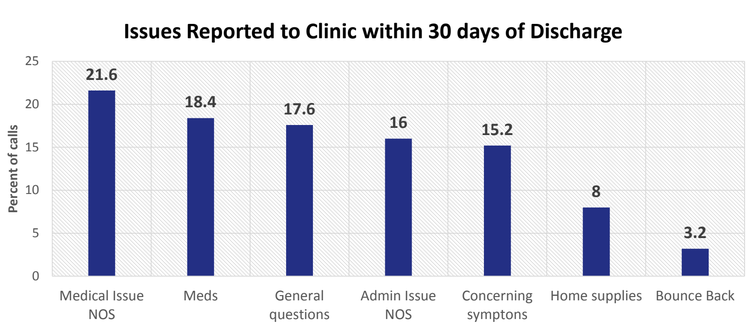
Sean Alemi, MD; Elizabeth Cedars, MD; Molly Naunheim, MD; Conor McLaughlin, MD; Samantha Kahn, Cherie Adrian RN, MSN, OCN

Otolaryngology – Head and Neck Surgery

Background

UCSF as an institution aims to achieve zero harm and continually improve patient care. Head and Neck Cancer patient discharges after free-flap surgery are complex, requiring coordination of equipment and home health services, as well as patient understanding and support. However, there are concerns about patient safety at discharge: patients call after discharge with many issues, including confusion about wound care and lack of appropriate supplies, and can have subsequent ED visits or readmissions.

- OHNS service readmitted **11.96%** of its patients within 30 days of discharge from July 2016 – March 2017 (ReDash).
- The average length of stay for the H&N service is **6.41 days** for YTD as of Jan 2017 (Svcline dash), with 7 medically unnecessary days of inpatient care per week due to discharge delays (1 wk resident tracking).
- Outpatient clinic RN receives **20.8** post-operative issues/day (1 wk RN tracking). 47.2% of issues are a result of medication issues, general questions, home supplies, and unplanned medical care.



Project Goals

- From July 1 2017 – June 30 2018:
  - Reduce number of post-op issues managed by outpatient RN by 20%
  - Reduce readmissions rate to be no more than 11.6% to align with UCSF target.
  - Maintain or reduce current average length of stay and medically unnecessary inpatient days
  - ***Process measure: 80% compliance with intervention***

Project Plan and Intervention(s)

Our gap analysis revealed the following areas as potential contributors to our current state:

- Medication Issues: conflict between national initiative to reduce pain meds and patient need; unknown pain med requirements; drug not a covered benefit and requires further authorization; patients do not leave hospital with medications in hand
- General Questions: different hospitalization experiences for every patient; different needs with different discharge instructions; patients don't know what is normal after discharge; information is too much and nonstandard = patient confusion, forgetful, not relevant at time
- Home supplies: patients don't have DME they need upon discharge; insurance doesn't cover DME; no access to supplies they need in their community
- Bounce back: unanticipated medical problems; inability to tolerate PO; poor pain control; lack of understanding of normal post-op course; lack of supplies in their community/outpatient

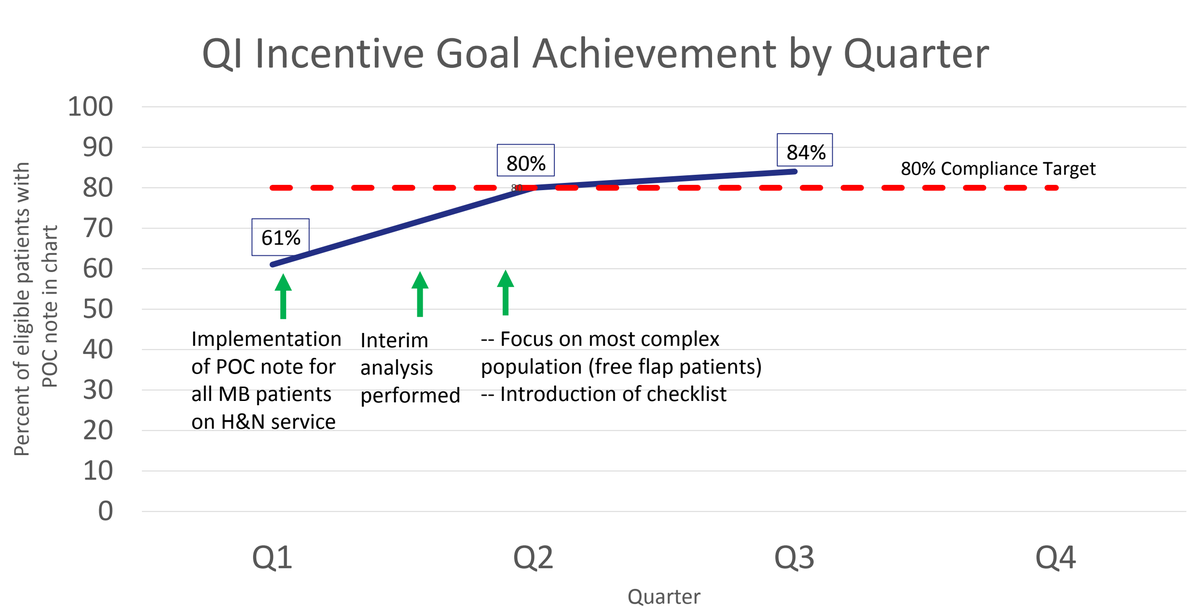
After discussion with residents, attendings, and the UBLT, the planned intervention entailed:
Standardized communication tool in the form of a "Plan of Care" note placed by primary team on transfer from ICU to floor (usually POD2) for all Mission Bay free flap patients. Includes checklist of the following information:

- Anticipated discharge destination
- Wound care
- Anticipated discharge diet
- Anticipated home equipment needs
- Anticipated home care
- RN teaching needs
- Outpatient follow-up needs

The goal is to improve communication such that all team members have an understanding and early awareness of the discharge plan; provide consistent patient and family teaching throughout admission; and enable outpatient team to reference the anticipated plan after discharge.

Our resident incentive goal consisted of the following process measure:
Use of the communication tool in at least 80% of Mission Bay free flap patient care episodes between July 1 2017 – June 30 2018.

Project Evaluation & Impact



- Readmissions: **7.5%** FY2018 TD (ReDash, OHNS MB units A5, A6).
- LOS: **5.06 days** (Svcline dash, Head & Neck Surg)
- Outpatient team tracking of calls and resident assessment of medically unnecessary days pending.

Next Steps, Dissemination & Lessons Learned

Next Steps:
-Assess utility and ease of use from perspective of care team (attendings, residents, PT, OT, SLP, case management), and modify as needed
-Incorporate information contained in note into standardized pathway currently being developed
-Assess outpatient tracking of calls to identify areas of continued care breakdown and consider additional interventions to improve understanding and care

Dissemination:
Incorporation of a system of documentation for early coordination of care during admission could be performed by other services, with modification of checklist to address individual service needs

Lessons Learned:
Improvement is best implemented with involvement of multiple people rather than reliance on a single individual to achieve a task; Communication continues to be an area of improvement that can significantly impact patient care.

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Improving Inpatient to Outpatient Follow-up for Ophthalmology Consults at Parnassus

Catherine Sun, MD

Ophthalmology Residency

Background

Inpatients seen for ophthalmology consultation are not always seen for their recommended follow-up in ophthalmology outpatient clinics following discharge. It is important to ensure that patients with serious ophthalmic conditions that can be vision-threatening are not lost-to-follow-up.

Between 3/1/17-3/28/17, 33 inpatient ophthalmology consults were seen at Moffitt-Long Hospitals.

•Of the 16 patients whom we recommended outpatient follow-up and who did not have an existing non-UCSF eye provider, 5 (31%) had scheduled appointments listed for ophthalmology clinic as of 4/7/17.

•Of those 5 patients, 2 (33%) patients no-showed and were rescheduled, and 1 patient had follow-up scheduled in the near future (after review date of 4/7/17).

While these numbers are only representative of one month, it appears that there is room for improvement in terms of scheduling follow-up and increasing outpatient follow-up adherence.

Project Goals

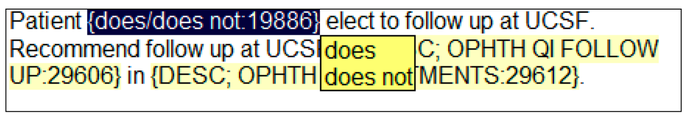
Residents will increase the outpatient follow-up adherence from **33% to 50% for 3-out-of-4 quarters** for Moffitt-Long inpatients who were seen as ophthalmology consults and had recommended outpatient follow-up scheduled in ophthalmology clinic.

Project Plan and Intervention(s)

Factors that may contribute to low outpatient follow-up include difficulty scheduling appointments, insurance coverage issues and patient no-show. Barriers to scheduling a follow-up appointment include lack of communication between the primary team and ophthalmology consult resident, and/or between the ophthalmology consult resident and the ophthalmology scheduling staff. In patients who no-show for their appointment, this may be due to lack of reminders, difficulty with transportation or other unidentified reasons.

We reviewed and updated our consult note template with clearer instructions regarding recommended outpatient follow-up with pull-down menus. These changes were incorporated into a public smartphrase called **.ophthofollowup** (see below) that we incorporated into all of our consult notes on 7/28/17.

1)



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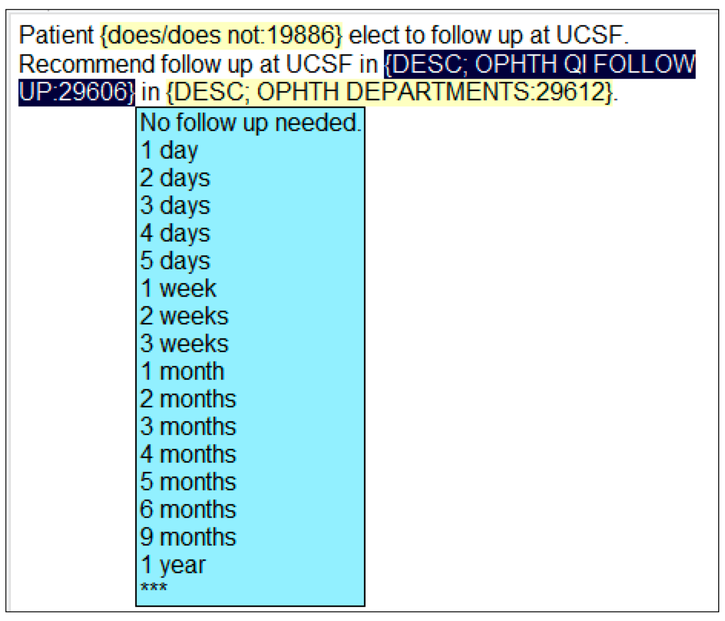

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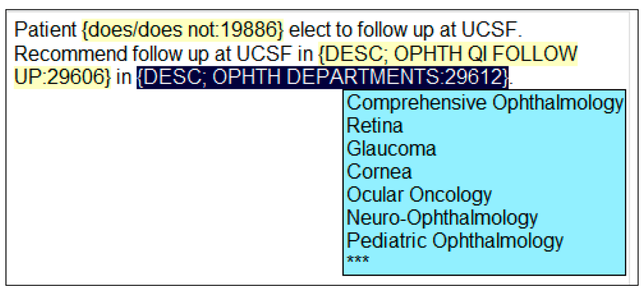


4) The patients who elected to follow-up at UCSF autopopulated an Epic report (**Ophthalmology QI REP0066557**) that could be accessed by our support staff to help schedule appointments. Residents also sent Epic messages to our scheduling staff about follow-up appointments.

This QI report that we created and fine-tuned with the help of the EHR Reporting team also allowed us to better track patient follow-up. It provided information regarding:

- Next ophthalmology/optometry clinic visit date
- Type of ophthalmology/optometry clinic
- Visit status (scheduled, completed, no showed, cancelled)

Project Evaluation & Impact

	Quarter 1 (8/2017-10/2017)	Quarter 2 (10/2017-1/2018)	Quarter 3 (1/2018-4/2018)
Number of Consults seen	47	126	87
No. of scheduled outpatient appointments at UCSF ophthalmology	33	76	62
No. appts that occurred*	32	64	60
No. of completed appts*	**27 (84%)**	**48 (75%)**	**37 (62%)**
No. of no shows*	5 (16%)	12 (19%)	19 (32%)
No. of cancelled appts*	0 (0%)	4 (6%)	4 (6%)

*Of all the appointments that occurred at the time the report was run at the end of each quarter

Met goal of >50% outpatient follow-up adherence for 3 out of 4 quarters!

Next Steps, Dissemination & Lessons Learned

Next Steps:

- Better utilization of the Epic report to send patient reminders about appointments
- Trying to reduce the extra step of sending Epic messages to scheduling staff to schedule follow-up

Dissemination:

- Creating a smartphrase for follow-up that autopopulates into a report that can be tracked can be utilized by many consult services.

Lessons Learned:

- Tracking patient follow-up is the first step to improving adherence

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program

in partnership with the 2018 UCSF Health Improvement Symposium

Reducing Discharge Opioid Prescriptions after Orthopaedic Surgery

Trevor Grace, MD; Patrick Curran, MD; Bobby Tay, MD; Mohammad Diab, MD; Erik Hansen, MD

UCSF Department of Orthopaedic Surgery

Background

- The U.S. is currently in an opioid epidemic, which has been a focus of recent legislation and media attention
- Unfortunately, opioids prescribed after surgery are common sources for misuse and diversion, and may be a significant contributor to the opioid crisis
- Musculoskeletal is known to be more painful than other procedures, and Orthopaedic Surgeons thus hold an important responsibility to curb excessive opioid prescriptions

Project Goals

- The goal of this QI initiative is to promote judicious and standardized prescribing practices by reducing the number of opioids prescribed by our department
- Specifically, we sought to decrease the median discharge opioid prescription by 10% compared to the 2016-2017 academic year

Project Plan and Intervention(s)

- We performed continuous quantification and monitoring of discharge opioid prescriptions provided to Orthopaedic inpatients being discharged by Orthopaedic Residents, Nurse Practitioners, or Physician's Assistants at UCSF
- After each rotation, summary graphs (Figs 1-2) would be emailed to the entire Orthopaedic department detailing the median discharge opioid prescription provided for that rotation, and comparing it to the prior year's median and the goal
- Encouraging tips, techniques, and reminders were included with each email to promote judicious prescription practices

Figure 1: Example Summary Graph (total)

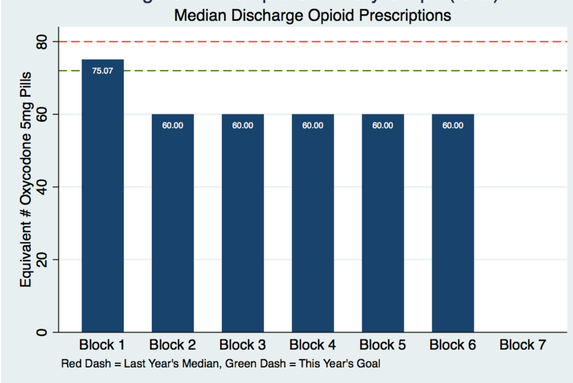
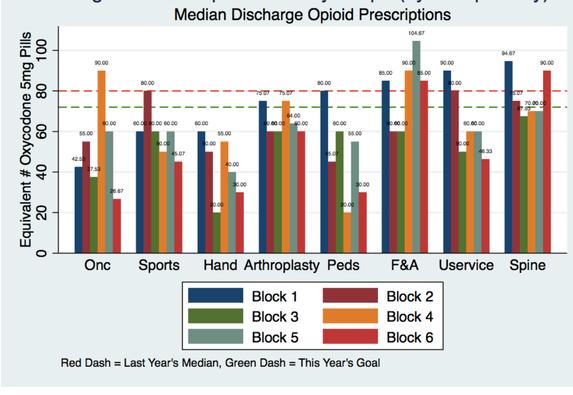


Figure 2: Example Summary Graph (by subspecialty)



Project Evaluation & Impact

- We observed a substantial decrease in the median discharge opioid prescription across the entire orthopaedic department in the 2017-2018 academic year, as compared to the 2016-2017 academic year (Fig 3)
- This decrease was observed in each Orthopaedic subspecialty (Fig 4)

Figure 3: Comparison to 2016-2017

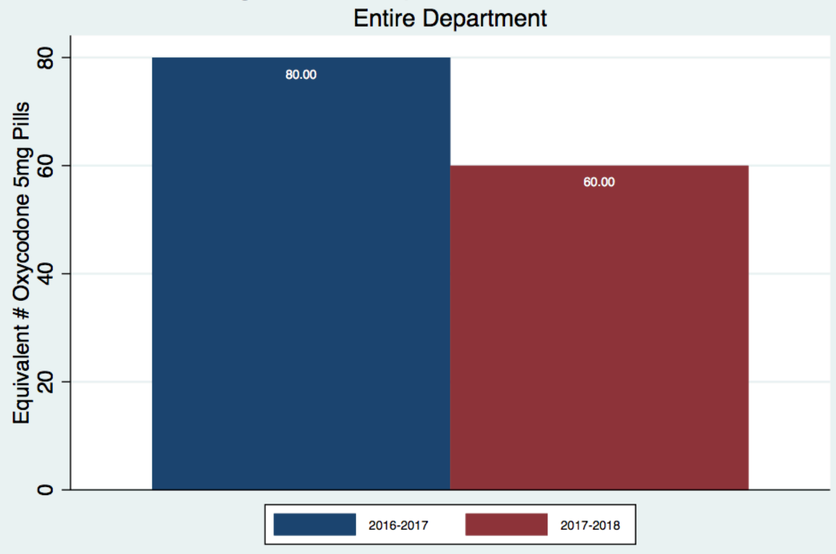
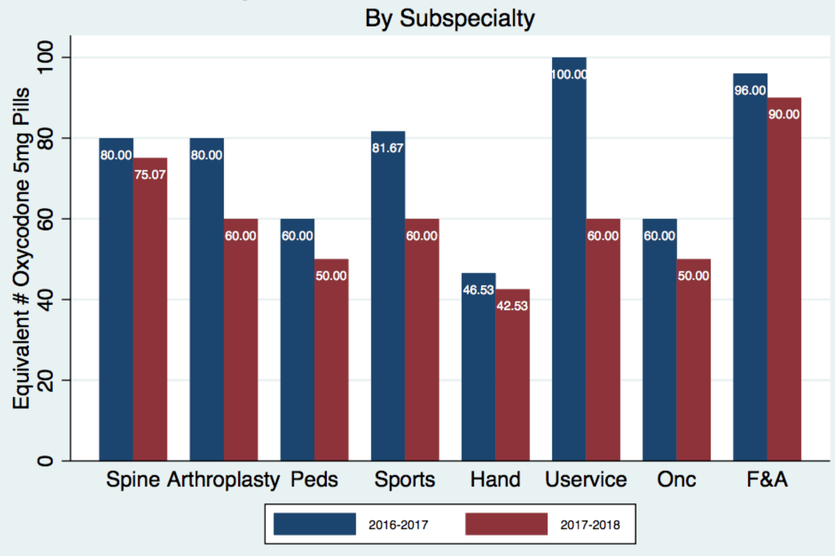


Figure 4: Comparison to 2016-2017



Next Steps, Dissemination & Lessons Learned

Next Steps:
Analyze post-discharge data including refill rates within 0 and 30 days after surgery to gauge the effect of reduced opioid prescriptions
Implement an order set to further standardize discharge prescription regimens in each subspecialty
Continue quantification and monitoring of discharge opioid prescriptions as means to promote judicious prescription practices

Dissemination:
Periodic notifications of discharge prescription quantities could be provided to each department or even each provider to promote transparency
The Electronic Medical Record (EMR) could automate discharge prescription quantities and notify providers if they exceed recommended regimens

Lessons Learned:
The most valuable lesson we learned from this project is the importance of teamwork and collaboration in working toward a collective goal. We had multiple meetings to openly discuss strategies, ideas, and directions to take in order for us to achieve our target. These discussions were invaluable in the success of our Quality Improvement project this year.

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
in partnership with the 2018 UCSF Health Improvement Symposium

Reducing Perioperative Costs: Parental Presence Induction Gowns

Team Members

Denise Chang, M.D.
Masood Memarzadeh, M.D.
Jina Sinskey, M.D.
Marla Ferschl, M.D.
Pediatric Anesthesia Fellowship

Background

- Anxiety-reducing strategies surrounding anesthesia in pediatric patients is important and improves patient experience.
- Historically, this was accomplished with pharmacologic agents, which have undesirable side effects including delayed emergence and prolonged PACU stay.
- A promising alternative strategy to reduce pediatric preoperative anxiety is parental presence induction during anesthesia, where a familiar adult stays with the child until he or she is completely asleep, thereby reducing stranger anxiety.
- Approximately 80% of scheduled pediatric OR cases involve parental presence on induction.
- Procedurally, parents wear a disposable protective suit (bunny suit) over their street clothes and a bouffant hat.
- However, these bunny suits are quite expensive, with a cost of $1.12/suit. In addition, these suits are not gender-sensitive or culturally sensitive.

Project Goals

- We aim to reduce spending on protective garments for family members by 10% cumulatively over FY17.
- As pediatric anesthesia practice has changed, more and more parents are invited back into the operating room with their child and therefore must wear appropriate covering for the sterile environment.
- Although the number of bunny suits used per year has increased dramatically over the past 5 years, the cost impact of this change has not been analyzed.

Project Plan and Intervention(s)

1. Determine baseline levels of bunny suit usage over a two week period in September 2017, extrapolating this data to approximate number of suits used annually, and annual cost.
2. Survey other major pediatric surgical centers who regularly invite parents into their ORs for the induction of anesthesia to determine what alternatives to the bunny suits exist.
3. Compare pricing for different options, and propose a new garment that is satisfactory and cost effective to the pediatric OR committee for evaluation and approval prior to implementation.
4. Purchase and roll out cost effective parental presence induction gowns.
5. Determine post-intervention parental presence induction gown usage over a two week period and extrapolate cost savings.

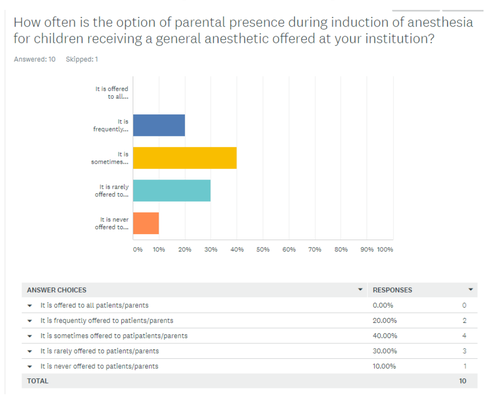
“Bunny suit”

Covered hood

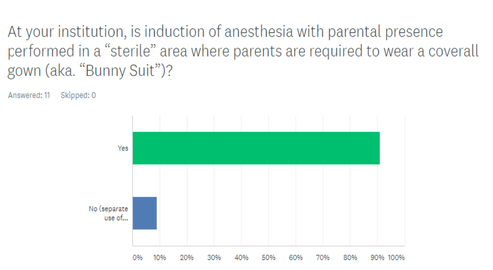
“Blue smock”

Project Evaluation & Impact

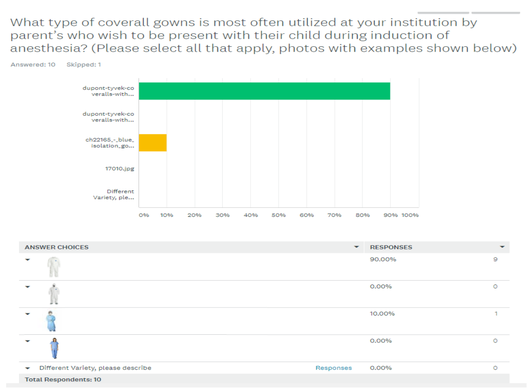
1. Average baseline bunny suit usage (determined over two week period in Oct 2017): 11 gowns/day. Annual cost of bunny suits = $4,496 (11 gowns/day x $1.12/gown x 365 days).
2. Survey sent nation-wide to 21 major pediatric surgical centers, with 11 responses – Most centers that utilize parental presence induction utilized bunny suits.



ANSWER CHOICES	RESPONSES	
It is offered to all patients/parents	0.00%	0
It is frequently offered to patients/parents	20.00%	2
It is sometimes offered to patipatients/parents	40.00%	4
It is rarely offered to patients/parents	30.00%	3
It is never offered to patients/parents	10.00%	1
TOTAL		10



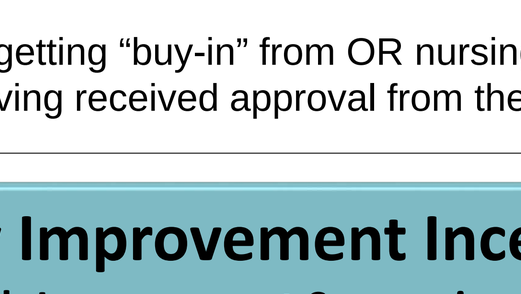
ANSWER CHOICES	RESPONSES	
Yes	90.91%	10
No (separate use of non-“sterile” induction rooms for induction with parental presence)	9.09%	1
TOTAL		11



ANSWER CHOICES	RESPONSES	
	90.00%	9
	0.00%	0
	10.00%	1
	0.00%	0
Different Variety, please describe	0.00%	0
Total Respondents: 10		

3. Selected “blue smock” protective gown (pull over, fluid-resistant, accommodates wide range of height/weight, dresses/skirts). Cost efficient at $0.55/gown.
4. Approved by perioperative OR nursing committee with formal roll out starting 4/2/2018 with emails to perioperative nursing staff and anesthesia providers.
5. Post-roll out blue smock usage at 6 gowns/day and bunny suits at 5 gowns/day, likely due to inadequate dissemination of roll-out information and concerns raised from intraoperative OR nursing regarding inadequate posterior coverage of blue smocks. See Figure 1 for projected cost savings (28% annual savings).

Figure 1. Projected Annual Costs of Parental Presence Induction Gowns



Next Steps, Dissemination & Lessons Learned

Next Steps:

- Develop new proposal for gowns given OR nursing concerns regarding inadequate posterior coverage of smocks.
- Discuss roll-out of newly proposed gowns with OR nursing staff to ensure agreement.
- Roll out newly proposed gown with emails and flyers in the preoperative areas.

Dissemination:

- This improvement is unique to pediatric anesthesiology where parental presence on induction of anesthesia is desired.

Lessons Learned:

- We learned the importance of getting “buy-in” from OR nursing staff at the ground level for the proposed changes, despite having received approval from the OR nursing staff leadership.

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
in partnership with the 2018 UCSF Health Improvement Symposium

Improving Detection & Treatment Of Post-Cardiac Catheterization Vascular Occlusion Complications

Fatemat Hassan, MD, Anyir Hsieh, MD, Christiana Tai, MD, Diwakar Turaga, MD, PhD, Samuel Keller, MD, Phillip Moore, MD

Pediatric Cardiology Fellowship Program

Background

True north Pillar:

Quality and Safety
(Achieve zero harm and continually improve patient care)

Femoral arterial and/or venous occlusion is a common complication following cardiac catheterization with incidence rates ranging from 1-9% (Glatz et al 2013). Risk factors include small patient size, large sheath size, history of repeated femoral access and duration of cardiac catheterization.

Patients with single ventricle physiology who require multiple cardiac catheterizations and surgeries are particularly at risk for development of occlusions. Furthermore, If they develop occlusions, they may be subjected to riskier future procedures, such as jugular venous access or transhepatic access. Maintenance of vessel patency is also needed for central access for future surgeries, ECLS, hemodialysis, and transplant, which they may require in the future. Even if future central access is not required, there may be long-term effects of femoral venous and arterial occlusion on limb growth and development of claudication and peripheral vascular disease.

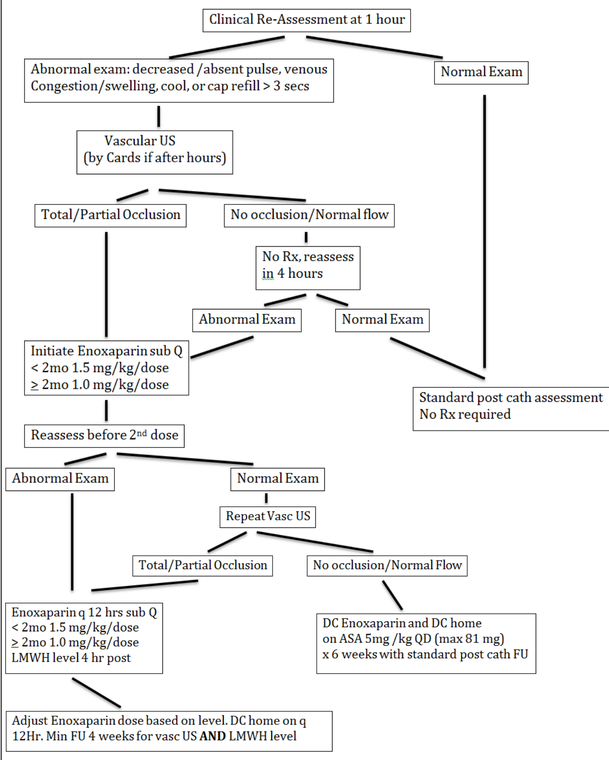
If femoral venous or arterial occlusion is promptly diagnosed and treated, vessel patency may be salvaged and maintained. Currently at UCSF, vascular occlusions are not consistently documented, imaged or treated. We hope to implement a protocol which streamlines and standardizes our approach to post-cardiac catheterization femoral vessel occlusion in order to maintain vessel patency for our patients.

Current Conditions

Although post-catheterization occlusion is common, it is poorly documented with only one case recorded in 2016 and four in 2015. We know of 3 patients who required Broviac line placement in the CICU due to lack of femoral venous access following cardiac catheterization or prior femoral line placement. There is little data about the patients who are discharged home following cardiac catheterization.

Project Plan and Intervention(s)

Lower limb pulses, perfusion and congestion are examined immediately following cardiac catheterization and again in 4-6 hours by a physician. In addition, bedside nurses perform neurovascular checks at standardized intervals. If there is a concern for weak/absent pulse or venous congestion, the patient is usually treated with heparin or Lovenox. Some patients may also undergo vascular ultrasound to confirm occlusion prior to starting anticoagulation. The duration of treatment is variable from a few hours to a few months and usually dictated by clinical symptoms. There is inconsistency in obtaining follow-up vascular ultrasound to demonstrate complete resolution of occlusion.



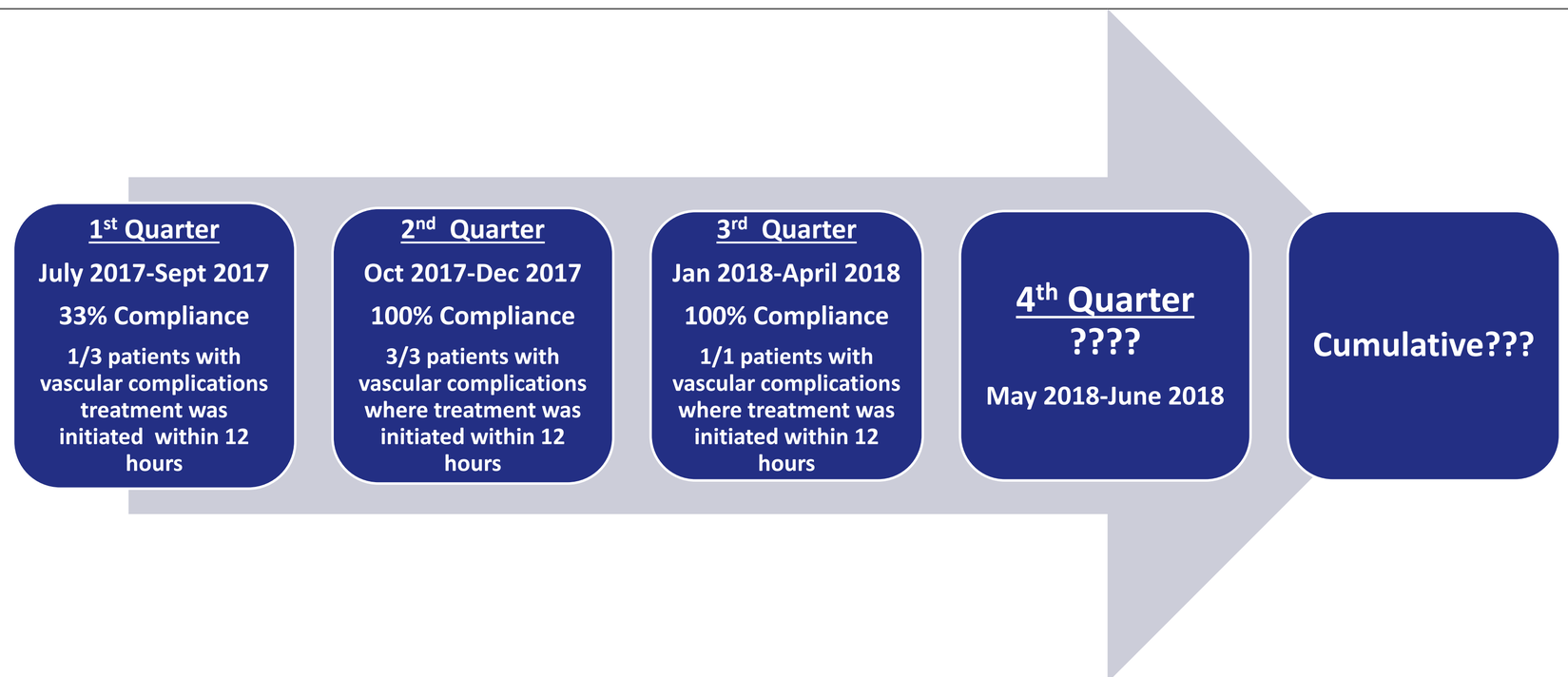
Gap Analysis/Barriers:

- Difficulty of ordering vascular ultrasounds at the Mission Bay campus especially during weekends and after hours.
- Vascular occlusion is generally diagnosed following completion and documentation of the cardiac catheterization. Attendings need to take an extra step to addend already completed notes if occlusion develops.
- There is significant treatment variation between providers in terms of threshold to treat, duration of treatment, and follow-up.
- Follow-up vascular ultrasounds cannot be obtained as an outpatient at the Mission Bay Campus, requiring patients to go to Parnassus. (may be especially difficult to obtain for those who live far from San Francisco and do not have local access to vascular ultrasounds).
- There is lack of follow-up with patients who are referred to our institution from outside providers with regard to duration treatment and resolution of occlusion.

Interventions:

- Initiated pulse checks one hour after sheath pull by the cardiology fellow, attending or NP and initiating work-up at that point.
- New protocol for vascular occlusion management was distributed to the various units involved in the management of these patients (PACU, ICN, CTCU, PCICU, PICU)

Project Evaluation & Impact



Project Goals

- **Identifying and initiating treatment of vascular complications post-cardiac catheterization within 12 hours of the procedure in 75% of the cases.**
- Fellows will promptly identify and treat patients with absent/decreased pulses or venous congestion after cardiac catheterization based on clinical exam +/- vascular ultrasound and initiating anti-coagulation therapy within 12 hours after the cardiac catheterization.
- Management will be based on a protocol designed and proposed jointly by cardiology and hematology.

Next Steps, Dissemination & Lessons Learned

Next Steps:

Lower limb vascular imaging on all patients after cardiac catheterization
1- To identify the true incidence of vascular complications.
2- Treat more patients in an attempt to decrease the number of cardiac patients that struggle due to lack of central access for monitoring or medications. Especially during major cardiac procedures.

Dissemination:

Hoping to disseminate the protocol to other services at Benioff Children's Hospital that use frequent femoral access like the PICU and PCICI.

Lessons Learned:

We were able to employ the one hour post-cath vascular exam.
It would be interesting to know the long-term manifestations of these vascular occlusions (treated and untreated)

UCSF Resident and Clinical Fellow Quality Improvement Incentive Program
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Improving Procedural Sedation Documentation in the Pediatric ICU

Helayne Feferman MD, Jenifer Twiford RN, Brandie Hollinger RN, Mary Nottingham RN, Peter Oishi MD, Deborah Franzon MD

UCSF Department of Pediatrics, Division of Critical Care

Background

Procedural sedation is a frequent practice in the ICU. Because sedation is now commonly administered by non-anesthesiologists and not in the OR, the Joint Commission (JCAHO) has set forth a procedural sedation checklist that should be complied with prior to, during, and after all procedural sedation administrations.

Sedation documentation does not occur reliably in the PICU but is a required element of procedural sedation in order to comply with quality & safety standards set forth by the Joint Commission (JCAHO). The UCSF sedation committee conducts audits on the following components monthly to ensure compliance:

1. H&P/Interval history on record
2. NPO status
3. Pre-procedure equipment checklist
4. ASA Classification
5. Immediate pre-sedation assessment
6. Mallampati classification
7. Timeout completed
8. Discharge criteria met

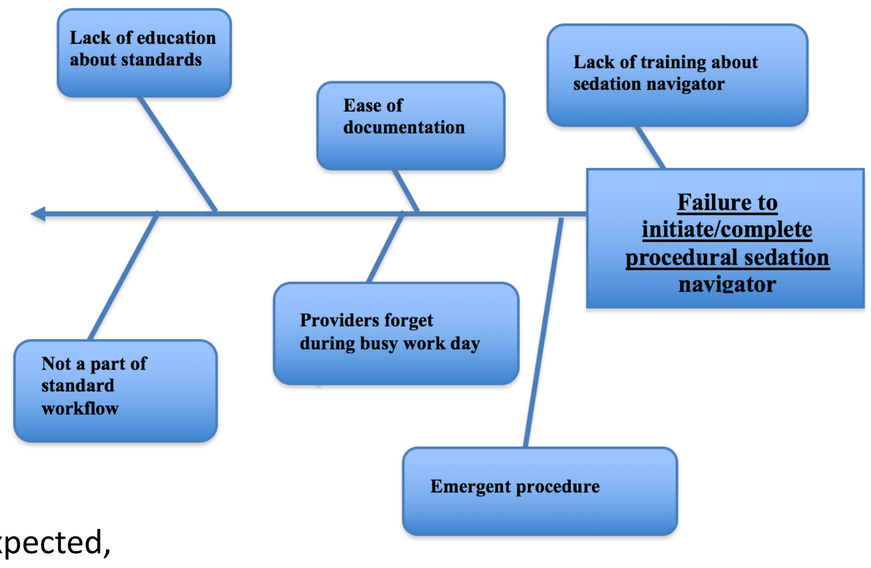
Project Goals

Out of 54 procedural sedation logs initiated in the Pediatric ICU in 2016-2017 CY, only 3 (5.5%) logs were complete and adherent to JCAHO regulations.

We aim to increase total procedural sedation log completion from 5.5% to 75% completion in the PICU 2017-2018 CY. A secondary goal will be to increase documentation of pre-procedural MD/NP assessment from 52% to 90%.

Project Plan and Intervention(s)

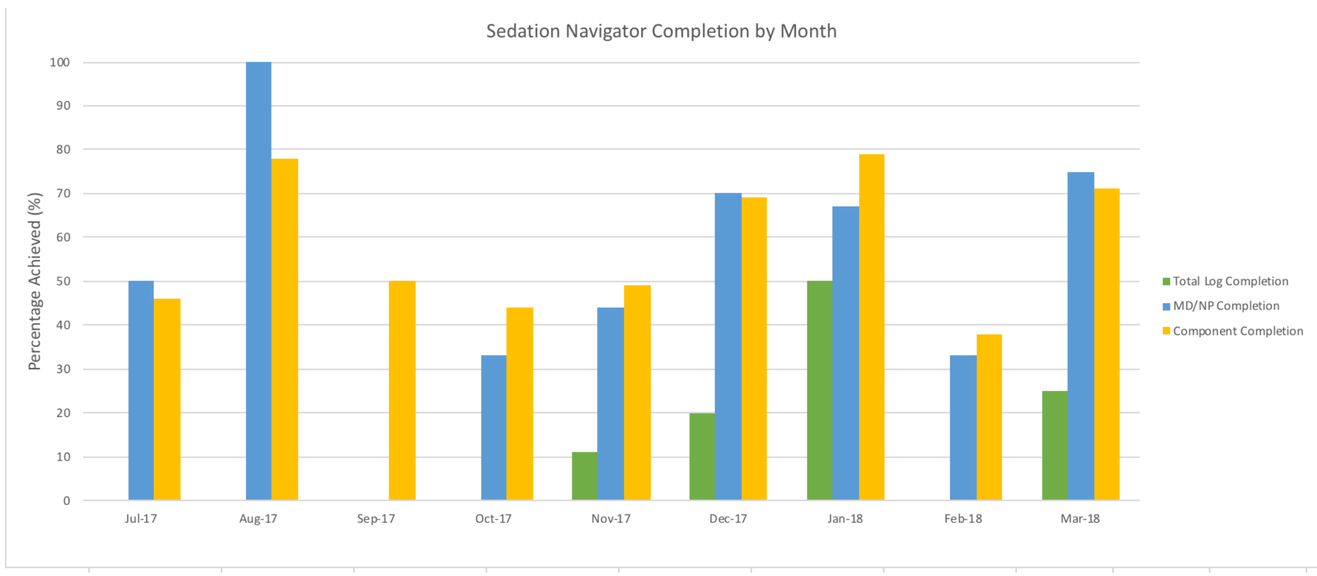
We began initially conducting a pre-assessment to examine the barriers related to poor documentation in the Pediatric ICU. Providers & RNs were asked to complete a short quiz assessing the use of the sedation navigator, as well as the appropriate patient population for the navigator. We found a general lack of education about standard use of the navigator and the qualified patient population.



To improve this process, we prepared two educational presentations: one aimed towards the MD/NP patient providers, explaining the standards expected, how this will improve patient care, and education on how to complete the sedation log. The second presentation was aimed towards the patient RN, who plays a large role in completion and can be a significant patient advocate for completing procedural sedation navigator/checklist.

Project Evaluation & Impact

Outcome Measured	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
Total Log Completion	0/6 (0%)	0/4 (0%)	0/1 (0%)	0/6 (0%)	1/9 (11%)	2/10 (20%)	3/6 (50%)	0/6 (0%)	1/4 (25%)
MD/NP Completion	3/6 (50%)	4/4 (100%)	0/1 (0%)	2/6 (33%)	4/9 (44%)	7/10 (70%)	4/6 (67%)	2/6 (33%)	3/4 (75%)
Component Completion	22/48 (46%)	25/32 (78%)	4/8 (50%)	21/48 (44%)	35/72 (49%)	55/80 (69%)	38/48 (79%)	18/48 (38%)	20/28 (71%)



Next Steps, Dissemination & Lessons Learned

Next Steps:

1) Continued education on the importance and appropriate usage of the sedation navigator
2) Cooperative work with the established UCSF Sedation committee
3) Continued assessment and analysis on success of completion of the navigator
4) Implementation of 'sedation navigator checklist' as part of the routine time-out proceedings

Dissemination:

1) Education of what qualifies as procedural sedation as part of orientation to employees in affected hospital areas
2) Inclusion of procedural sedation navigator training modules in routine EPIC training that occurs for new employees

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Improving Early Discharge from the Pediatric Acute Care Floor

David Chen, MD MPH*, Matthew Nordstrom, MD*

Faculty Sponsors: Glenn Rosenbluth, MD, Arpi Bekmezian, MD, Darren Fiore, MD

Department of Pediatrics

*Indicates co-authorship

Background

- Discharge before noon (DBN) rates are an increasingly used hospital metric

- DBN can improve throughput of patients from high-cost/resource areas such as the ED and ICU to the floor via the following, though the effects are controversial[1]:
  - Decreased ratio of expected to actual LOS and reduced readmission rate[2].
  - Move median time of emergency department admissions and transfers from 5pm to 4pm[3].

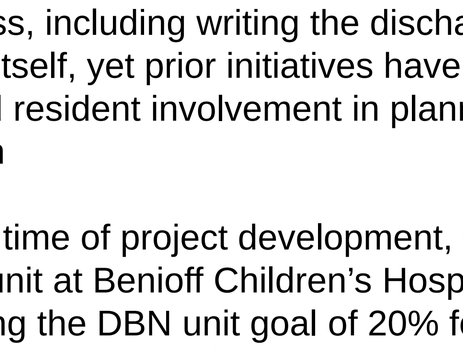
- In recent years, numerous changes have been implemented such as a daily "Tee Time" meeting for discharge planning and incentives for each patient discharged before noon.

- Residents are crucial to the discharge process, including writing the discharge order itself, yet prior initiatives have only had limited resident involvement in planning and design

- At the time of project development, C5 Med Surg unit at Benioff Children's Hospital was meeting the DBN unit goal of 20% for 6 out of the prior 10 months.

Project Goals

- In this context, we decided to develop our QI project as an initiative to improve DBN, focusing on areas residents have control
- We aimed to improve on the prior year's discharge before noon rate. At the time of project development, the DBN rate from last year was 20.9%.



- In consultation with pediatric faculty, we decided that aiming for an approximate 15% relative increase was a target that was substantial and achievable. Thus, our formal QI project goal was:

"The percentage of patients discharged before noon from the pediatric hospital medicine (purple, orange, and green services) will exceed 24% from July 1st, 2017 to June 30th, 2018 at UCSF Benioff Children's Hospital"

Plan and Intervention

- We developed "Early Discharge Best Practices" (see right panel) and disseminated them to all residents, with routine reminders at each rotation change. These items were focused on those items with resident control.

- At the beginning of January, we implemented a discharge orders in before 8 AM initiative, incorporating the day and night shift teams. The day team would relay anticipated discharges and the night team would prepare them for discharge. If the night team indicated in the morning that the patient met discharge criteria, a conditional discharge order would be written prior to 8 AM and the attending notified

- Regular updates were emailed out to residents on the acute care floor

Best Practices for Discharge Planning

As discharge approaches (2-3 days before):
(1) Discuss discharge planning on rounds and at Tee Time (R3)
(2) Discuss follow-up plans with consultants and communicate with Case Management (R1 & R3)
(3) Set expectations with families about the discharge time (i.e. in the morning if possible) (R1 & R3)

Day before discharge:
(4) Pharmacy - settle discharge prescriptions if possible (R3)
(5) Check with consultants if they need to see the patient prior to discharge (R1)
(6) Finalize f/u needs with subspecialists and inform Case Management (R1 & R3)
(7) Complete DC instructions (R1)

Once you know if the patient can be discharged before noon, make sure R1/R3/Attending are all aware.

Evaluation & Impact

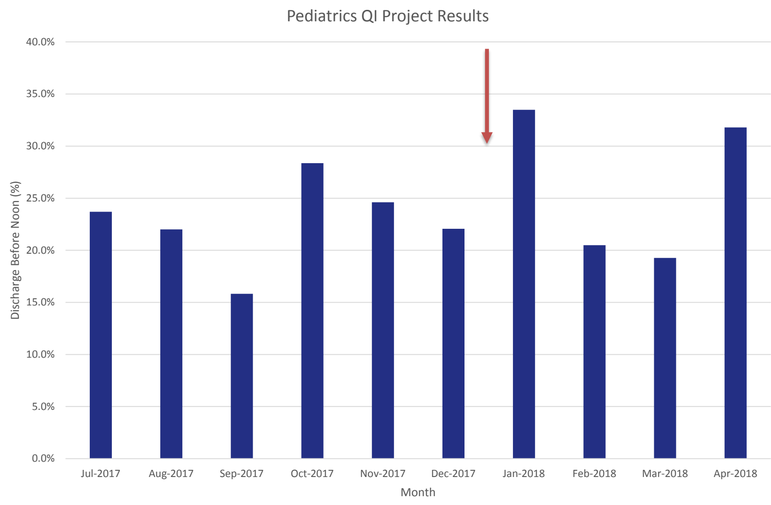
- DBN rates were lower at the beginning of the year, potentially due to new interns and senior residents

- Barriers to DBN were assessed with on service residents on a month to month basis:
  - Many residents identified primary barriers as ones perceived to be out of their control: meds-to-beds/pharmacy, subspecialist discretion, nursing, and transportation.

- Residents provided feedback that pre-rounding and other morning activities made it frequently difficult to assess patients for discharge readiness in the morning
  - Above feedback led to the early discharge order initiative outlined above

- Average discharge rates appeared to increase following the roll-out of the discharge order before 8 AM initiative (red arrow), from 23.0% prior to 26.1% after

- As of April 30th, we are above our goal of 24%, with our current YTD DBN rate at 24.3%



Next Steps, Dissemination & Lessons Learned

Next Steps:
-The main next steps for this project will be maintaining the interventions for future year as well as joining efforts between nursing, pharmacy, case management, and physicians for discharge planning
-Analysis of balancing measures, such as length of stay, to evaluate for unintended effects

Dissemination:
None of the practices used in our project were specific to pediatrics and could be adopted to other inpatient acute care floors. Inter-specialty forums such as GME symposia or chief resident meetings could be used to disseminate best practices across the hospital

Lessons Learned:
-Support for a project from multiple levels is crucial - alignment of this goal with pre-existing goals for faculty, nursing, and other staff

1. Shine, D. Discharge Before Noon: An Urban Legend. The American Journal of Medicine, Volume 128 , Issue 5 , 445 - 446
2. Wertheimer B, Jacobs RE, Bailey M, et al. Discharge before noon: an achievable hospital goal. J Hosp Med. 2014;9(4):210-21
3. Wertheimer B, Jacobs REA, Iturrate E, Bailey M, Hochman K, Discharge Before Noon. J. Hosp. Med 2015;10;664-669

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Increasing Completed PHQ-9 Questionnaires for Ambulatory Adult Psychiatry Follow-up Visits

A. Ning Zhou, MD
Ellie Elmschig, MD
Josh Carroll, MD
Elizabeth Rawson, MD
Weston Fisher, MD

UCSF Adult Psychiatry Residency Training Program

Background

Patients' complaints in psychiatry are inherently subjective. As a result, it can be difficult to track patients' progress overtime when relying on their subjective report. Questionnaires such as the Patient Health Quesitonnaire-9 (PHQ-9) provide a quantified measurement of a patient's depressive symptoms, which can be used for screening as well as tracking symptom change over time. These questionnaires are brief, easily administered, and can be completed electronically. Moreover, insurance companies are increasingly requiring objective measures of patient improvement in order to reimburse for services.

In June of 2015, Langley Porter Psychiatric Institute transitioned to an electronic medical record system, APeX. This created an opportunity to electronically send out questionnaires through MyChart, an online patient portal, and store the results in the patient's medical record. The adult outpatient psychiatry clinics at UCSF are currently automatically sending PHQ-9's to almost all patients electronically through MyChart. However, completion rates of these questionnaires are low.

<u>This is a problem because:</u>

1. It becomes difficult to track how patient's symptoms change over time
2. Insurance companies may not reimburse for visits without more objective data on patient improvement
3. Providers are less accountable for the care they provide
4. Patients are not actively participating in their care

<u>The PHQ-9 completion rates from April 1, 2016 to April 1, 2017 for adult patients were:</u>

- 15.1% of 20,232 **follow-up** encounters
- 35.7% of 789 **new patient intake** encounters

Project Goal

*Increase monthly completion rate of PHQ-9 for all adult psychiatry follow-up encounters to greater than **25%**, cumulative over the 2017-2018 year.*

Project Plan and Intervention(s)

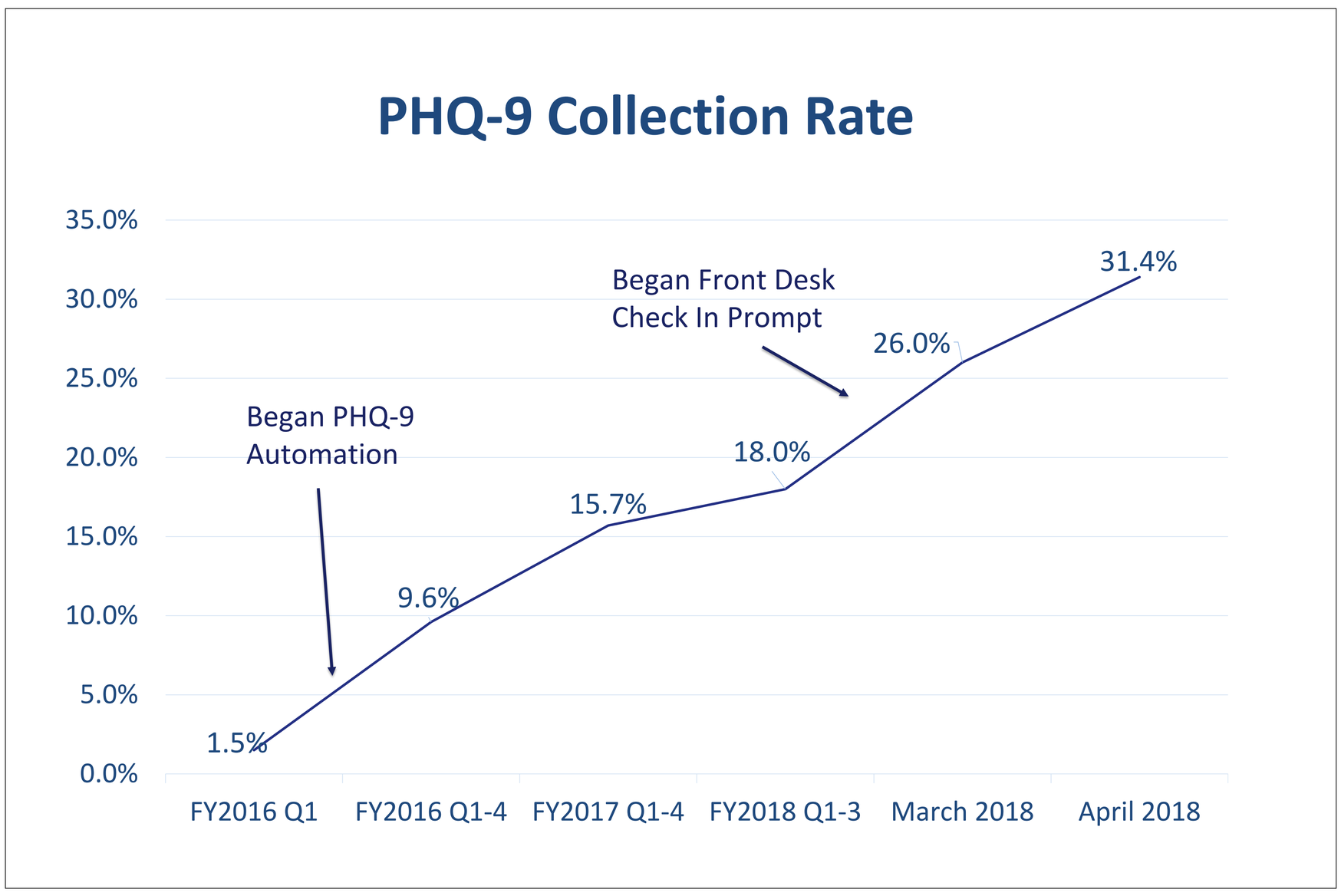
Root causes for why patients do not complete PHQ-9's

- Patients are not on MyChart and thus not receiving questionnaires electronically (about 50%)
- Patients find the questionnaires not important / annoying / too frequent
- Patients did not receive a reminder to complete the questionnaire at the front desk
- Patients have issues with health literacy

Interventions

- <u>Increase provider communication/education to patients</u> about importance of questionnaires, discuss and review data during appointment: emailed all ambulatory providers, presented at Residents' Association meetings, discussed at daily interdisciplinary QI huddles
- <u>Give questionnaires at front desk</u>: worked with Chief Operations Officer and Practice Manager to build workflow for front desk staff to check to see if patients had completed questionnaires at time of check in. Worked with IT to build alert notifying staff when there were incomplete questionnaires. Gave staff individual label-makers to improve work flow
- <u>Allow providers to enter PHQ-9 scores by hand in APeX:</u> Worked with IT to develop functionality for providers to enter paper PHQ-9 results electronically into computer. However, this data showed up in a separate section from patient-entered scores, so worked with IT to develop functionality for providers to answer unanswered questionnaires on patients' behalf which allowed scores to show up in same section
- <u>Reports showing individual provider's numbers:</u> Publically acknowledged top 3 providers with highest PHQ-9 completion rates while publically posting everyone's completion rates for additional motivation

Project Evaluation & Impact



Next Steps, Dissemination & Lessons Learned

Next Steps:

- Continue building PHQ-9 into default clinic flow, e.g. tablet computer available in waiting area
- Hire staff such as medical assistants to complete screening questionnaires directly with patients and enter data into APeX
- Direct messaging to clinicians with low completion rates

Dissemination:

- Reinforce front desk work flow incorporating distribution of unanswered questionnaires.
- Easily adaptable FAQ teaching clinicians how to input PHQ-9 scores into APeX
- Increasing use of ancillary support staff to collect and enter the PHQ-9 scores.

Lessons Learned:

- Even when individuals change quickly, averaged measures respond slowly
- Provider-education yielded very modest improvements in results (3%)
- Systemic change involving adapting front desk work flow brought about the most dramatic improvements (almost 20%) though required buy-in from multiple stakeholders and senior leadership

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Improving Communication Between Inpatient & Outpatient Pulmonologists at the Time of Discharge

Pulmonary & Critical Care Medicine Fellowship Incentive Program

Lekshmi Santhosh, M.D. Janice Hull R.N., M.S. & Lorriana Leard, M.D.

Background

- Unclear **communication** b/w inpatient Pulmonary C/S team & outpatient Pulmonary clinic
- Tackling this problem could address:
  - Follow-up scheduled at an **improper time** frame (i.e. too early or too late)
  - **Inadequate** treatment (if patients are not seen soon enough)
  - **Excessive** treatment (if patients are not tapered off of toxic medications quickly enough)
  - Both patient and physician **satisfaction**
- Currently **23%** pts able to book new patient visits in **<14 days**
- Baseline **cancellation** rate is **28%**
- Only **51%** of patients say they get an appointment as soon as needed.

Project Goals

Project Goals:

To improve **communication** b/w outpatient pulmonologists & inpatient pulmonary consult team by implementing a **discharge template** that summarizes the hospitalization and clearly specifies the time-frame needed and prerequisites before follow-up.

Aim Statement:

Pulmonary/Critical Care fellows rotating on the UCSF Pulmonary Consult service in the year 2017-2018 will reach a goal rate of **75% discharge template completion.**

How to Measure Success:

We tracked discharge **template completion** on the inpatient Pulmonary consult service.

Project Plan and Intervention(s)

Project Plan/Intervention:

- **Step 1: Soliciting Feedback:** Collected feedback from fellows and faculty on ideal template via a variety of mechanisms:
  - Discussions with key outpatient clinical faculty
  - Discussions with Program Evaluation Committee/Curriculum Committee
  - Discussions with fellows on consult service
- **Step 2: Apex Template Design:** Worked with Apex to design template as "Significant Event" note with .pulmdischarge
  - Fellows using this Apex SmartPhrase would pull in the note
  - Revisions of Apex template with outpatient clinic director & Program Evaluation Committee & inpatient consult rotation director
- **Step 3: Data Collection:** Worked w/ Apex to generate report to pull all inpatient pulmonary consults & check for discharge template. Verified with manual Apex chart review.

Project Evaluation & Impact

Template Was Iteratively Revised – Latest Version (May 2018)

Pulmonary Sign-Off Note/Discharge Plan
Date of Consult: [AUTO-POPULATE]
Date of Signoff: [AUTO-POPULATE]
Primary Outpatient PulmonQ1 Q2 Q3 Y 68 **53%** Y 79 **54%** Y 49 **40%** N 60 47% N 66 46% N 75 60% TOTAL 128 TOTAL 145 TOTAL 124 **TOTAL = 397 CONSULTS, 49.37% YES (196) ologist, if any:** ***
PCP: [AUTO-POPULATE]
Pulmonary Diagnoses This Admission: ***
Pending Data: ***
Treatment Plan of care: ***
Recommended treatment(s) *
Follow-up in * Clinic with *** in *** weeks.**
Follow-Up Testing before or at time of appointment: [Dropdown with CXR, Chest CT, HRCT, Labs, PFTs, sleep study and Free Text *]**
[ ] Accountable Provider[s] Notified? Y/N
[ ] Tests Already Ordered? Y/N
Brief HPI & Pertinent Hospital Course (Narrative Form): ***

Physical Exam on day of Sign-Off:
[AUTO-POPULATE VITAL SIGNS]
***

Any Other Notes:
***

Table 1: Table of Data Collection and Percentage of Discharge Templates Used

TOTAL = 397 INPATIENT CONSULTS, 49.37% USED DISCHARGE TEMPLATE (196) VS. 201 WHO DID NOT										
Q 1				Q 2				Q 3		
Y	68	**53%**		Y	79	**54%**		Y	49	**40%**
N	60	47%		N	66	46%		N	75	60%
TOTAL	128			TOTAL	145			TOTAL	124	

Next Steps, Dissemination & Lessons Learned

Next Steps:

- Reconvene with **stakeholders** (fellows, outpatient faculty & inpatient faculty) to discuss in detail whether different templates might serve different purposes
  - For example, different note template for same-day consult & sign-off?

Dissemination:

- Ultimate goal to work **across GME** to get **standardized "Signoff Note"** for all consulting services

Lessons Learned:

- Faculty & fellow **buy-in** are equally important – projects truly need both to succeed
- Trainees more receptive to QI projects that they **self-identify** rather than those perceived to be required
- Technical barriers re: extraction of data frm Apex – better **QI data analysis/research infrastructure** needed

STANDARDIZED DOCUMENTATION OF ADVERSE CONTRAST EVENTS (ACE)

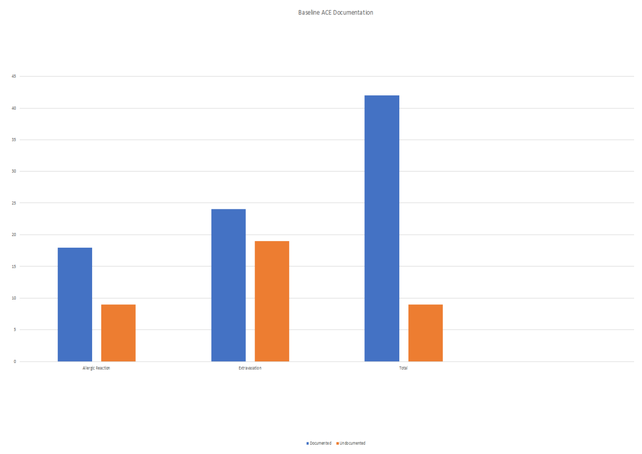
Molly Chapman, MD, MA
K. Pallav Kolli, MD
Christopher Hess, MD, PhD

Department of Radiology & Biomedical Imaging

Background

Adverse contrast events (ACEs) in CT examinations requiring intravenous (IV) contrast administration are an important cause of morbidity and even mortality in radiology. Severe allergic reactions and extravasation are uncommon with modern iodinated contrast media, but occur with relatively high frequency when accounting for the large volume of CT studies obtained in current medical practice. When ACEs occur, it is important that they be carefully documented in the electronic health record (EHR), both to effectively communicate events with ordering providers so that they can monitor for late complications and to avoid future events when patients undergo repeat imaging.

Within the UCSF Department of Radiology & Biomedical Imaging, the radiologist is responsible for supervising the safe use of contrast. CT technologists document ACEs using both Apex and the Incident Reporting (IR) system. However, these records are not readily accessible in the EHR for other providers. To align with the UCSF Health "True North" Quality and Safety pillar and the department goal to achieving zero patient harm, we aimed to improve the visibility of these events to all providers.



Project Goals

From 1/1/2016-3/22/2017, approximately 60% of ACEs involving IV iodinated CT contrast were documented in the EHR. Only 39% were documented by a radiologist; others were documented by a radiology nurse. For the 2017-18 academic year, **our departmental goal was for ≥75% of significant CT ACEs to be documented as either a note in Apex or in the radiology imaging report**, cumulative over the 2017-2018 academic year:

X = # of ACEs documented by IRs (all allergy and extravasation events)

Y = # of ACEs documented in Apex

PRIMARY GOAL: Y/X * 100% >= 75%

SECONDARY GOAL: document all allergic reactions to iodinated IV contrast in the Apex allergy banner.

- All allergies were included
- Only extravasation events with >10 cc of infiltrated IV iodinated contrast were included
- Apex documentation included new allergy records, notes written by radiologists and/or RNs, or documentation in radiology reports

Project Plan and Interventions

Multiple factors contributing to low MD documentation of ACEs were identified:

1. Lack of a standardized reporting mechanism to allow for convenient documentation.
2. While most patients who experience an ACE are evaluated by the radiologist, in the busy work flow of the reading room the task of documentation was occasionally forgotten.
3. Diffusion of responsibility, wherein the radiologist who evaluated a patient for an ACE was working at a different hospital site from the dictating radiologist for that imaging study. Poor communication resulted in no documentation by either party.
4. Radiologist inexperience with writing notes in Apex.

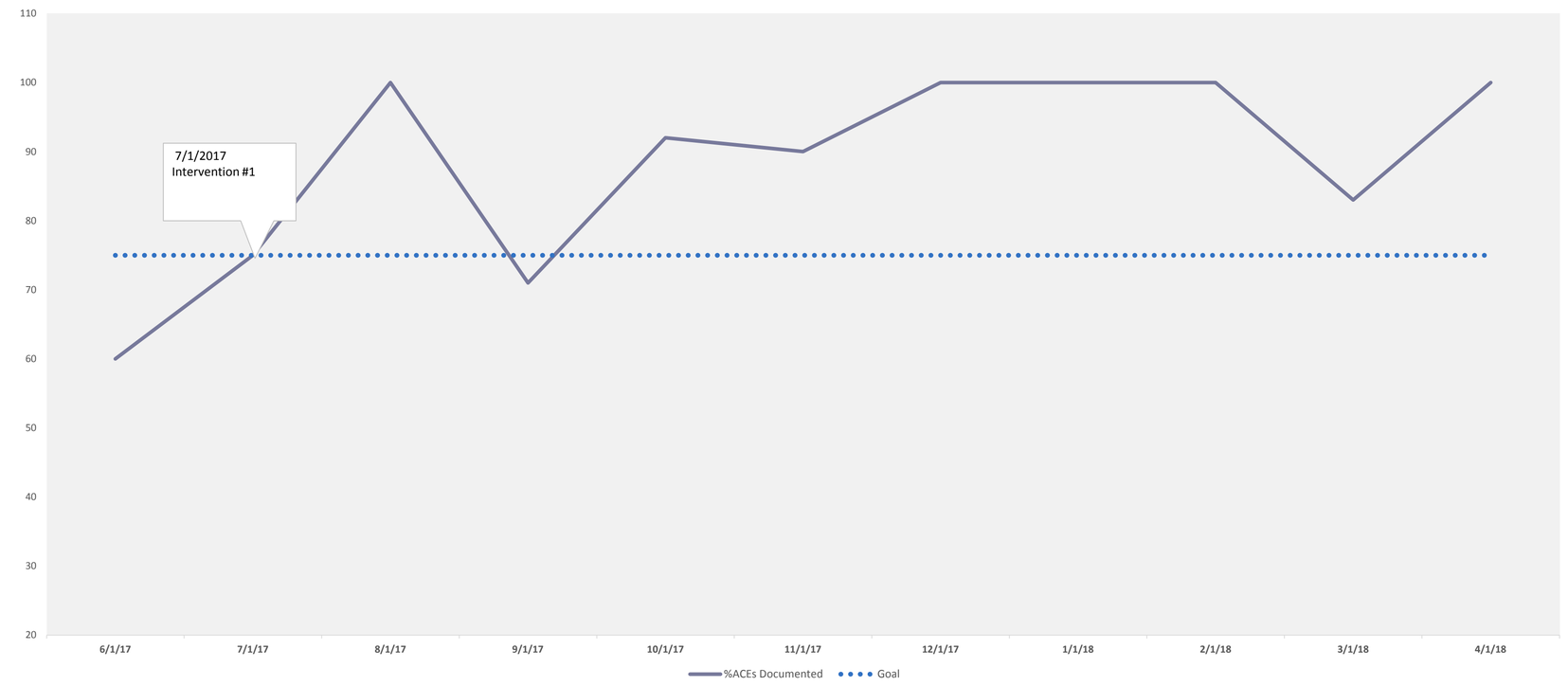
We developed two countermeasures at the outset of the project.

1. A standard reporting template to document ACEs for the radiology imaging report (implemented as a Powerscribe 360 autotext ["Macro"] to be used in dictations).
2. A standard template for complete documentation of ACEs as a Significant Event note in Apex (implemented as a dotphrase ".ACE"). The Powerscribe macro was circulated in sections where iodinated contrast is commonly used, and approved by each Radiology section QI champion. Once approved, a similar format was adapted for the Apex dotphrase. Both were made publicly available for use.

Measures to ensure adoption of the templates included announcements made at faculty meetings by Dr. Hess. Dr. Chapman made e-mail and personal announcements with expectations for management at resident town hall meetings, as well as the July fellows orientation. It was emphasized that documenting any new allergy to imaging contrast in the Apex allergy banner was an additional required step. Short explanations were provided for using the Apex dotphrases, given the infrequency in which Radiology trainees complete Apex notes.

Our technologists are the front line responders to these events. Dr. Chapman met with the lead UCSF technologists for both CT and MRI. The importance of communication with the radiologist were announced by the lead technologists in technologist meetings prior to the start of the academic year. Dr. Chapman also met with Charlene Fong RN, the department's nurse in charge of patient safety, to discuss root causes of the problem and provide support for the project.

Project Evaluation & Impact



Cumulatively at the time of the creation of this poster, there were a total of 82 ACEs, of which 76 were appropriately documented, for a **cumulative 93% rate of documentation**. Of these events, 24 were contrast allergies. In 100% of these cases, the allergy was added to the allergy banner in the patient's chart.

Next Steps, Dissemination & Lessons Learned

Next Steps: The success of the intervention arises in part from the convenience of a pre-populated template that was easy to generate in radiology report or Apex. We plan to continue to reinforce the importance of communicating and documenting ACEs at faculty and trainee meetings for the remainder of the academic year and beyond.

Dissemination: This project could be adapted for use in any MRI contrast-related ACE, as well as at our other sites a the San Francisco VA Medical Center and the San Francisco General Hospital.

Lessons Learned: Members of the radiology team including MDs, RNs, and technologists work together to create a safe environment for our patients. While each counterpart in this effort has role-specific goals, focusing on patient safety as a common goal was key to the project's success. Improving intra- and inter-departmental MD-to-MD communication, as well as MD-to-technologist and MD-to-RN communication were critical. Moving forward, an unexpected problem included gaps in trainee knowledge of appropriate management of the ACE, such as what threshold of allergy severity indicates need for future contrast pre-medication. Continued educational efforts, including the possibility of hands-on simulation training for residents, will be needed.

Acknowledgements: We thank the Radiology housestaff, fellows and faculty for their enthusiastic participation. Charlene Fong RN, our safety nurse provided invaluable input. Many thanks to Corey Fuller for helping create our ACE dotphrase. Dr. Emily Edwards, our former resident QI Champion, provided indispensable advice in the early stages of the project. Thanks to GME for providing financial and educational support for resident QI projects. Lastly, special thanks to our CT and MRI technologists, the front line of our care, and lead technologists Jessica Pfannensteil and Benjamin Mow.

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A prospective, interventional study evaluating the use of a prompt to improve compliance with documentation of a plan of care for pain in patients with bone metastases seen for palliative radiation therapy

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Resident QI Initiative Leaders

UCSF Department of Radiation Oncology

Background

Management of cancer-related pain is an essential component of comprehensive oncologic care. Undertreated pain results in adverse clinical outcomes, undue suffering, decreased quality of life, and threatens the UCSF true north pillars of patient experience, quality and safety. Furthermore, there are significant disparities in pain management as racial/ethnic minorities and underserved populations are at higher risk for undertreated cancer-related pain.

A recent intradepartmental analysis discovered frequent inadequate pain assessments in patients evaluated for palliative radiation for bone metastases. While 90% of patients had a documented pain scale (1-10/10), only 50% had other components of pain assessed (i.e. location, quality, aggravating factor, alleviating factors, interference with activity). Of those with documented pain (on 1-10 scale) median score was 5, and 51% had scores >4. Among these symptomatic patients, analgesic regimen was assessed in 28%, and a pain intervention was documented in just 17%.

Project Goals

The goal was to achieve documentation of a "plan of care for pain" in >50%of new patient consultations seen by residents for bone metastases in the department of Radiation Oncology for 3 out of 4 best performing quarters in the 2017-2018 academic year. Satisfactory plan of care will include appropriate pain intervention, such as adjustment in analgesic regimen, referral to SMS/palliative care, communication with primary oncologist/PMD, and radiation therapy.

Project Plan and Intervention

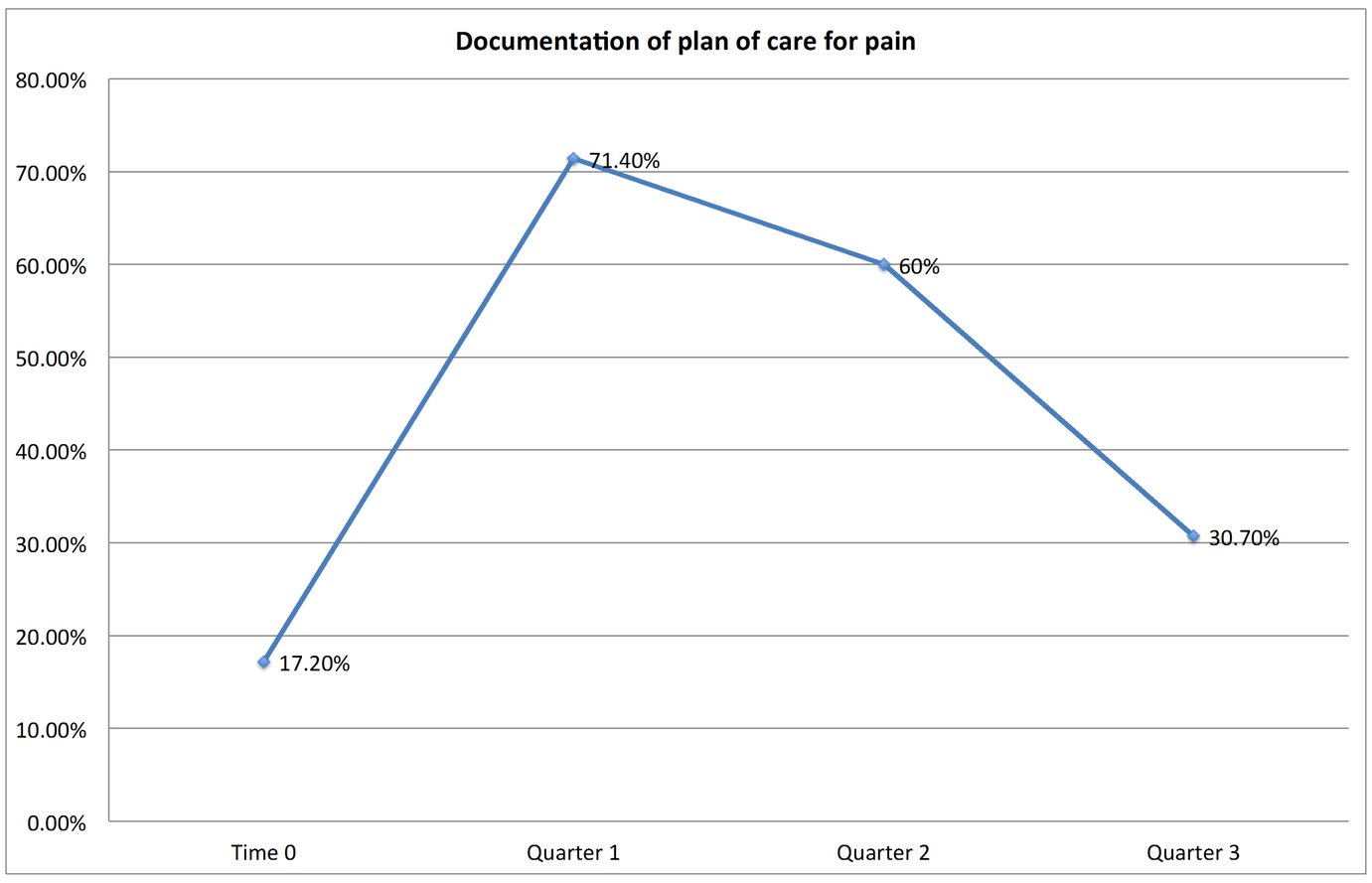
Current practice documenting pain intervention in Radiation Oncology is dependent on physician preference. In a previous departmental analysis, we found that we were documenting pain in patients seen in consultation for bone metastases, but we were not explicitly addressing this pain in our assessments and plans. The Centers for Medicare and Medicaid have identified documentation of a 'plan of care for pain" as an important quality measure in Radiation Oncology, which will be assessed in the Merit-based Incentive Payment System.

In this intervention, we focused specifically on patients seen in consultation for bone metastases. Many patients with bone metastases have pain and radiation therapy is often an important palliative treatment modality.

We created a smart phrase in the electronic medical record, to be populated into consult note templates. The phrase is ***"I have assessed the patient's pain today, which is ***/10. The plan of care for pain is *** ."*** Email reminders were sent to physicians 2 times per quarter**.** Charts were subsequently audited on a quarterly basis, and percent compliance was recorded per quarter.

Project Evaluation & Impact

We have achieved our goal of documenting a plan of care for pain in >50% of patients seen in consultation for bone metastases in 2 of 3 quarters thus far, with 4th quarter data pending. In particular, we found that the analgesic regimen was assessed or modified in 35% of consultations, urgent radiation therapy undertaken in 26%, communication with primary provider or oncologist in 10%, and referral to the Palliative Care service in just 4%.



Next Steps, Dissemination & Lessons Learned

Next Steps:
Our next steps will be to collect data for the 4th quarter, as well as report our outcomes to the department QI leads. Pending our outcomes, this could be implemented throughout the department in accordance with Merit-based Incentive Payment System (MIPS) quality objectives.

Dissemination:
This simple "plan of care for pain" could readily be adapted throughout the cancer center.

Lessons Learned:
There were unexpected challenges in designing and implementing this project. We had initially wanted a drop down smart phrase, but due to limitations with EPIC programmers, we instead utilized a wild card (***) format. We also discovered that email reminders can be easily overlooked, leading to our third quarter decline in compliance. We will utilize in person reminders at our morning conferences to ensure compliance in the 4th quarter.

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Reducing Incomplete History and Physicals In an Infertility Practice

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Background

Patients undergoing controlled ovarian stimulation prior to oocyte retrieval do not consistently obtain a preoperative history and physical (H&P) at the beginning of their cycle. This is an issue because when completed at the last visit prior to oocyte retrieval, the visit may take twice as long delaying the patient and those that follow her. Further, if a patient has a medical condition that may alter anesthesia plans during retrieval, there is limited time to adjust plans. Improving the timeliness and completeness of preoperative history and physical seeks to address the UCSF true north pillars of Quality and Safety and the Patient Experience.

Each cycle start involves a baseline ultrasound, preoperative H&P and confirmation that patients have all medications needed for their cycle.

In a sample of four weeks from the 2016-2017 year, the rate of incomplete H&P's amongst patients who went to retrieval was 17%.

Project Goals

The objective of this Quality improvement project was to reduce the incidence of incomplete H&Ps for patients that are in-cycle for ovarian stimulation.

A 50% reduction in delayed preoperative H&P completion, would save up to 30 minutes per week, and improve work flow for nursing staff who are left with the responsibility of ensuring the completeness of this task.

The goal of this Quality improvement project was to decrease the rate of incomplete H&Ps by 50%. In a successful endeavor, the incomplete H&P rate should be less than 8.5% per quarter for at least three quarters in the 2017—2018 academic year.

Project Plan and Intervention(s)

Hypothesis: increased awareness about the rate of missed H&Ps amongst the staff that preform H&Ps would improve the completion rate.

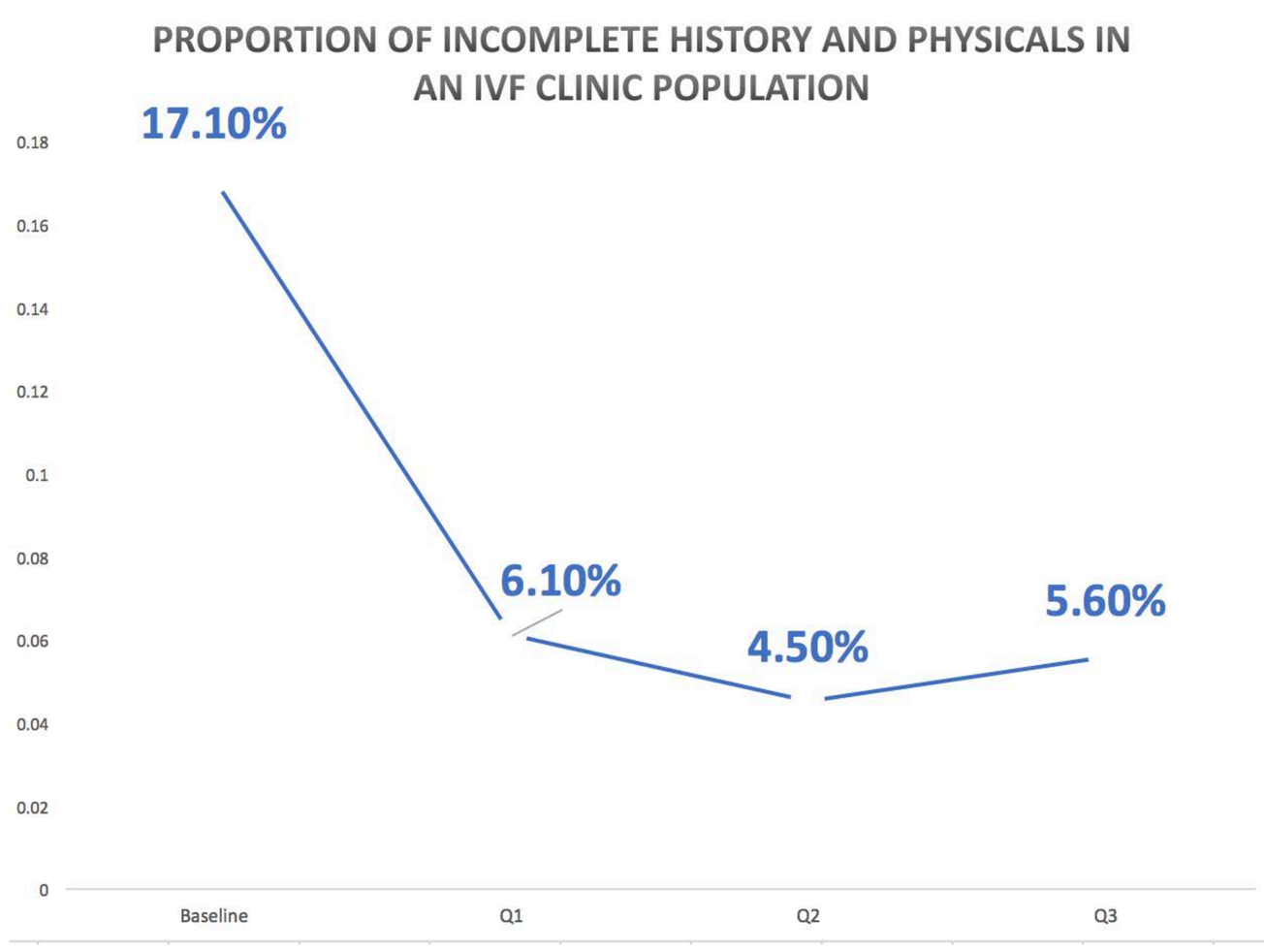
Intervention: In quarter 1, we notified the primary providers that complete H&Ps for patients including clinical fellows, nurse practitioner and physicians.

Interventions were determined on a quarterly basis after reviewing trends in missed H&Ps.

Though we saw an improvement in quarter 1, there was a trend towards fertility preservation patients representing a disproportionate amount of incomplete H&Ps. We proposed that focusing on the patients in the fertility preservation program would be helpful. These patients may start their treatment shortly after consultation may not have had time to receive a proper H&P.

Project Evaluation & Impact

There was a decrease in the incomplete H&P rate in quarters 1-3 after an intervention of educating clinicians and staff about the importance of completing H&Ps. The mean incomplete H&P rate in quarters 1-3 was 5.4%. The mean incomplete H&P rate constitutes a 68.4% decrease in the incomplete H&P rate.



Next Steps, Dissemination & Lessons Learned

Next Steps:
We had an increase in the rate of incomplete H&Ps in Q3. We are currently analyzing the potential causes- the leading cause is double booking H&P patients. Furthermore, on an annual basis at the start of each academic year we will remind staff about the importance of completing H&Ps

Dissemination:
Encouraging development of plans with multiple stake holders, in our case, nurses, physicians and the medical assistant director, helped to implement a plan in which everyone was invested. Also, simple reminder emails proved to be useful.

Lessons Learned:
During this process, we were notified that for patients pursing fertility preservation, a consultation performed within 30 days of the oocyte retrieval qualifies as a history and physical. Nursing staff were notified.

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Delirium Reduction in Urologic Patients

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UCSF Departments of Urology and Quality*

Background

Delirium is serious and affects 30-60% of hospitalized patients.

Delirium results in increased mortality, increased length of stay, increased falls, and increased cognitive deterioration in patients with dementia.

Delirium is under-recognized, with 50-70% cases missed and up to 30% of hospital acquired delirium can be prevented.

Reducing hospital delirium is important to providing quality patient care.

Project Goals

Our overarching goal is to reduce hospital delirium using am evidence-based, nonpharmacologic method of early detection and prevention.

Our measurable goal was whether a delirium prevention orderset was placed at any time during the hospitalization for patients who had a positive AWOL or NuDESC screening, with target 50% resident compliance in ordering the delirium order set, cumulative Jan 1-June 30, 2018.

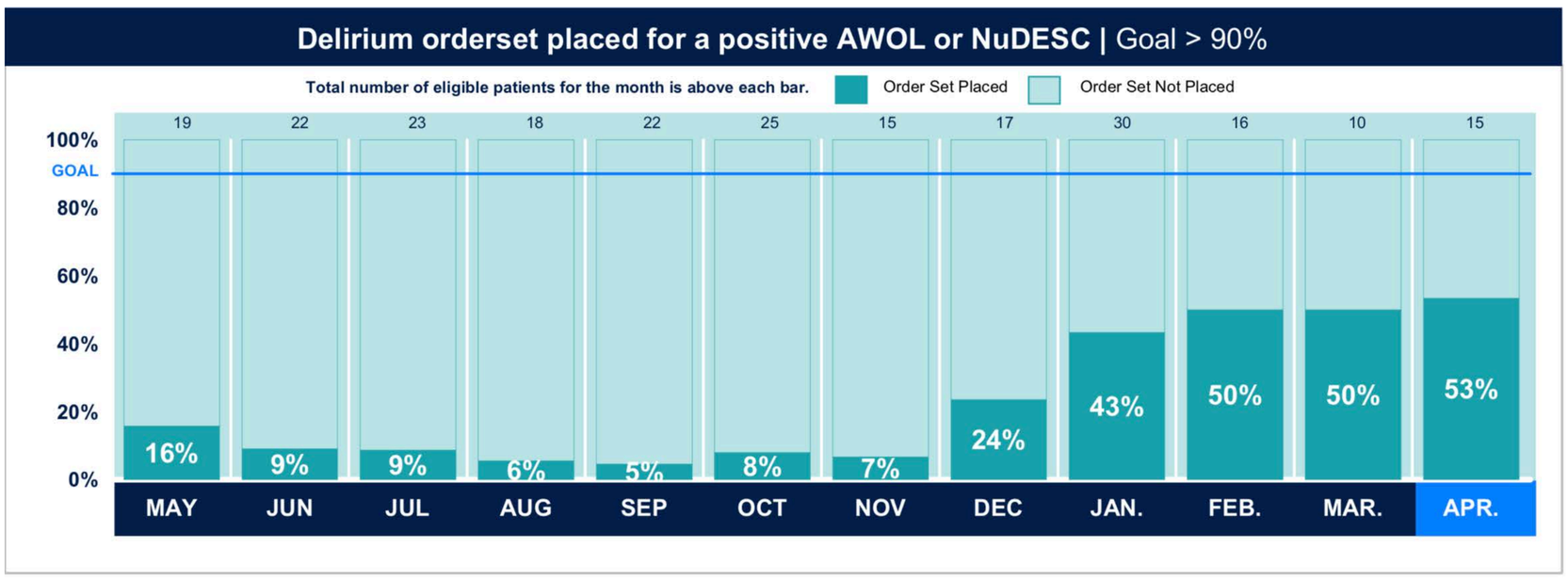
Project Plan and Intervention(s)

INCLUSION CRITERIA:
-Patients with an AWOL score of 2 or greater
-Age >80
-Can't spell WORLD backwards
-Not oriented to city, state, county, hospital name and floor
-Nursing illness severity assessment of moderately ill or greater
-Patients aged 70 years or older AND after a high risk operation
-Patients you are concerned might develop delirium

EXCLUSION CRITERIA: ICU patients

WORK FLOW:
- Nurses screen patients and assess for delirium by reporting a risk score.
- Inpatient pharmacy performs medication reconciliations aimed at eliminating medication-related risks for delirium.
- Urology residents would get paged to place specific delirium reducing protocol orders and change medications based on their findings.
- Given difficulties with implementation and inconsistent paging of residents regarding AWOL/Nu-DESC scores, residents were instructed to use the orderset for appropriate patients without awaiting nursing communication.

Project Evaluation & Impact



Next Steps, Dissemination & Lessons Learned

Next Steps:
We will continue this intervention to decrease delirium in our patient population. With improved implementation and dissemination of protocols, we are confident we will provide a benefit to our patients. Our overall numbers of patients diagnosed with delirium are quite small, thus we will continue to accumulate data and calculate the impact of this project in our patient population.

Dissemination:
This hospital-wide initiative can be adapted by other services by incorporating delirium assessment tools in their daily practice, using the coded lists and appropriately applying the orderset.

Lessons Learned:
We learned that implementing a multidisciplinary project is challenging, as there are many competing priorities in delivering excellent patient care and new tasks are difficult to adopt in a timely manner.

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Inpatient Wound Care eConsult Workflow: Efficient, Timely, and Secure

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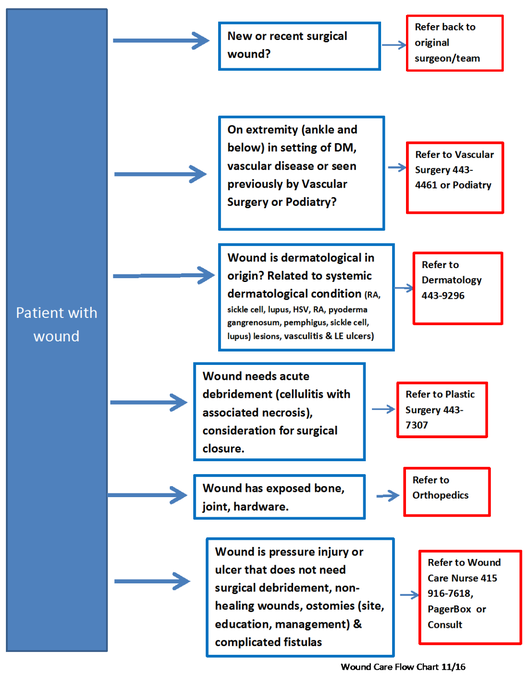
Division of Plastic and Reconstructive Surgery

Background

The wound care clinical nurse specialist (CNS) team currently serves as the gateway for triage of inpatient wounds. Most of these wounds have potential to heal with dressings alone. Not infrequently, UCSF inpatients have wounds that require procedures beyond the scope of the wound CNS team, such as sharp debridement or reconstruction. The Division of Plastic and Reconstructive surgery inpatient consult service currently works alongside the wound CNS team to provide bedside or surgical debridement for wounds initially seen by the wound CNS team. However, until now, the traditional workflow for referring a chronic wound to the inpatient Plastic Surgery consult service requires multiple steps involving additional providers. This can result in delays in seeing patients and therefore scheduling procedures, task duplication, and occasional confusion regarding the specific consultant roles. Additionally, when the wound CNS team is temporarily unavailable; assessment can be delayed. In these urgent circumstances our inpatient consult service can also provide wound care recommendations, but this service is rarely utilized. Restructuring the integration and workflow for plastic surgery in evaluating inpatient chronic wounds will offer the following True North benefits:
Lowering Cost: Wound care is labor and resource intensive for inpatients, timely referral and appropriate treatment could reduce time to healing. Improving communication and standardizing documentation could improve efficiency and further reduce costs.
Learning Health System: Most primary inpatient medical providers do not have formal training in wound assessment and their energies are focused on acute medical illness rather than chronic wounds; Implementation of a decision making tool and standardized workflow as part of this QI initiative could improve communication and efficiency
Strategic Growth: An increase in billable procedural wound care, especially sharp or surgical debridement, could increase reimbursement for the medical center and faculty practices.

Existing Workflow:



The current workflow for plastic surgery to become involved in chronic wound consults introduces delay, potential errors in communication, and is highly dependent on the availability of the wound CNS.

Project Plan and Intervention(s)

Implement APEX checklist for inpatient wound consults – with assessment, action plan, and followup plan. Checklist will track specific time points and outcomes and will be filled out by plastic surgery inpatient team.
Develop educational and interactive wound assessment aid with decision tree logic and pictures to guide primary providers. Recommendations for consult and pre-consult data to gather provided in checklist form. Will not require provider to expend time to review slides/modules with largely irrelevant data, and saves time with unnecessary pages to multiple consultants. Available even when wound care RN is off duty or unavailable. Integrated feedback system, allowing for suggestions and referring provider satisfaction to be tracked.
Provide standards for wound documentation and APEX-linked wound photography using smartphones running Haiku. Improves communication between providers and fidelity of clinical documentation. Increases efficiency, avoids unnecessary dressing changes causing patient discomfort and allows consultants and team members to confer using similar information. Allows provider seeing patient to assemble supplies for wound care or bedside procedures.
Measure number of operative cases and patients referred for followup with UCSF plastic surgery through this channel.

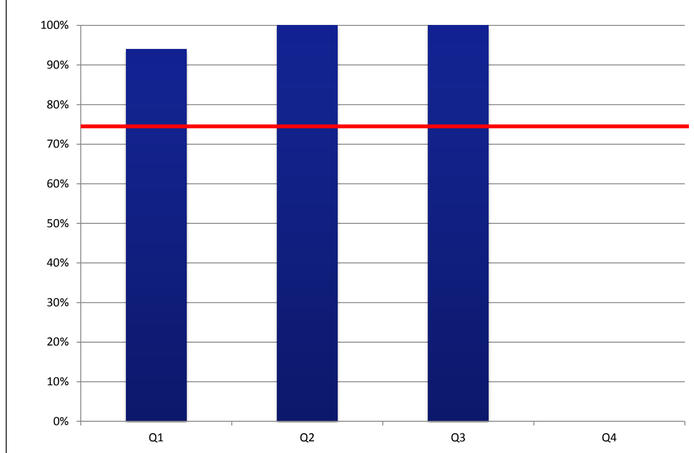
Discuss with stakeholders: Parnassus wound CNS team, Medicine/Hospitalist leadership, Podiatry, Dermatology, Plastic Surgery attendings, residents, PA's.
Chart review of upcoming (May-June 2017 wound consults) for baseline data. (QI team)
Create APEX wounds workflow template for inpatient plastic surgery providers to complete. (QI team)
Create plastic surgery wounds workflow with guides for:
- Wound triage and assessment, including contingency plan for who to contact if wound CNS is unavailable
- Wound photography and documentation using APEX

Project Evaluation & Impact

Quarterly evaluation and results, AY2017-2018:

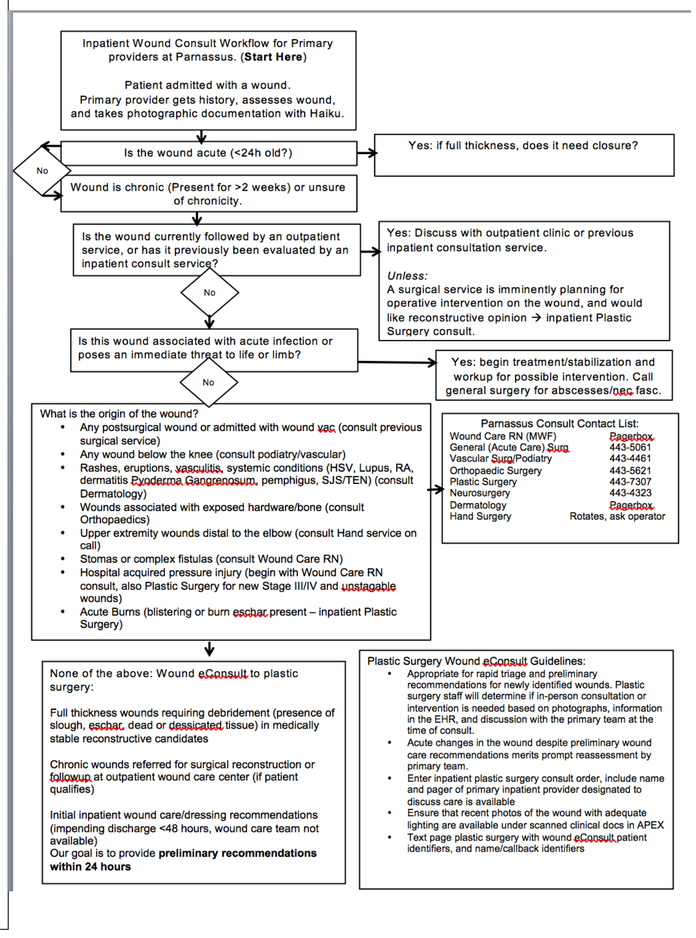
Goal: 75% of nonsurgical wound consults triaged and preliminary recommendations documented in chart using wounds workflow within 24 hours (based on APEX audit)

Q1: 32/34 = 94%
Q2: 14/14 = 100%
Q3: 9/9 = 100%
Q4: pending



Qualitative Assessment: **Success!**

Because of the ongoing QI initiative, we have been extremely diligent and well-informed and thus proactive about seeing and staffing wound consults, whether operative or nonoperative.
We have collaborated with Bobby Robertson, RN who was recently hired as the WOCN at Parnassus. He works 5 days a week and brings vast experience working in conjunction with plastic surgeons. His knowledge and efficiency in seeing wound consults has already reduced the burden of consults significantly and for many patients we have been able to discuss a multidisciplinary plan. We have coordinated our services so we are aware of staffing shortages and scheduled absences and are prepared to fill in when these occur.
Due to publicity and awareness at all levels - housestaff/trainees and surgical attending, the plastic surgery team proactively took steps to address nonsurgical wound consults in a timely fashion.
Also - improved communication with the parnassus WOCN improved screening and has improved the quality of referrals to plastic surgery. We are seeing more operative consults!



Project Goals

1. Improve two-way dialogue between wound CNS and plastic surgery team and plastic surgery team responsiveness, as measured by plastic surgery inpatient team completion of APEX wound workflow checklist and action plan within 72 hours of wound CNS recommendation for plastic surgery evaluation at 75% compliance; 3 out of 4 quarters for next academic year.
2. Increase identification of appropriate surgical candidates and direct consultation from primary admitting team.
3. Increase plastic surgery consultation for wound evaluation when wound CNS team is unavailable.

Next Steps, Dissemination & Lessons Learned

Next Steps:
1. Elicit feedback from stakeholders. (Hospitalists/Internal Medicine, consulting teams, Beside RNs, Wound CNS, Derm, Podiatry, Vascular, Orthopaedics)
2. Await optimized APEX inpatient consult order to facilitate entry of needed data and to facilitate chart audits
3. Determine electronic consultation Billing/E&M criteria and optimize for correctly documenting evaluation, management, and supervision for eConsultation.

Dissemination:
Could this be used at Mission bay in a pediatric setting? Could this be used by outpatient providers?

Lessons Learned:
Cooperation with a skilled, invested WOCN is invaluable.
Electronic and Telephone consultation with a knowledgeable wound care RN and/or MD is highly sought-after.
The pace of progress exceeds the pace of EHR modifications.

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