Scientific Proceedings of the Texas Children's Hospital's 16th Session of the Advanced Quality Improvement and Patient Safety Program

Arjun M. Dangre BDS, MPH
Texas Children's Hospital, axdangre@texaschildrens.org

Kelly Wallin MS, RN, CHSE
Texas Children's Hospital, kdwallin@texaschildrens.org

Gertrude A. Leidich MBA, RN
Texas Children's Hospital, galeidic@texaschildrens.org

Angelo P. Giardino MD, PhD
University of Utah, giardino@hsc.utah.edu

Recommended Citation

The TMC LIBRARY
Health Sciences Resource Center

Scientific Proceedings of the Texas Children's Hospital's 16th Session of the Advanced Quality Improvement and Patient Safety Program

Abstract

The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program is a six month mixed didactic and experiential learning experience designed to improve patient care, lower costs, change the culture, and develop quality leaders. As a part of AQI program participants are grouped into teams and each team completes a healthcare related Quality Improvement (QI) project. Each project demonstrates use of various QI tools including process maps, fishbone diagrams, and key driver diagrams. The projects use the IHI 'Model for Improvement' as the primary QI methodology to achieve their aim. Three or more Plan-do-study-act (PDSA) cycles are required for each QI project. The graduation ceremony is modeled after a day-long scientific meeting and each team presents a poster as well as a brief oral presentation using Power Point slides describing their project work. At the 16th AQI graduation session held on 9/15/2017, 16 teams presented their projects, of which 8 submitted their posters for inclusion in this proceedings piece.

The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program is a six-month mixed didactic and experiential learning experience designed to improve patient care, lower costs, change the culture, and develop quality leaders. As a part of AQI program participants are grouped into teams and each team completes a healthcare related Quality Improvement (QI) project. Each project demonstrates use of various QI tools including process maps, fishbone diagrams, and key driver diagrams. The projects use the IHI 'Model for Improvement' as the primary QI methodology to achieve their aim. Three or more Plan-do-study-act (PDSA) cycles are required for each QI project. The graduation ceremony is modeled after a day-long scientific meeting and each team presents a poster as well as a brief oral presentation using Power Point slides describing their project work. At the 16th AQI graduation session held on 9/15/2017, 16 teams presented their projects, of which 8 submitted their posters for inclusion in this proceedings piece. The following are the 8 poster presentations from the AQI 16th session:

- Clark, M., Tal, L., Morris, J.L., & Sigler, K.E. (2017, September). Improving the Discharge Process for Patients on 12 West Tower. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Krasnosky, A.D., Kim, J., Acosta, E., & Frawner, K.L. (2017, September). Let's Talk! Improving Healthcare Transition at the Complex Care Clinic. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Williams, L.A., McCollum, R.D., Wallace, N., & Marchand, J.J. (2017, September). Impact of Non-compliance using Automated Dispensing Cabinets and Supply Inventory Accuracy. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Victorian, V.A., Cordasco, B.D., & Ringold, S.L. (2017, September). Closing the Loop: Radiology Results Follow Up Improvement in Pediatric Urology. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Abbas, S.Z., Bartz-Klinepeter, S.K., McCann-Crosby, B., & Boudreau, W.A. (2017, September). Increasing Continuous Glucose Monitoring use in Newly Diagnosed Diabetes. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Reddy, K.M., Groves-Brandon, S.A., & Hellsten, M.B. (2017, September). Standardization of Home Pain Management Instructions at Discharge for Pediatric Hematology/Oncology. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Cheatham, L.S., Mankidy, B., Kapoor, S., & Loflin, P. (2017, September). Using Targeted Interventions to Improve Cardiopulmonary Resuscitation Metrics. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

- Ernest, K., Barbella, M., Hill, M.H., & Irani, N. (2017, September). Improving Communication by Closing the Loop. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI). Program, Houston, TX.

Improving the Discharge Process for Patients on 12 West Tower

Mona Clark, MSN, Jennifer Morris, PharmD, Katie Sigler, MSN, CPNP-AC, Leyat Tal MD

Background

- Delayed patient discharge is a widespread problem amongst hospitals
- Srivastava et al demonstrated that nearly one in four patients experience a medically unnecessary prolonged hospital stay
- This can account for 9% of all hospital costs and total hospital days
- Delayed discharged results in delayed patient throughput, prolonged boarding in the emergency center, prolonged length of stay and inconvenience for patients and their families
- The current goal at TCH is to discharge patients by 1pm, however the average discharge time on 12WT at 3pm
- Only 30% of patients on 12WT are discharged by 1pm

Project Aims

- Global aim: Fifty percent of renal patients on 12WT will be discharged by 1pm by September 1, 2017
- Aim 1: Improve perceived communication between renal service and multidisciplinary to 50% by Sept 1, 2017
- Aim 2: Increase renal attendance at care progression rounds to 50% by September 1, 2017

Methods

- Focus on renal patients on 12WT only and then expand to all services on 12WT if successful
- A survey was sent out to members involved in the discharge process to identify perceived barriers to timely discharge
- Based on results, a key driver diagram was used to identify areas for improvement:
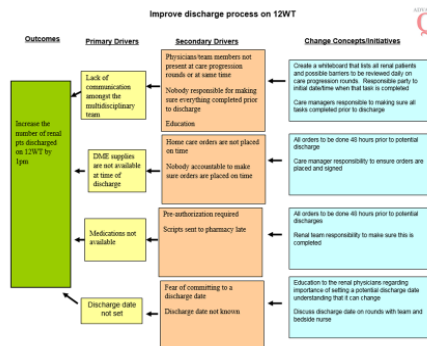
- PDSA 1 : Pre-Survey sent to multidisciplinary team to assess for barriers
- PDSA 2: Physician team to call nurse to bedside for rounds
- PDSA 2a: Email sent to residents
- PDSA 2b: Nurse to ask team for discharge date
- PDSA 3: Educate attendings to go to CP rounds
- PDSA 4: Implement tracking board at CP rounds
- PDSA 4a: facilitate use of the board
- PDSA 5: Post-survey sent

Results

- Barriers identified during PDSA 1 include:
  - 35% participants believe that a perceived lack of communication led to delays in discharge
  - Physician not present at CP rounds leads to lack of communication among team members
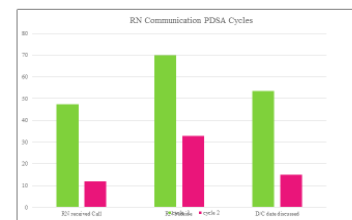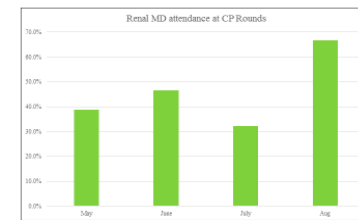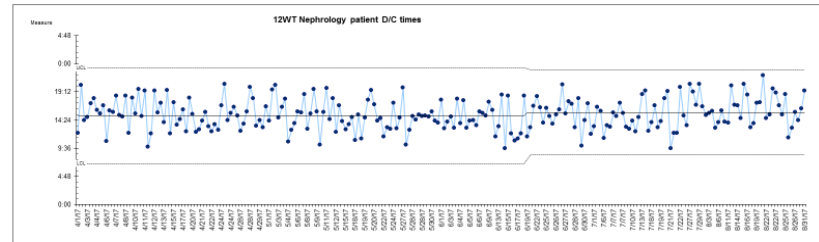
Discussion

- The communication tool created as a result of the PDSAs has made steps toward increasing communication among the multidisciplinary team.
- It attempted to reduce barriers to discharge by completing tasks and signing off at least 24 hours prior to anticipated discharge date.
- The communication interventions implemented for this QI project will continue long term, with plans for implementation to the remaining service line departments (Liver, Gastroenterology, Rheumatology and off service) on 12WT.

Clark, M., Tal, L., Morris, J.L., & Sigler, K.E. (2017, September). Improving the Discharge Process for Patients on 12 West Tower. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

Let's Talk!
Improving Healthcare Transition at the Complex Care Clinic

Athena Krasnosky MSN, APRN, CPNP, Kimberly Frawner MBA,
Judy Kim MD, Elisha Acosta MD

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

Background

The goal of healthcare transition is to "maximize lifelong functioning and potential through the provision of high-quality, developmentally appropriate health care services that continue uninterrupted as the individual moves from adolescence to adulthood."[1] The TCH Complex Care clinic serves as a medical home for over 900 children with special health care needs and is actively working on improving its health care transition process. Building on previous AQI projects, our AQI team sought to improve the rate at which clinic primary care physicians were introducing the concept of health care transition to patients and their families.

Two weeks of pre-intervention, baseline data was obtained via paper surveys, showing:

• Transition planning was discussed in only 56% of non-acute appointments with patients ≥14 years

• Primary reported reasons for not discussing transition were: I forgot (27%), transition already discussed this year (23%), and I am not the patient's PCP (14%)
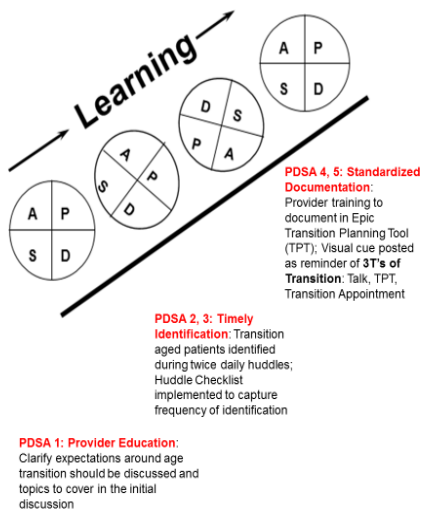
Project Aims

➤ **Global Aim**: To improve the healthcare transition process at Texas Children's Hospital.
➤ **Specific Aim**: To improve the rate of initial discussion regarding transition during well-visits with patients ≥ 14 years at the Complex Care Clinic from 56% to 70% .

Project Metrics

Outcome Measure:
• % well adolescent visits (age ≥ 14) per week with transition discussion
• # of transition planning visits per week

Process Measures:
• % of pre-clinic huddles per week with reminders for transition discussion
• % of office visits in which transition discussion is documented

Balancing Measure:
• Providers' perception of additional visit time due to transition discussion

Methods

Learning

PDSA 4, 5: **Standardized Documentation**: Provider training to document in Epic Transition Planning Tool (TPT); Visual cue posted as reminder of **3T's of Transition**: Talk, TPT, Transition Appointment

PDSA 2, 3: **Timely Identification**: Transition aged patients identified during twice daily huddles; Huddle Checklist implemented to capture frequency of identification

PDSA 1: **Provider Education**: Clarify expectations around age transition should be discussed and topics to cover in the initial discussion

Results

Weekly surveys were disseminated to providers to monitor frequency of transition-related discussions.

Outcome Measures:
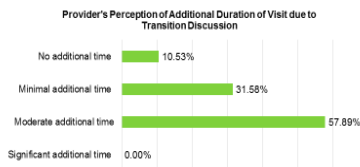

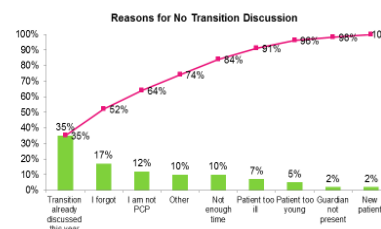% of Well Adolescent Visits per Week with Transition Discussion

Number of Transition Visits Per Week
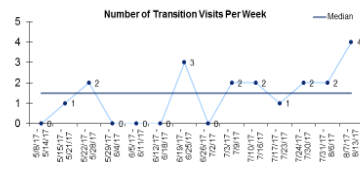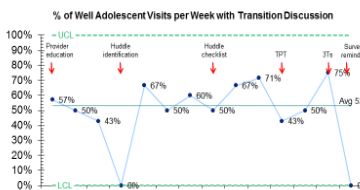
Process Measures:
• Transition planning was discussed in 90% of pre-clinic huddles

Balancing Measure:

Provider's Perception of Additional Duration of Visit due to Transition Discussion

No additional time	10.53%
Minimal additional time	31.58%
Moderate additional time	57.89%
Significant additional time	0.00%

Results (continued)

Reasons for No Transition Discussion

Discussion

Unfortunately, during the compressed time frame of AQI we were unable to establish a trend showing an increase in percentage of transition discussions during adolescent follow up or well child visits. We hypothesize decreased sample size related to decreased office visits and provider absences due to summer months may have contributed.

Impact:
- Health care transition is being discussed by the patient's preferred provider (PCP) at a younger age
- Improved documentation allows for better communication with providers and patients

Sustainability:
- Identifying transition aged patients is now a standard part of daily clinic huddle
- Increased knowledge/comfort with concept leads to more clinic based "champions"

Lessons Learned:
- Automated data is preferable whenever possible
- Importance of receiving buy in from key stakeholders and necessary participants cannot be overstated

Next steps:
- Work on "hard stop" in documentation
- Continue educating providers, especially trainees, on concept and goals of health care transition

Citation:
[1] American Academy of Pediatrics, American Academy of Family Physicians, and American College of Physicians-American Society of Internal Medicine. A Consensus Statement on Health Care Transitions for Young Adults With Special Health Care Needs. Pediatrics 2002; 110; 1304.

Krasnosky, A.D., Kim, J., Acosta, E., & Frawner, K.L. (2017, September). Let's Talk! Improving Healthcare Transition at the Complex Care Clinic. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

IMPACT OF NON-COMPLIANCE USING AUTOMATED DISPENSING CABINETS AND SUPPLY INVENTORY ACCURACY

Ruth McCollum, Jaime Marchand, Ellie Wallace, Lynn Williams

Texas Children's Hospital

MAGNET RECOGNIZED — AMERICAN NURSES CREDENTIALING CENTER

Background

With today's focus on lowering costs while improving outcomes we cannot ignore medical supplies, which account for a large portion of a hospital's total expense. Our Omnicell management system gives us the tools we need to address this critical area.

Our supply system empowers us to effectively control inventory costs, accurately capture charges for reimbursement, and improve the reorder process for medical supplies. Our system noted lost charges on inpatient units throughout West Campus. Further investigation was necessary to determine reasons for lost charges.

Benefits:
•Lowered costs through reduction in consumption and inventory levels
•Increased revenue through accurate charge capture
•Improved nurse workflow and patient safety through availability and reliability.

Project Aims

• Decrease financial loss to Texas Children's Hospital through proper charge capture and inventory level management.

• To increase staff compliance in Omnicell use by 10% over a period of 4 months to ensure accuracy of par levels, appropriate charge capture and improve staff workflows when supplies are needed.

Methods

Ethical aspects of implementation include improving patient safety by assuring necessary supplies are available when needed.

Setting: 5 West Acute Care Unit noted inconsistencies with removal of supplies causing inaccurate charge capture for supplies.
• The effectiveness of the project will be measured by noted improvement in charge capture reports.

Completion of 3 PDSA cycles
• **PDSA Cycle 1**: Provided one to one information sessions with staff. Developed printed information sheets and placed on all bulletin boards for 5 West staff. Followed up with written information via email for all 5 West staff.
• **PDSA Cycle 2**: Surveyed staff to determine how were educated on Omnicell use along with opportunities to discuss any questions or concerns not covered in PDSA Cycles 1 and 2.
• **PDSA Cycle 3**: Re-education on Omnicell compliance.

Results

Three PDSA cycles were completed: June 13, June 27, and July 31, 2017. The data collected over that 2 month period revealed increased compliance by 10% (89% on 5/15 and 99% on 7/31), and decreased the financial supply loss by nearly 3% (2.70% in May and .01% in July).

Achieved the goal of decreasing financial loss by improving staff compliance. It was concluded that the greatest barrier to compliance was decreased understanding of proper Omnicell processes due to lack of formal staff education.

5 West Omnicell Financial Loss

Percent of Omnicell Supplies Assigned to Patient
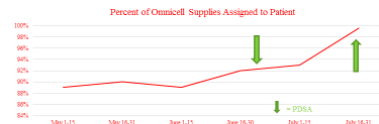
Discussion

• This project demonstrated that following proper instruction, education and understanding, the nursing department was able to increase compliance in Omnicell practices. Through proper charge capture and inventory level management, financial loss to the unit was decreased.

• Charge Capture improved by ensuring the supplies are issued to the patient and not to the cost center.

• Patient safety may be positively impacted by improving nursing workflows and ensuring all supplies are arranged in ways that are conducive to staff needs during emergency situations.

Sustainability

West Campus supply chain, in conjunction with nursing units, will implement formal training in Omnicell use.

Each unit will be audited monthly to ensure compliance.

Williams, L.A., McCollum, R.D., Wallace, N., & Marchand, J.J. (2017, September). Impact of Non-compliance using Automated Dispensing Cabinets and Supply Inventory Accuracy. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

Division of Urology Radiology Results Follow Up Improvement

Sarah Ringold MBA, Veronica Victorian MMS PA-C, Brian Cordasco MHSA FACHE.

Background

- In Spring 2017, the Division of Urology's process for providing information about radiology results was ineffective—only about 50% of TMC Urology patients received adequate follow-up after imaging.
- Patients needing follow-up care were at risk of not receiving results and an updated plan of care.
- Healthy patients with no need for follow-up wasted time and money on unnecessary office visits.
- Providers preferred different methods for reviewing results—office visit immediately after, telephone call, etc.
- Division nurses lacked capacity or authority to effectively respond to result inquiries.
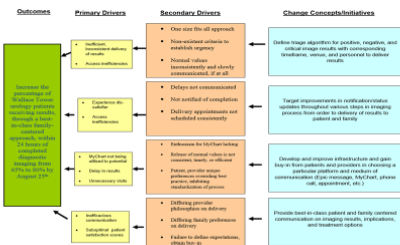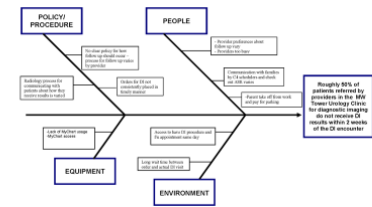
Project Aims

- To better understand how and when families want to receive radiology results.
- To increase rate of MyChart utilization as a means of communicating results.
- To increase the percentage of Wallace Tower Urology patients who receive communication about results or have a scheduled appointment to review results within three business days of completed radiology procedures from 50% to 75% by August 25th.

Methods

The following methodology presented minimal risk for our patients:
1. Narrowed the scope of our project to focus on patients seen in the WT Urology Clinic or that received follow up in its multi-disciplinary clinics.
2. Surveyed patient families at clinic check-out to understand preferences for result follow-up.
3. PDSA 1: Trained Urology medical assistants to enroll patients into MyChart before rooming or after check-out.
4. PDSA 2: Dr. Nicolette Janzen piloted a process for communicating results that could both ensure detailed follow-up for patients who need it yet reduce time and financial investment for those who do not:
   a) Complete office visit immediately following radiology encounter.
   b) If part a not accomplished, send MyChart message advising patient on next steps.
   c) If parts a and b not accomplished, send Epic message to RN's to contact family to advise of next steps.

Results

- PDSA 1: Medical Assistants enrolling patients in MyChart resulted in a WT Urology patient MyChart enrollment rate increase 46% to a high of 65% between July 3, 2017 and August 31, 2017.
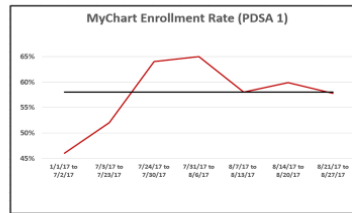
- PDSA 2: Dr. Janzen successfully implemented a new process on July 10th. After implementing the process described in 'Methods', the follow up rate after a radiology encounter increased from 54% to an average of 78%.
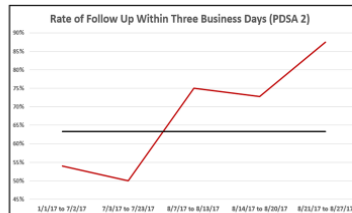
Discussion

- Proposed process changes can be successful so long as staff remains diligent about MyChart enrollment and providers commit to the three step follow-up process described in 'Methods'.
- There are many benefits of the process changes described in PDSA cycles 1 and 2:
  a) Provide high quality, safe care to urology patients who have radiology procedures.
  b) Ensure that patients who need follow-up care receive it in a timely manner.
  c) Save time and money for families whose children do not need follow-up care.
  d) Preserve office visit access for patients more likely to need surgery or ongoing care.
  e) Avoid overburdening physician or RN team by using MyChart to communicate.
  f) Potential to establish a clear, consistent process for the entire Division.
- Next step is to pilot the three step physician follow-up process with another provider, eventually scaling to the entire Division at all clinic locations and perhaps to other outpatient areas.

Future Challenges

- Training for providers on new process and on how to utilize MyChart efficiently (SmartPhrases, etc.)
- Lack of Spanish language version of MyChart
- Other barriers to using MyChart—internet access, etc.

Victorian, V.A., Cordasco, B.D., & Ringold, S.L. (2017, September). Closing the Loop: Radiology Results Follow Up Improvement in Pediatric Urology. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

Abbas, S.Z., Bartz-Klinepeter, S.K., McCann-Crosby, B., & Boudreau, W.A. (2017, September). Increasing Continuous Glucose Monitoring use in Newly Diagnosed Diabetes. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

Standardization of Home Pain Management Instructions at Discharge for Pediatric Hematology/Oncology

Shelly Groves-Brandon, MPA; Melody Hellsten, DNP, RN, PPCNP-BC, CHPPN; Kiran Reddy MD; Sheranda Fesler, PhD(c), MS, BSN, RNC, NE-BC, CPHQ, CPPS

Background

Pain is commonly encountered in pediatric hematology and oncology patients and many do not receive appropriate written instructions[1]. Inadequate pain management at home leads to suboptimal pain control with a lower quality of life[2] and may lead to increase in re-admission rates. Providing adequate home pain instructions upon discharge home from an inpatient stay is of utmost importance for optimal pain control.

Prior to this project there was no standardized home pain management plan being utilized in pediatric hematology/oncology.

We reviewed discharge records from hematology/oncology patients being discharged home on opioids over two months and noted 80% of patients were discharged with no pain specific discharge instructions.

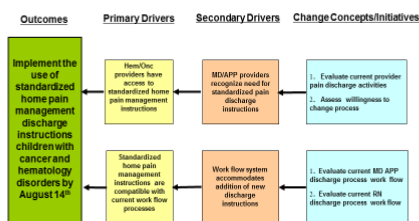April 2017 Use of Pain Discharge Instructions

Project Aim

To develop and implement standardized pain management discharge instructions for hematology/oncology patients who are discharged from 9WT on opioid therapy by August 14, 2017.

Methods

Home Pain Management Discharge Instructions Key Driver Diagram

PDSA cycles

• **PDSA cycle 1**: All Hem/Onc providers were surveyed to capture their current pain management instruction practices.

• **PDSA cycle 2**: An EPIC smartphrase for home pain management instructions was designed for use for any hematology or oncology patient being discharged home on opioids from TCH and was distributed to select faculty members for review and feedback.

• **PDSA cycle 3**: Implement smartphrase for pain management instructions
✓**Upload** smartphrase in EPIC
✓**Educate** faculty and staff
  ▪ Emailed faculty, residents, inpatient NP's and clinicians, and nurses to introduce the new smartphrase
  ▪ Met with residents to review new smartphrase
✓**Set reminder**
  ▪ Placed colorful flyers in the work room as reminders.

Results

PDSA cycle 1: Survey
A survey of hematology/oncology faculty demonstrated that there was no standardized format to provide pain management instructions at discharge

Hem/Onc Providers Pain Management Instruction Practices
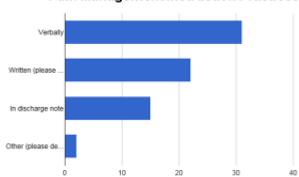
PDSA cycle 2: Design
The initial design of the smartphrase was distributed to select faculty members for review and their suggestions were incorporated into the final version.

PDSA cycle 3: Implementation
– 17 patients were discharged with opioids from July 31st – August 14th, 2017.
– During that period, the home pain management smartphrase was not used in discharge instructions.
– However, of the 17 patients, only 5 had pain specific home discharge instructions

Home Pain Management Discharge Smartphrase Use
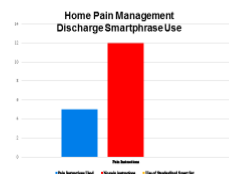
Discussion

• The use of a SmartPhrase in EPIC did not prove to be effective, likely due to the impediment of work flow.
• The timing for our PDSA cycle was suboptimal due to the following factors:
  – Roll out of the Beacon EPIC application for Hem/Onc in July
  – New trainees in July

Next Steps
• Future cycles will focus on automated pain management discharge instructions to address work flow challenges and improve consistency in pain management discharge instructions.
• Initially target the sickle cell population.
• Expand to the outpatient setting.
• Expand to West Campus and Woodlands.

Conclusions
• The lack of and variability of discharge instructions continues to highlight the need for standardized home pain instructions for patients on opioids.

References

[1]Am J Emerg Med 2003 Jan;21(1):48-50. Patients discharged with a prescription for acetaminophen-containing narcotic analgesics do not receive appropriate written instructions. Osborne ZP et al

[2] Pediatr Blood Cancer 2014 Jun;61(6):1029-33. doi: 10.1002/pbc.24907. Pain management at home in children with cancer: a daily diary study. Fortier MA et al

Reddy, K.M., Groves-Brandon, S.A., & Hellsten, M.B. (2017, September). Standardization of Home Pain Management Instructions at Discharge for Pediatric Hematology/Oncology. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

Using Targeted Interventions to Improve Cardiopulmonary Resuscitation Metrics

Latarsha S. Cheatham, DNP, RN-BC, FNP-BC; Sumit Kapoor, MD, FCCP
Paul Loflin, PhD, MS, BSN, RN; Babith Mankidy, MD

Texas Children's Hospital

MAGNET RECOGNIZED — AMERICAN NURSES CREDENTIALING CENTER

Background

- In the US, > 500,000 children/adults experience cardiac arrest; however, less than 15% survive.

- Cardiopulmonary Resuscitation (CPR) is a complicated process which requires coordinated effort from an interprofessional team including, but not limited to, physicians, nurses, respiratory therapists, pharmacists, and other ancillary staff.

- High quality CPR can improve patient outcomes.

- Excellent team communication, timely performance of recommended treatments per Advanced Cardiac Life Support (ACLS) guidelines, role assignments, high quality chest compressions, and team debriefings are all essential steps in performing meaningful CPR.

- Prior to this project, there was no structured and consistent CPR code process response management in place at Baylor St. Luke's Medical Center (BSLMC).

Project Aims

By September 2017:
- Improve adherence to ICU code compliance measures/guidelines by 50%

- Improve documentation of CPR data by 70%

Methods

- Formulate and use a code compliance checklist as a metric to assess the effectiveness of a code event.

- Collect baseline data on real code and mock code events.

Fishbone Diagram
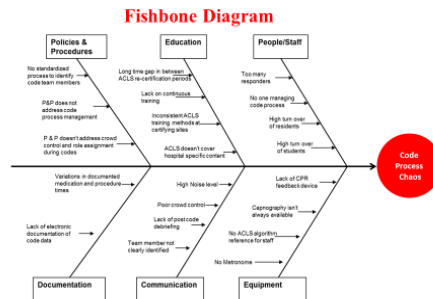
Intervention:
The use of simulation to improve code process management

PDSA 1:
Mock Codes

PDSA 2:
Use of name badges to identify code team members

PDSA 3:
Use of AHA application (Full Code Pro) to improve code documentation

PDSA 4:
Post code debriefing session

Results

- The ACLS knowledge assessment questionnaire revealed the following mean test scores: 71% (RNs), 80% (APCs), and 79% (Residents).

- In real code events, chest compressions and time to Epinephrine administration were at 100%, all other CPR parameters required improvement.

- After PDSA 4, compliance with debriefing was 73%. Smart app use and role assignment were at 100%.

Figure 1
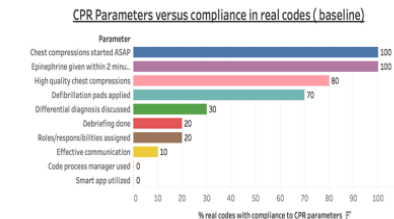
Figure 2
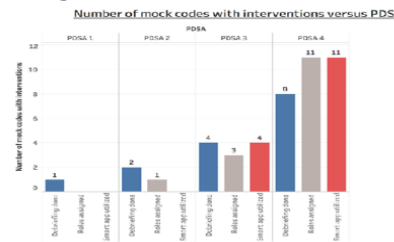
Discussion

- The majority of clinicians scored less than 80% on the (ACLS) knowledge assessment questionnaire, indicating a need for improvement.

- Baseline data for real code events showed poor compliance with important CPR parameters.

- Debriefing occurred 20% of the real mock codes. Studies have demonstrated that structured debriefing improves code team performance and patient outcomes. A consistent debriefing after code is imperative.

- Ongoing simulation training improved compliance with CPR parameters.

- The impact of this project is an orderly and systematic code process that adheres to the (ACLS) guidelines.

Conclusion

- Conventional ACLS training is prone to knowledge and skills attrition which needs to be reinforced with frequent simulation in order to improve code process management.
- The use of simulation to improve CPR process management is feasible; however, further studies are needed to determine the best utilization of code teams to improve adherence to the ACLS guidelines.

Future Direction

- Developing comprehensive code process management protocol

Cheatham, L.S., Mankidy, B., Kapoor, S., & Loflin, P. (2017, September). Using Targeted Interventions to Improve Cardiopulmonary Resuscitation Metrics. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI) Program. Houston, TX.

Improving Communication by Closing the Loop

Michael Barbella (Woodlands Administration)
Kristin Ernest (Woodlands Sports Medicine Physician)
Manny Hill (Business Process Transformation)
Natasha Irani (Woodlands TCP Physician)

Texas Children's Hospital

MAGNET RECOGNIZED — AMERICAN NURSES CREDENTIALING CENTER

Background

What do you consider timely communication?

While we have multiple initiatives on provider to patient communication at TCH, there is limited focus on provider to provider communication. This project focuses on closing one aspect of the communication loop between subspecialists and primary care providers.

Woodlands area **TCPs** ranked their satisfaction with provider-to-provider communication as **6.3 (out of 10).**
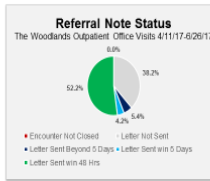
Woodlands area **TCPs** and **Subspecialists** agreed that timely communication *should* occur within **48 Hours** of a patient office visit.
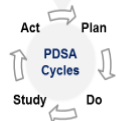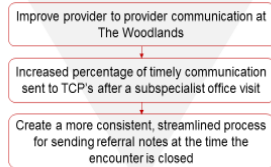
Woodlands area **TCPs** would prefer to **receive a full visit note** for all *new* and *return* subspecialty office visits.

Project Aim

To improve communication between specialty and primary care providers by increasing the rate of referral notes sent within 48 hours of a completed office visit from **52% to 65%.**

Referral Note Status
The Woodlands Outpatient Office Visits 4/11/17-6/26/17

8.0%
52.2%
38.2%
4.2%
5.4%

- Encounter Not Closed
- Letter Not Sent
- Letter Sent Beyond 5 Days
- Letter Sent win 5 Days
- Letter Sent win 48 Hrs

Model for Improvement

Improve provider to provider communication at The Woodlands

Increased percentage of timely communication sent to TCP's after a subspecialist office visit

Create a more consistent, streamlined process for sending referral notes at the time the encounter is closed

Act — Plan — Study — Do — PDSA Cycles

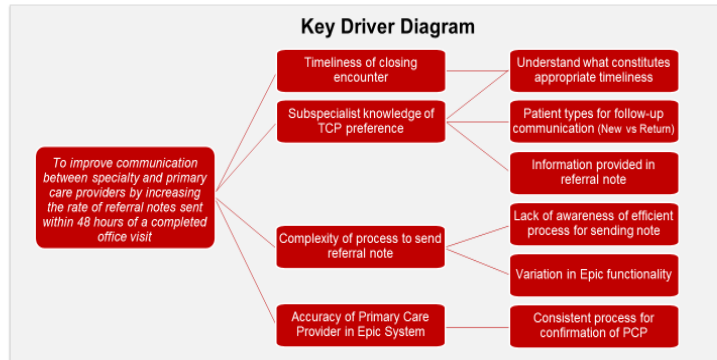## Analysis & Methods

Key Driver Diagram

To improve communication between specialty and primary care providers by increasing the rate of referral notes sent within 48 hours of a completed office visit

- Timeliness of closing encounter
  - Understand what constitutes appropriate timeliness
- Subspecialist knowledge of TCP preference
  - Patient types for follow-up communication (New vs Return)
  - Information provided in referral note
- Complexity of process to send referral note
  - Lack of awareness of efficient process for sending note
  - Variation in Epic functionality
- Accuracy of Primary Care Provider in Epic System
  - Consistent process for confirmation of PCP

PDSA Cycles

1 Subspecialist Education on TCP Information Requested

Provide subspecialist with data via email on when and what patient information PCPs prefer.

DID YOU KNOW...

2 Live Demonstration on Best Practices to Send Referral Note

Live demonstration of written instructions for physicians and administrative leadership present at Woodlands Grand Rounds.
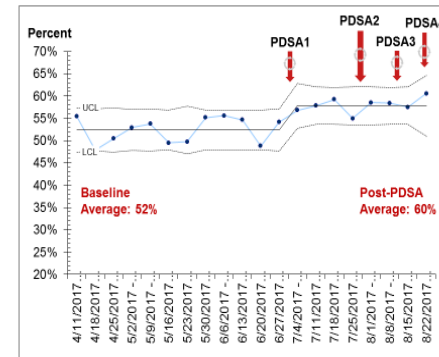
3 Email Instructions for Sending Notes

Email sent to all Woodlands Subspecialists with instructions on how to consistently send referral notes to primary care providers for all patient encounters.

4 Verifying PCP at Time of Check-in

ASR supervisors reinforced importance of verifying and/or obtaining accurate PCP information at time of check-in with all Woodlands ASRs.

Results

Referral Note Communication

The Proportions Chart (P-Chart) below shows the proportion of TCH The Woodlands office visits with encounters closed and referral notes sent within 48hrs. The weekly percentage increased from a baseline average of **52%** to **60%** after PDSA Cycle 4.

Percent
70%
65%
60%
55%
50%
45%
40%
35%
30%
25%
20%

PDSA1 PDSA2 PDSA3 PDSA4

UCL
LCL

4/11/2017, 4/18/2017, 4/25/2017, 5/2/2017, 5/9/2017, 5/16/2017, 5/23/2017, 5/30/2017, 6/6/2017, 6/13/2017, 6/20/2017, 6/27/2017, 7/4/2017, 7/11/2017, 7/18/2017, 7/25/2017, 8/1/2017, 8/8/2017, 8/15/2017, 8/22/2017

Baseline Average: 52%
Post-PDSA Average: 60%

Provider Satisfaction

A closing survey with Woodlands area **TCP** providers demonstrated an **improvement in satisfaction score** from **6.3** to **7.75.**

Discussion

Next Steps: Recommendations Presented to Access Taskforce

1. Implement a uniform template for referral notes
2. Develop a streamlined process for sending referral notes to PCPs at the point of encounter closure
3. Educate subspecialists regarding TCP preferences on timeliness of communication and information included

Ernest, K., Barbella, M., Hill, M.H., & Irani, N. (2017, September). Improving Communication by Closing the Loop. Poster presented at The Texas Children's Hospital's Advanced Quality Improvement and Patient Safety (AQI). Program, Houston, TX.