



READY
RELIABLE
CARE **ANYTIME,
ANYWHERE**

**2022 READY RELIABLE CARE HIGH RELIABILITY
ORGANIZATION AWARDS**

**ABSTRACT BOOKLET – ALL
SUBMISSIONS**

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Introduction

A summary of all submitted abstracts towards the 2022 Ready Reliable Care High Reliability Organization Awards. The Ready Reliable Care (RRC) High Reliability Organization (HRO) Awards Program recognizes initiatives that improve the Military Health System (MHS). We seek approaches and enhancements in both clinical and non-clinical areas that result in more reliable processes, better outcomes, and higher quality care. The goal of the Awards Program is to promote a culture of learning, sharing, and continuous improvement.

Awards will be presented in the following **Domains of Change**:



LEADERSHIP COMMITMENT
Prioritize Ready Reliable Care at all levels of leadership



CULTURE OF SAFETY
Commit to safety and harm prevention



CONTINUOUS PROCESS IMPROVEMENT
Advance innovative solutions and spread leading practices



PATIENT CENTEREDNESS
Focus on patients' safety and quality of care experience

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Leadership Commitment Award Submissions

CPI Manager – Build a Competitive Edge

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Other – CPI Manager

Domain of Change: Leadership Commitment

Abstract:

Since 1 December 2021—my selection date as the Squadron CPI Manager—I have seen low levels of innovation, where Airmen are missing the opportunity to weigh in on a number of significant efforts that lead to improved care and advances in a ready, reliable Military Health System. Factors that led to this initiative include little to no interest shown and minimal education and training opportunities given to flights to take aim at old processes in order to improve the continuum of care and support within a high reliability organization.

In this report, leadership commitment was analyzed in order to address administrative processes, training, and organizational climate by centralizing and coordinating oversight of flight CPI metrics and outcomes by utilizing deference to expertise and commitment to resilience. These principles hold considerable promise for the increase in foundational knowledge (CPI managers push for education and training as it pertains to CPI), airmen's involvement in solutions (CPI managers push for project completion as it pertains to CPI), and tracking strategic alignment (CPI managers push for squadron level tracking as it pertains to CPI)—essential elements that are all needed to prioritize. This initiative resulted in 532 completed hours of CPI education, 16 completed CPI/JDI projects, and a real time CPI/JDI tracking spreadsheet used to brief Sq/CC/SEL.

From National Pandemic to Virtual Panacea: Leveraging Virtual Solutions to Fill Educational Gaps

Organization: Naval Medical Center Portsmouth

Primary Clinical Community: Primary Care

Secondary Clinical Community: Complex Pediatrics

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Leadership Commitment

Abstract:

The foundation of high quality, safe patient care is the development of physician's knowledge, skills, and aptitudes applicable to their practice. The Naval Medical Center Portsmouth (NMCP) Pediatric Residency Program imbues its graduates with the knowledge needed for academic success with a protected half-day of didactic sessions every week focused on board exam topics. However, without a dedicated tracking system, some topics were taught with high frequency while others were taught infrequently or not at all addressed. Concurrently, the ability to conduct in-person education was limited by the COVID-19 pandemic, resulting in the need to reconsider how these objectives were achieved.

Our resident-led Academics Team used this time to recalibrate the academic curriculum, mapping the time available based upon the specialty specific board exam outline and eliminating both redundancies and extraneous, non-didactic content. Virtual learning platforms were incorporated during the pandemic, and ultimately led to ongoing clinical and didactic relationships with sister institutions (Children's Hospital of Philadelphia, Children's Hospital of the King's Daughters).

From these efforts the percentage of board exam topics covered increased from 65% to 90% and unique lecture hours by subspecialties not present at our institution increased drastically. In-training examination scores for our program increased by 12% from 2020 to 2021 as scores fell by 8% on a national level.

A streamlined set of learning objectives, standardized scheduling protocol, and use of both military and non-military resources resulted in an increase in trainee academic preparedness during a time of national decline in objective score measures. Coverage of board content specifications and performance on standardized testing was increased by use of standardized scheduling algorithm.

Implementation of Enhanced Senior Leadership Rounding Form to Improve Leadership Engagement

Organization: Hanscom AFB

Primary Clinical Community: Primary Care

Secondary Clinical Community: Dental

Clinical Support Service: Diagnostic Imaging

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Leadership Commitment

Abstract:

Poor communication in a workplace continues to be a top concern for employees at the front lines. Poor communication often creates a tense environment where people are not motivated to be productive and not inspired to collaborate. Closed loop communication, on the other hand, consists of the team's ability to exchange clear, concise information, to acknowledge receipt of that information, and to confirm its correct understanding. In March 2022, Hanscom Air Force Base (AFB) completed its first Ready Reliable Care (RRC) Safety Communication Bundle data call. The RRC Champions observed it was difficult to determine when concerns had been acknowledged as closed between Senior Leadership and the concerned unit. To address this issue and ensure closed loop communication, the RRC Champions revised the Senior Leadership Rounding (SLR) Form and requested time to address the Executive Team and Hanscom's Flight leaders.

Hanscom's revised SLR Form consists of two sides: The 4C Script and Suggested Safety Questions. The Suggested Safety Questions includes Discuss Concerns "For RRC SCB Quarterly Data: Provide some immediate feedback. Note that these issues will be addressed w/in 30 days with flight leadership." The Patient Safety Manager then emails flight leadership with the concerns that were discussed during the Rounding Session. Flight leadership has the opportunity to address the concern or request additional support. Top concerns, including those that require Executive Leadership support, are discussed at a monthly Expanded Staff meeting. Another suggested safety question is "Is there a recent Kudos example to share?" This provides an opportunity for the unit to provide some appreciation to their members. From this question Hanscom has observed how strong the Culture of Safety is embedded in the team and have found multiple Trusted Care/High Reliability Organization (HRO) Heroes of the Month and great safety catches.

Improving Medication Adherence with the Use of a DHA Mobile App

Organization: Wright-Patterson AFB

Primary Clinical Community: Primary Care

Secondary Clinical Community: Behavioral Health

Clinical Support Service: Connected Health

Non-Clinical Support Service: Information Technology Resourcing

Domain of Change: Leadership Commitment

Abstract:

Poor medication adherence for patients with non-acute disorders has been shown to significantly increase the rate of relapse/recurrence. Aggregated results of BAMC antidepressant med compliance as of Oct 2019: 70% 3mo- and the lowest compliance demographic was in teenagers. Common reasons cited for poor compliance in the literature include forgetting to take the medication as scheduled, concerns with side effects, poor education regarding medication effects and use, and low motivation. Additionally, ineffective management of chronic conditions managed by medications drive up cost, impact access to care, and overall readiness. Easy access to reliable education regarding diagnosis/medications may optimize provider time. Due to a clear need for improved medication compliance, a mobile app was created and approved for use throughout the DoD by DHA. This mobile application is a single source for medication reminders, disease and medication education, and clinic/pharmacy contact numbers. From a prior market review, there were no mobile tools available that offered all features in one app.

Leadership and Professional Development Innovation in an Adult Neurology Residency Program

Organization: Brooke Army Medical Center

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Leadership Commitment

Abstract:

Physicians may be asked to lead healthcare stakeholders. Leading successfully can be difficult and even more challenging to teach. Synonymously in the business world, experts estimate up to 50% of those leading U.S. companies fail, despite roughly \$14 billion spent annually on leadership development. This project sought to determine prior experience with leadership and professionalism education at a neurology residency program, and report the results of a new seminar curriculum aimed at enhancing leadership potential of early-career neurologists.

We hypothesized that residents surveyed would (1) report a paucity of formal leadership training, (2) cite a desire for purposeful education, and (3) grassroots seminars will be an effective intervention. An electronic, voluntary, anonymous survey was shared within the Neurology Department at the sole Level 1 Trauma Center within the Military Health System. One-hour grass-root seminars were held on topics including healthcare disparities and implicit bias, effective teaming, negotiations, personal finance, leadership, and healthcare law.

Pre- and post-seminar surveys were analyzed. Seventeen initial survey participants responded. Forty-seven percent (8/17) endorsed no dedicated leadership/professionalism curriculum during medical school at all. Seventy-one percent (12/17) reported a "hidden curriculum." Sixty percent endorsed "minimal exposure" to formal leadership education during residency. 92% agreed that residents would benefit from more. The perceived importance of leadership skills increased with each level of medical training. The healthcare law seminar significantly improved topic understanding ($p=0.007$). 100% reported a need to improve personal negotiation skills, and 100% reported increased confidence following the negotiation seminar. Participants were more likely to consider implicit bias ($p=0.014$) in their own patient encounters after the healthcare disparities seminar.

Physician trainees have a need for, and may benefit from, a leadership curriculum. The innovative education strategy of grassroots seminars may allow for effective delivery and incorporation of intended lessons thereby meeting the needs of all stakeholders.

Operation Allies Refuge/Welcome (OAR/W) at Overseas Military Treatment Facility

Organization: Navy Medicine Readiness & Training Command Rota Spain

Primary Clinical Community: Military-Specific Care

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: N/A

Domain of Change: Leadership Commitment

Abstract:

In support of Operation Allies Refuge/Welcome (OAR/W), our overseas U.S. Naval installation, on a host nation military base, was designated a temporary safe haven by the DoD to receive airlifted Afghan evacuees, including Special Immigrant Visa applicants and vulnerable civilians (collectively termed "Travelers"). On 22 August 2021, our OCONUS Military Treatment Facility (MTF) was identified as the lead medical unit to support OAR/W in our region. Within 48 hours, a new command and control structure was developed and executed using active-duty staff for the operational ("forward") mission. Active duty, General Schedule, and Local Nationals also continued to support the hospital ("homefront") mission, with no service degradation. Without an operational table of equipment for this type of dual-platform mission, we built one in coordination with Combatant Commands, installation facilities, and hospital assets. Inbound Traveler flights began 27 August 2021, and continued almost daily for several weeks.

Our small overseas MTF remained resilient to our core mission of exceptionally reliable care despite rapid transformation. We maintained constancy of purpose over six weeks, preoccupied with avoiding failure in this historic mission to provide quality care with zero harm for 2,483 Afghan Travelers with whom we shared mutual trust and respect.

Purposeful Leadership Rounding

Organization: Naval Medical Center San Diego

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Leadership Commitment

Abstract:

Leadership engagement in healthcare institutions is a well described tool for frontline staff to share concerns with leadership, address safety issues, and ultimately improve the safety and quality of care at the institution. Purposeful leadership rounds conducted by our Executive Steering Committee (ESC) were initiated as part of our command-wide preparation strategy for our triennial Joint Commission survey. Formal rounds were conducted during most weeks between December 2021 and July 2022. Purposeful rounds focused on identified accreditation risk points based on prior Joint Commission surveys, contracted assist visits, and internal command audits. Purposeful rounds consisted of five separate three member teams made up of ESC members, each visiting a unique clinical location throughout the command. Depending on the focus for the week's rounds, there was frequently a short pre-brief for the ESC members to provide education on the relevant accreditation standards. Scoring was tracked with command-created Joint Commission Resource TRACER tools. Results were collated and feedback was provided to the respective departmental leadership for correction. The ESC received summarized briefs of results for each month's rounds, with a focus on higher level observations requiring leadership intervention. Numerous opportunities for improvement were identified as a result of this purposeful rounding initiative, to include standardization of emergency eye wash and emergency shower logs, updated Basic Life Support, Advanced Life Support, and Pediatric Advanced Life Support algorithm cards for crash carts, and improved documentation of High Level Disinfection logs. These rounds also facilitated

opportunities for senior leaders to engage with frontline staff and discuss relevant issues, enhancing communication up and down the chain of command. Overall, the command saw an approximately 75% reduction in the number of observations on 2022 Joint Commission survey in comparison to the 2019 survey.

Standardization of Pulmonary Embolism Evaluation and Management through Implementation of a Pulmonary Embolism Response Team: A Single-Center Experience at Brooke Army Medical Center

Organization: Brooke Army Medical Center

Primary Clinical Community: Critical Care/Trauma

Secondary Clinical Community: Cardiovascular Care

Clinical Support Service: Diagnostic Imaging

Non-Clinical Support Service: Safety Reporting Mechanisms

Domain of Change: Leadership Commitment

Abstract:

Pulmonary embolism (PE) is associated with significant rates of morbidity and mortality. Management of PE is complex, and adverse patient events are not uncommon. Brooke Army Medical Center is among several select institutions that have implemented multi-disciplinary pulmonary embolism response teams (PERT) to improve PE outcomes. PERT structure varies among institutions and often involves specialty expertise from a variety of departments within the hospital. PE response teams aim to improve the diagnosis and treatment for patients with acute PE.

We developed a multi-disciplinary PERT and implemented a standardized algorithm to guide the evaluation, management, and disposition of patients with acute PE. Patients with PE were identified in the pre-PERT period (2015-2017) and post-PERT period (2020-2021). Retrospective analysis of clinical characteristics, management strategies, and outcomes was performed for both cohorts. A total of 68 patients with acute PE were analyzed, 38 patients prior to PERT adoption, and 30 patients post-PERT. Baseline characteristics between the two cohorts were similar.

A statistically significant increase in the evaluation for right ventricle (RV) dysfunction was noted in the post-PERT cohort, with more pro-brain natriuretic peptide (proBNP) labs and more transthoracic echocardiograms (TTE) obtained in the post-PERT cohort compared to the pre-PERT cohort ($p=0.005$, $p=0.0001$). Six patients in the pre-PERT cohort underwent catheter directed thrombolysis (CDT), compared to 0 in the post-PERT cohort ($p=0.006$). There were no differences in other treatment modalities.

To our knowledge this is the first report describing the successful implementation of a PERT at a military treatment facility to guide the evaluation, management, and treatment of PE. Implementation of the PERT improved the appropriate diagnostic evaluation for patients with intermediate risk PE and reduced the use of non-guideline based CDT. This initiative serves as an example of what could be applied across other military treatment facilities within the Defense Health Agency.

Using LENS to Improve Organizational Climate through Daily Practices

Organization: Kirk U.S. Army Health Clinic, Fort Meade MEDDAC

Primary Clinical Community: Primary Care

Secondary Clinical Community: Behavioral Health

Clinical Support Service: N/A

Non-Clinical Support Service: Administrative Management Work at all Levels

Domain of Change: Leadership Commitment

Abstract:

REASON: Twelve months ago, the current command reviewed the SCORE Survey Culture and Engagement Survey Results, dated July 2021. The results of the survey indicated that the unit experienced high burnout rates, low team work, breakdown in communication, and inability to participate in decision making. Hence, the unit's overall climate and morale assessment was low.

OBJECTIVES: The command's main objective was to improve the unit's overall climate, with a focus towards improving team communication, collaboration and organizational trust. Efforts would center on increased leader engagement.

DESCRIPTION: The command leveraged the Learning and Engagement System (LENS) to connect teams and leaders across time and space. LENS is a digital knowledge management tool accessible from any web browser. The platform gives a voice to all team members by allowing multiple ways to interface such as mobile device, text, and compatible internet browsers.

SUMMARY: The unit's culture and climate improved as a result of full LENS implementation. Leadership presence increased by 123.07%; LDSB duration decreased by 48.38%; the unit averaged 80 active LENS users since inception in February 2022, resolved 186 of 197 reported issues resulting in a 94% closure rate, and helped the clinic secure "Zero" Joint Commission findings. In May 2022, the command established a Peer-to-Peer "Kirk ACE" Chip Recognition Program and presented 104 Kirk ACE Chips during weekly SLR. Shortly following the LENS implementation, the unit experienced improved results in the Command Climate Survey domains for trust in leadership by 15%; inclusive organization by 17%; cohesive organization by 18%; and engaged and committed by 20%.

CONCLUSION: The unit improved a culture centered on excellence, with a unit focus on average number of engaged leaders attending LDSB; average LDSB duration; active LENS staff utilizers; number of resolved administrative barriers to success; and prioritization of people.

Culture of Safety Award Submissions

21-0083-1626664 – CIA – Wrong Site Surgery

Organization: 377th Medical Group - Kirtland AFB

Primary Clinical Community: Dental

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Safety Reporting Mechanisms

Domain of Change: Culture of Safety

Abstract:

A CIA was conducted after a dental patient underwent a procedure in the network in which the wrong tooth was removed. Per the information documented in the referral, the Oral Surgeon removed tooth # 2, when, in actuality, it was tooth # 29 which should have been removed. The CIA Team was tasked with determining the root cause of this wrong site surgery.

The CIA Team consisted of the PSM as the Facilitator and SGB as the Team Leader. The rest of the team was composed of various disinterested members throughout the Medical Group. The CIA Team Members were quick to ascertain the continued use of paper records was part of the underlying problem, even though Dentrix had been live for 5 months. Additionally, the Dental Clinic also used old and outdated forms lacking all the necessary information and without a centralized manager of the dental referral process. All of these factors led to a transcription error on the referral, ultimately leading to a wrong site surgery.

While it was known the wrong tooth was removed by the Oral Surgeon, the CIA Team needed to

determine why. It was determined the Oral Surgeon acted correctly, based on the information he was provided from the Dental Clinic. This information requested removal of tooth # 2, which was accomplished.

The CIA Team determined that a transcription error on the internal paper referral sheet led to the wrong information on the digital referral which was then faxed to the Oral Surgeon resulting in the removal of the wrong tooth. The patient ultimately had to have a second tooth removed, at which time, the correct information was sent to a different Oral Surgeon. Unfortunately, the laborious transcription processes failed the patient and the staff creating an environment that tolerated mistakes by not catching them.

8-Step Practical Problem Solving Initiative / Skin Injuries, Main OR

Organization: Walter Reed National Military Medical Center

Primary Clinical Community: Surgical Services

Secondary Clinical Community: Surgical Services

Clinical Support Service: Patient-Centered Care

Non-Clinical Support Service: Involvement in Safety Protocols

Domain of Change: Culture of Safety

Abstract:

Identifying skin injuries with trends and gaps was an ongoing effort since 2020 and accelerated during 2021. Patient safety events specific to Oral Maxillofacial in CY2021, and other sub-specialties presented concerns from a patient care standpoint involving skin impairment. Applying the principle of Commitment to Resilience, SWARMS occurred without any trends or significant findings. A pursuit for safety and harm prevention for surgical patients prompted a collaborative focus group to investigate further skin injuries. Through partnership the multi-disciplinary team identified distinction between thermal injuries, burns secondary to equipment, positioning technique, and pressure injuries secondary to procedures over four hours in length. Developing corrective actions among the Main Operating Room (MOR) Surgical Services, inpatient, and outpatient procedures became the extent of improving care for the surgical patient.

Centralized Surgical Scheduling

Organization: Navy Medicine Readiness & Training Command Rota Spain

Primary Clinical Community: Surgical Services

Secondary Clinical Community: Surgical Services

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

In preparation for the realignment of the Ambulatory Procedures Unit (APU) from the Main Operating Room, Directorate for Surgical Services (DSS) to the Multi-service Ward (MSW), Director of Nursing Services (DNS) of this OCONUS hospital, a centralized surgical scheduling system was created. The MOR APU has historically employed a full-time nurse to provide all clinical and administrative needs for surgical patients both pre-operatively and on the day of surgery. There is an extensive list of surgical prerequisites that must be verified and completed in order to deliver highly reliable surgical care, and despite thorough evaluation by a consistent nurse in charge of the process, some items were not getting completed in advance of the surgical day. The movement of pre-op responsibilities from APU to the MSW team could add potential risk of inconsistency completing this work with the shared responsibilities and competing priorities of an often busy Multi-Service ward. The department head (DH) of the MOR, with a focus on a culture of safety, created a centralized scheduling process for the hospital to reduce current deficiencies and to prevent the potential for harm that existed due to the transition of the APU to the MSW

environment. This preoccupation with failure prompted the central scheduling initiative. The DH of the MOR regularly emphasized with the staff the need to anticipate problems and to preemptively seek out solutions where mistakes could occur. Examples of the deficiencies included incomplete documentation on consents, consents not matching the scheduled procedure, incomplete documentation for lab orders, and patients being scheduled without completed paperwork. Though the APU transition is ongoing, positive results have already been noted with no harm or rescheduling of patient surgeries. The transition to this new system has proven to be key in the success and continued safety for this facility's surgical patients.

Develop Surgical Smoke-Free “Go Clear” Initiative

Organization: Navy Medicine Readiness & Training Command Twentynine Palms

Primary Clinical Community: Surgical Services

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

Surgical smoke is a visible plume of aerosolized combustion byproducts produced by heat-generating (electrosurgical) instruments which can contain over 16 EPA pollutants and over 150 substances including chemicals, bacteria, viruses, and tumors. Despite AORN, CDC, NIOSH recommendations, no formal surgical smoke-free initiative training program exists in the Main Operating Room and OB/GYN clinic where over 500 surgical smoke producing procedures are performed annually.

Disruptive Patients

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Other (Patient and Staff Safety)

Domain of Change: Culture of Safety

Abstract:

As defined by the U.S. Department of Labor, "a workplace violence incident is a verbal, written, or physically aggressive threat or attack intended to intimidate, cause injury or death to others in a place of employment." From Oct 2020 through Feb 2022, the 673d Medical Group had 131 disruptive patient incidents that met the workplace violence definition and were of great concern to staff members and organizational leaders. Providers, nurses, and technicians voiced their concern regarding disruptive behavior. Many stated this issue largely contributed to burnout and feeling unsafe in the work environment. To enhance a Culture of Safety in the organization, it was imperative to explore in depth what could be done to ensure the safety of our patients and staff. The primary goal was to reduce the number of incidents that cause mental and physical harm (111 incidents in CY2021). A multidisciplinary team was formed and a process improvement project was chartered. Reduction of the number of incidents of disruptive patients is the measured objective. The data was collected through the Patient Safety Reporting System and Department leadership. The root causes were determined and 24 potential gaps were identified. The Failure Mode and Effects Analysis (FMEA) and severity of effects scoring method was utilized to prioritize the gaps. Active leadership engagement played a vital role in the team's ability to implement numerous new processes that ensure patient and staff safety. The investment in this PI project demonstrated to staff that nothing is more important than safety. The Medical Group is dedicated to delivering world class healthcare in a safe working environment for our patients and staff and to ensure a sustained Culture of Safety.

Enhanced Recovery After Surgery (ERAS) Protocol Implementation for Breast Surgery Patients to Reduce Post-Operative Opiate Use

Organization: Naval Medical Center Portsmouth

Primary Clinical Community: Surgical Services

Secondary Clinical Community: Oncology

Clinical Support Service: Medical Management

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

BACKGROUND: The opioid crisis in the United States continues to impact every level of patient care and opiate dependence poses a direct threat to the health and medical readiness of our patients within the MHS. We identified variable post-operative prescribing practices of opiates as an area of improvement in the MHS Clinical Communities of Oncology and Surgery. The initiative of this culture of safety project was to embody the RCC Principals to optimize our peri-operative pain management for breast surgery patients. This project aimed to reduce the risk of opiate dependence and abuse in our Comprehensive Breast Clinic patients by implementing standardized Enhanced Recovery After Surgery (ERAS) protocols for all patients undergoing breast surgery and assess the effectiveness of these protocols in reducing post-operative opiate use.

METHODS: This was a prospective, single institution study at our MTF of all patients undergoing breast surgery from November 2020 to November 2021. All patients were enrolled in our protocols and given questionnaires at their 2-week postoperative clinic visit that assessed their perioperative pain using the Defense and Veterans Pain Rating Scale (DVPRS) and opiate pain medication use. Appropriate parametric and nonparametric tests were used for analysis.

RESULTS: A total of 133 patients completed the survey over the 12-month period. Of these patients, 98.5% received pre-operative education regarding pain and pain control and 79.7% received pre-operative pain medication in preoperative holding. 91.7% of patients reported use of scheduled non-opiate medications and 70.7% of patients reported having unused oxycodone tablets.

CONCLUSION: This study demonstrated that our ERAS Protocol was implemented with excellent utilization of pre-operative patient education and high compliance of pre-operative and post-operative multimodal pain medication. Additionally, it illustrated opportunities to decrease the number of oxycodone tabs prescribed per patient in almost all the procedures analyzed and to improve safe disposal of opiate medications.

First-Five-Minutes Drill Program

Organization: 377th Medical Group - Kirtland AFB

Primary Clinical Community: Critical Care/Trauma

Secondary Clinical Community: Critical Care/Trauma

Clinical Support Service: Precision Medicine

Non-Clinical Support Service: Involvement in Safety Protocols

Domain of Change: Culture of Safety

Abstract:

The American Heart Association (AHA) teaches healthcare personnel to provide high-quality cardiopulmonary resuscitation (CPR) and defibrillation as quickly as possible, because the sooner these interventions are performed, the better the chances for survival after cardiac arrest. Responders should

call for help within 20 seconds, start compressions within 60 seconds, and administer the first defibrillation within 180 seconds. To maintain skill retention, personnel should practice CPR frequently.

During a mock-code at an outpatient clinic, a nurse educator observed staff providing CPR too slowly. To improve response times and meet the AHA's standards of care, the Education & Training flight implemented monthly in-situ simulations, called "First-Five-Minute" drills. These drills prioritized three response times: the time needed to call for help, start compressions, and give the first defibrillation.

The nurse educator developed an observational evaluation tool to measure learning during quarterly mock-codes. After fourteen months, all three response times not only improved, but exceeded the AHA's standards of care. The time needed to call for help improved by an average 88%, time to start compressions improved by an average 81%, and the time to administer the first defibrillation improved by an average 88%. The author believes these drills can be replicated in other clinics across the military health system (MHS) with similar outcomes. By encouraging diverse teams to focus on the common goal of "zero harm," this initiative promoted a Culture of Safety through Constancy of Purpose.

Implementation of Bi-monthly Patient Safety Forum in the Patient Movement Enterprise

Organization: TRANSCOM Patient Movement Requirements Center - Americas

Primary Clinical Community: Military-Specific Care

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Safety Reporting Mechanisms

Domain of Change: Culture of Safety

Abstract:

In 2021, TRANSCOM Patient Movement Requirements Center - Americas (TPMRC-A) implemented a project initiative to increase communication lines between us as the Regulating Authority (RA), En Route Patient Staging Facilities (ERPSF) and our high utilization Military Treatment Facilities (MTF). TPMRC-A established a patient safety bi-monthly virtual meeting consisting of a safety team and leadership within the organization along with key personnel from CONUS patient staging and military treatment centers. These meetings allow for open communication from outside facilities to articulate unique constraints for RA movement considerations, identify areas of concern, address patient safety events, and solutions to issues that are encountered during the patient movement process. Initiative performance was measured monthly utilizing Patients Safety Reports with event subtypes and causal factors compared to previous months. In addition, Quarterly and Annual reports provided by USTRANSCOM and AMC Patient Safety Managers are used to identify trends and, over the course of 16 months, data from more than 6,000 patients was collected from the TRANSCOM Regulating and Command and Control Evacuation System (TRAC2ES) and Joint Patient Safety Reporting (JPSR) systems. The results of implementing virtual bi-monthly Patient Safety meetings have positively influenced all safety events within the AE system. Through this change we saw a 49% reduction of patient safety events with electronic documentation issues, 43% decrease in notification issues, 18% decrease in events with clinical administrative processes and procedures, and 4% decrease in medication, biological or nutritional errors. Improving communication and transparency has led to streamlined patient movement processes, improved previously unreported events, and improved events with causal factors other than communication.

Improving Barcode Medication Administration through Education, Audit, and Feedback

Organization: Navy Medicine Readiness & Training Command Camp Pendleton

Primary Clinical Community: Critical Care/Trauma

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

Medication administration errors add \$3.5 billion to annual healthcare costs (Adverse Drug Event Working Group [ADE Working Group], 2014). Barcode Medication Administration (BCMA) can reduce errors by 80% (Bonkowski et al., 2013; Leung et al., 2015). The national benchmark for patient wristband scanning and medication scanning is 95% compliance in all departments where BCMA technology is available (Nabi, 2020).

This evidence-based practice (EBP) occurred at a military treatment facility emergency department (ED). Though BCMA technology had been available in the ED since November 2020, the BCMA compliance rate was 33% in October 2021 for both wristband and medication scanning. This evidence-based project (EBP) focuses on effective implementation strategies to improve BCMA compliance in the ED. Acknowledging the risks of medication administration and mitigating those risks through the use of BCMA, this project demonstrates a COMMITMENT TO SAFETY AND HARM PREVENTION through PREOCCUPATION WITH FAILURE.

This EBP focused on implementation strategies of education, audit, and feedback to improve BCMA compliance. Initial education occurred during shift-change huddles and focused on introducing the importance of BCMA to nursing staff. A BCMA communication board was prominently displayed in the ED with education regarding scanning components. An education module was developed and assigned to all ED nursing and hospital corps staff through the organization's e-learning platform, Elsevier. Weekly and end-of-month BCMA audit reports were run through the electronic health record reporting system, Discern. The reports broke down overall ED compliance and individual staff compliance.

The ED's BCMA wristband scanning improved to 75% and medication scanning improved to 81% from October 2021 to April 2022; a 127% and 145% increase, respectively.

Education, plus audit and feedback, are effective implementation strategies for improving BCMA compliance in an ED. The BCMA culture is sustained through modification of the orientation and competency validation process for new staff members.

Maintaining High Quality, Reliable Diagnostic Care for Pulmonary Embolism during the International IV Contrast Shortage

Organization: Joint Base San Antonio – Brooke Army Medical Center

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Diagnostic Imaging

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

In May 2022, a COVID-19 outbreak in China led to the shutdown of a major plant that produced the majority of the world's intravenous contrast media. The shortage led to major realignments in Radiology studies for common indications. Pulmonary embolism (PE) was one of the most common indications arising in acute clinical scenarios. Historically, Nuclear Medicine (NM) ventilation and perfusion (V/Q) scans were used to assess for PE, but with the advent of rapid CT scans, CT Chest Angiogram quickly became the preferred rapid diagnostic test for acute or emergent indications.

With the international loss of intravenous contrast, the radiology, ER, and in-patient services decided to perform NM lung perfusion-only (Q-only) scans for PE evaluation. Q-only imaging with or without 3D SPECT/CT imaging leads to more sensitive, specific, and accurate pulmonary embolism diagnosis. Our institution adopted a simplified, reliable guideline for Q-only scan interpretation, the Prospective Investigative Study of Acute PE Diagnosis (PISAPED) criteria. Although all staff radiologists are trained on interpretation of V/Q scans during residency, the majority of staff radiologists do not regularly read these types of exams at our institution and are not familiar with the Q-only PISAPED criteria. Additionally, many residents are unfamiliar with appropriate Q-only scan interpretation due to infrequent use prior to

the contrast shortage.

We developed effective staff and resident training to help Radiologists learn how to use the PISAPED criteria with Q-only imaging to diagnose PE. The training led to increased accuracy and confidence in applying PISAPED criteria with Q-only imaging. We also developed a standardized reporting template that automatically populates with NM Q-only imaging, so that a standardized, high quality product is generated with each of these studies. These initiatives helped us to provide safe diagnostic care and reduced patient harm during the international contrast shortage.

Maturing into a Safety First Culture

Organization: 71st Medical Group - Vance AFB

Primary Clinical Community: Military-Specific Care

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Other (Applies to all aspects of medical facilities)

Domain of Change: Culture of Safety

Abstract:

The Military Treatment Facility (MTF) began its High Reliability Organization (HRO) journey to zero harm in August 2017. The objectives of the initiative were: establish a firmly ingrained culture of safety by nurturing a duty to speak up, promote teamwork through respect for people, and reduce harm through a constancy of purpose and critical thinking engendered through preoccupation with failure and sensitivity of operations.

The success of the objectives was measured by the following metrics: overall number of DoD reportable events, total patient safety reports submitted, organizational awareness of HRO principles, and speaking up for safety with impact across the DoD.

In summary, through intentional and concerted effort, the tell-tale signs of a maturing culture of safety are visible throughout the medical facility. It has been 2,575 days since the last DoD Reportable Event and Patient Safety Reports (PSR) have been sustained around 3,000 per year for almost 4 years. Lastly, the Airmen's preoccupation with failure here at a small MTF has made an impact across the Military Health System (MHS).

Medication Barcode Scanning Rate Improvement

Organization: Navy Medicine Readiness & Training Command San Diego

Primary Clinical Community: Cardiovascular Care

Secondary Clinical Community: N/A

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

At the end of February of 2021, the facility implemented the electronic health record (EHR) system, MHS GENESIS. A notable change of this new system included incorporation of Barcode Medication Administration (BCMA) technology to aid in error reductions surrounding medication administration, where an estimated 30% of medication errors occur. Since implementation of the new system, inconsistent utilization of BCMA among nursing staff resulted in a 68% BCMA compliance rate for two medical-surgical units, falling short of the >95% Leapfrog standard. The factors that led to this initiative were the implementation of a new workflow, and the inclusion of military hospitals to Leapfrog standards,

prompting the need to increase the compliance rate to provide safe patient care and avoid medication errors.

The objective of this initiative was to implement a process improvement with teamwork strategies in an effort to impact staff performance and increase BCMA compliance. The Ready Reliable Care (RRC) domain of culture of safety is pertinent to this initiative; by improving the BCMA compliance, medication errors are avoided, therefore enhancing patient safety.

A literature search was conducted to find the best practices to increase BCMA compliance in the inpatient hospital scenario. Barriers were identified affecting compliance rates and addressed, education was provided to staff, and a unit competition was established to engage staff and improve compliance. The outcomes were measured by the scanning of medication percentage obtained in the EHR system.

A 21% increase occurred from baseline in BCMA compliance rates with a marked change from 68% to 89% over a four-month period after the start of the competition. In conclusion, the integration of BCMA reduces medication errors through shared accountability and knowledge of proper technology usage impacting patient safety. Teamwork strategies and awareness of the process are crucial to achieving optimal outcomes within the fast-paced acute care environment.

Monitoring Patient on Duramorph Protocol

Organization: Navy Medicine Readiness & Training Command Rota Spain

Primary Clinical Community: Women and Infant

Secondary Clinical Community: Women and Infant

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

Patients who deliver via cesarean section frequently have pain control for the operation initiated using epidural or spinal anesthesia. In addition, the administration of opioids such as morphine injectable (Duramorph) has emerged as an effective first line form of postoperative pain control. However, there are risks of severe adverse effects with intrathecal opioid administration. All patients that receive this method of pain control require close monitoring for central nervous system depression over the first 24 hours post-operative. Monitoring for signs and symptoms, initiating resuscitation measures, and being familiar with the use and limitations of specific narcotic antagonists, such as naloxone, are important sets of competencies for nurses when caring for patients that have the potential to experience opioid-induced respiratory depression.

The staff are committed to patient safety and the prevention of patient harm. We prioritize the use of measures that will help identify any potential failure in our processes. Our commitment to reach zero patient harm ensures the close documentation review to identify discrepancies and to avoid miscommunication regarding the care of our patients. Identified during chart reviews was an opportunity to increase documentation compliance for postoperative Duramorph nursing assessments to include respiratory rate, level of sedation, and pain assessment.

A chart audit of the Duramorph patients conducted along with an in-depth look at the unit process revealed three root causes needing action to ensure successful implementation of our objectives: respiratory rate, pain level, and level of sedation. Our goal was to improve documentation compliance by 20% over the baseline rates (which were 68.3%, 62.1%, and 69.3%, respectively). At the conclusion of our project, we reached the goals for respiratory rate, 83.8% (goal 82%), and pain level, 85% (goal 74.5%), while falling just short for documentation of level of sedation, 80.6% (goal 83.2%).

Opioid Safety

Organization: Walter Reed National Military Medical Center

Primary Clinical Community: Surgical Services

Secondary Clinical Community: Behavioral Health

Clinical Support Service: Pain Management

Non-Clinical Support Service: Involvement in Safety Protocols

Domain of Change: Culture of Safety

Abstract:

The opioid epidemic and the high prevalence of chronic pain among U.S. military personnel are confounding factors that led the National Capital Region Pain Initiative (NCRPI) to manifest a culture of safety within the Military Health System (MHS). The number of drug overdose deaths increased by nearly 5% from 2018 to 2019 and quadrupled since 1999.¹ Of the approximate 70,000 deaths in 2019, 70% involved an opioid.² Preliminary CDC data from 2019 to 2020, reports an overdose increase of nearly 30% and over 90,000 deaths.³ Military members are highly exposed to opioids with almost one-quarter of active-duty members filling an opioid prescription in 2017.⁴ They are at an increased risk for negative long-term consequences of opioid use that impede on military personnel's work performance and mission readiness.

The NCRPI created a foundation that enhances the access and quality of care for pain patients while promoting readiness, restoration of function, and relief of pain while simultaneously reducing the misuse of opioids. NCRPI anticipates and addresses risks associated with opioid prescribing, driving zero harm. Their revolutionary foundations align to the RRC principle of Preoccupation with Failure.

The initiative played a major role in decreasing opioid prescriptions as a primary tool for pain management in the MHS. Military health data from April 2017 to July 2021 evaluating military beneficiaries who filled an opioid prescription at a strength of 50 morphine milligrams equivalent (MME) per day or more showed a 69% decline for active duty service members, a 47% decline for non-active duty beneficiaries under the age of 65, and a 32% decline for those 65 or older.⁵

Quality Improvement: Improperly Secured Pyxis Medications

Organization: Malcolm Grow Medical Center

Primary Clinical Community: Surgical Services

Secondary Clinical Community: N/A

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: Involvement in Safety Protocols

Domain of Change: Culture of Safety

Abstract:

BACKGROUND: Perioperatively, handling medications is second-nature to physicians and nurses. Unlabeled multi-use vials, leftover syringes, or bags of medications may remain in circulation due to anticipated future use or neglect of proper disposal. Third parties may question their integrity and quality. This may also permit abuse and waste of limited supplies. Patient harm may occur if high-risk medications are left unsecured or medications exceeding their preparation expiration are used.

AIM: The extent of various medications prepared for immediate use but were otherwise not administered was examined in a cohort of Brooke Army Medical Center Operating Rooms. A 75% decrease in items was desired post-intervention.

MEASURES: A baseline audit of OR Anesthesia Pyxis workstations for improperly secured medication items was conducted daily for four weeks. A four-week audit was repeated two months after verbal and

visual interventions were implemented.

IMPROVEMENT: In-person educational sessions were administered to anesthesiology trainees and faculty. Reminders were disseminated in regular department electronic newsletters. Durable signage at OR medication workstations was desired but not feasible due to conflicting interdepartmental policies.

RESULTS: Pre-intervention, 100% of ORs had at least one improperly secured medication at the Anesthesia Pyxis workstation; 92% had at least five. Two out of thirteen ORs demonstrated post-intervention decreases. A 73.8% increase in items was noted post-intervention. The prevalence of unsecured controlled medications during both audits was 2/649 (0.31%).

DISCUSSION: Our interventions did not demonstrate the expected results. The two ORs that demonstrated an improvement may have performed fewer anesthetic procedures. Placing durable signage in medication preparation areas may have had a stronger impact, but institutional barriers prevented this. Standardized end-of-day checklists may optimize proper use and disposal of medications. Implementing these measures hospital-wide can lead to fewer medication errors and reduce the potential for waste and abuse. Reappraisal of behaviors and workplace environments is crucial.

Resiliency Assessment Matrix (RAM)

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Other (Improving Staff Burnout

Domain of Change: Culture of Safety

Abstract:

The COVID pandemic has placed a considerable strain on medics resulting in higher stress levels and an increased concern about burnout and patient harm. After responding to COVID for a year and a half, the delta variant arrived in Alaska requiring the Joint Base Elmendorf-Richardson (JBER) MTF to expand out its inpatient beds to accommodate the demand. This additional work was a significant stressor to the JBER medics causing heightened alertness to focus on the frontline operations and those who do the work, a commitment to resiliency as an organization and averting patient harm.

The Air Force lacks the ability to collect near real-time data on our Service and family member's resiliency by leadership to proactively assist members, reduce stress and improve coping skills. In addition, our helping agencies lack data visibility to ensure their limited resources and services are targeted to those with greatest need. The Resiliency Assessment Matrix (RAM) was developed to help address this challenge by placing a simple operational risk management tool in the hands of front-line supervisors to help "color" their Airmen and families when it came to resiliency and connecting unit leadership with helping agencies through the power of data.

The RAM was initiated in October 2022 and the MDG unit leadership continues to assess and track resiliency of their members monthly to this date. Our data has shown 0.66-1.0% of our members are at high resiliency risk and 14-18% are medium risk over the past 9 months. Working with our base helping agencies, we have been proactively assisting members helping those most at risk and tackling stressful trends.

The RAM also competed at the installation's first innovation competition and won, taking home \$120,000. The funds secured a program developer contract to assist in getting the RAM developed as a web-based program and app.

Take What You Need Board

Organization: Navy Medicine Readiness & Training Command Rota Spain

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

Job burnout is described by the Mayo Clinic as “a special type of work-related stress—a state of physical or emotional exhaustion that also involves a sense of reduced accomplishment and loss of personal identity.” Burnout has become more and more prevalent in recent decades and can present itself in any profession. Healthcare is no exception, with caregivers experiencing their own version of the stress that comes with caring for others. COVID-19 only exacerbated the potential for healthcare worker burnout due to the increase in complexity that came with delivering patient care. The mitigation strategies introduced within the hospital setting to reduce the risks that the epidemic presented created an environment of isolation and disconnectedness. The Caregiver Occupational Stress Control (CGOSC) team focused on resilience, implementing the “Take What You Need Board,” an innovative and simple project developed to enhance a culture of safety by providing a tool to reduce staff burnout while promoting unity and reconnection. The actual board is a glass surface of an internal office window in a main hallway of the facility. Small sticky notes are placed across the window with encouraging quotes and positive affirmations. These goals display our hospital's commitment to resilience and show a respect for the people within the organization. Regular monthly replenishing of at least a third of the board each month, along with the request for more boards within the facility, has shown its value as a resilience tool within our facility.

Unsatisfactory PAP Smear Results

Organization: 21st Medical Group – Space Base Delta 1

Primary Clinical Community: Primary Care

Secondary Clinical Community: Women and Infant

Clinical Support Service: Laboratory/Clinical Pathology

Non-Clinical Support Service: N/A

Domain of Change: Culture of Safety

Abstract:

Maj Holmes identified an unusual trend in pap smear results being returned from lab in unsatisfactory results. Unsatisfactory result guidelines indicated a repeat pap in 2-4 months, and if unsatisfactory again, a colposcopy is recommended. Concerned with the unusual increasing number of potential repeat invasive procedures, she investigated possible causes for the sudden spike in unsatisfactory results.

Her research indicated ThinPrep, a modified Pap test technique used by our laboratory for detecting cervical cancer and precancerous lesions, had a list of compatible and incompatible lubricants. Incompatible lubricants used during the pap procedure could alter the results of a pap smear. An inventory of clinic lubricant supplies indicated 3 types of lubricants were stocked throughout the treatment rooms within the clinic and only one (see attachment 1) of the three lubricants were compatible with the ThinPrep test performed in the medical facility's laboratory. Maj Holmes educated her team on her findings, removed incompatible lubricants from the clinic stock/inventory, and collaborated with multiple departments across Medical Group to ensure lubricants being used for pap smears were compatible with the ThinPrep utilized in the laboratory.

Continuous Process Improvement Award Submissions

A Quality Improvement Project Rapid Response EEG Headset Reduces Time to Determination of Non-Convulsive Status Epilepticus at a Level 1 Trauma Center in the DoD

Organization: Brooke Army Medical Center

Primary Clinical Community: Critical Care/Trauma

Secondary Clinical Community: Neuromusculoskeletal

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

RATIONALE: Non-convulsive status epilepticus (NCSE) and non-convulsive seizures (NCS) have been found in 10-15% of patients in critical care settings. These often go unrecognized due to reduced consciousness, being in a coma, and not having physical signs of seizures. Left untreated, these lead to increased morbidity and mortality. The electroencephalogram (EEG) is the gold-standard for diagnosis. In an efficient system with EEG technicians in-house 24/7, there is an average delay of two to four hours before the EEG is available for physician review which leads to delays in diagnosis and treatment.

OBJECTIVE: Evaluate the impact on (1) time to electrographic data collection and (2) time to interpretation and patient care decision making using Rapid Response EEG (rr-EEG) headsets from the manufacturer Ceribell Inc. compared to traditional EEG at a Level 1 Trauma Center Military Treatment Facility.

RRC: This project demonstrates Continuous Process Improvement as we improved the process of obtaining EEGs and measured the improved performance through a reduction of time. As this technology does not require EEG technicians or machine, this has potential for replication MHS wide and utilization in austere environments or in the CCATT.

DESCRIPTION: All consultations that sought or required EEG service had either the rr-EEG device or the conventional EEG utilized. Data collected included time consult was received, time recording was started, and time of interpretation.

SUMMARY: The average time to initiate the rr-EEG was 48.94 minutes vs 128.05 minutes for conventional EEG p-value <0.001. The average time to interpret the rr-EEG was 58.59 minutes vs 246.29 minutes p <0.001. We compared time to interpret the rr-EEG to time to initiate the conventional EEG due to delays associated with work-flow and formal reading of the EEGs p-value <0.001.

CONCLUSION: rr-EEG has the ability to increase accessibility to EEG while reducing the time to obtain EEGs.

Below Zero Medicine (BZM)

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Other (Arctic Medicine)

Domain of Change: Continuous Process Improvement

Abstract:

The Military Health System (MHS) and Air Force Medical Service (AFMS), in particular, have a capability gap in the practice of arctic medicine that spans the entire doctrine, organization, training, materiel, leadership/education, personnel, facility and policy (DOTMLPF-P) spectrum. This impedes the AFMS Strategy Goal to Achieve Full Spectrum Readiness from maximizing medical readiness and resilience of all Airmen to perform mission requirements in all environments.

With the Arctic's increasing strategic importance, coupled with the Service's significant regional investment, the DoD requires the Department of the Air Force to have a unified, deliberate, and forward-looking approach, to ensure the Air and Space Forces can compete, defend the nation's interests in the Arctic region when required, and win. The Arctic Strategy that the AFMS will need to establish their presence with Line of the AF operations is highlighted in the AFMS strategy map. Current AFMS doctrine, policy and materiel solutions are insufficient to operate in below zero degrees/extreme cold environments. Local Alaskan based opportunities to train, exercise, and test MHS capabilities in extreme cold weather environments have been underutilized.

Participating in Exercises (Arctic Warrior, Northern Edge, Polar Force), involvement in outreach programs (Arctic Care) and tracking/treatment for cold weather injuries presents areas for growth and partnership with military and civilian subject matter experts (SME). This project was a major undertaking and covered multiple years of effort with more to come.

Closing Open AHLTA Encounters

Organization: Naval Hospital Beaufort

Primary Clinical Community: Primary Care

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Continuous Process Improvement

Abstract:

A continuous process improvement project (Lean Six Sigma Green Belt Project) pertaining to closing patient encounters was chosen from an analysis of the outstanding number of encounters left open at Navy Medicine Readiness & Training Command Beaufort (NMRTC- Beaufort), Navy Medicine Readiness & Training Unit Parris Island (NMRTU-PI), and Marine Corps Air Station Beaufort Branch Health Clinic (MCAS-BHC).

From 2017 to 2020, the Tri-Command averaged 801 unsigned outpatient encounters a year. The direction of the continuous improvement project was to develop actionable tools through data that improves patient encounter closures. The project focused on the RRC Principle of "Reluctance to Simplify."

Through data and research of the patient encounter itself, it was revealed that provider awareness of open encounters was difficult to achieve with the mechanisms in place. At project start, 16 NOV 2022, there were 160 open encounters dating back to 01 JAN 2020 in Medical Home Port Team 2. The project tested a weekly secured email of encounters to providers of the Medical Home Port Team 2. This email displayed each provider open encounters dating back to 01 JAN 2020 in a simple-to-access manner. The email method was tested through the dates of 16 NOV 2021 to 28 FEB 2022.

At project end (28 FEB 2022), the open encounters dating back to 01 JAN 2020 in Medical Home Port Team 2 went from 160 to 46. The email method yielded a two-thirds reduction in open encounters. Lastly, the weekly email method tested in this project rated a 4.4 out 5 for satisfaction from a provider survey.

COVID-19 Flow

Organization: 436th Medical Group – Dover AFB

Primary Clinical Community: Primary Care

Secondary Clinical Community: Primary Care

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

Beneficiaries of the 436 MDG have been contacting multiple primary care clinics to report the results of positive COVID-19 tests that were either taken at home or by other off-base testing sites. This has caused duplication of work and inconsistent guidance to some COVID positive patients. The MTF's current reporting protocol lacks first call resolution for the patient and increases the likelihood that providers and support staff receive duplicate telephone consults. Additionally, some patients are retesting themselves with home tests after initial COVID-19 infection, resulting in duplicate COVID-19 interviews and back to back isolation periods within 90 days. Public Health has created standard work that streamlines a one-way flow of communication for patients who receive a positive COVID-19 at home or off-base test result.

Depression Screening Initiative in Military NICU Parents

Organization: U.S. Naval Hospital Okinawa Japan

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: Women and Infants

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Continuous Process Improvement

Abstract:

BACKGROUND: Parents of infants admitted to the neonatal intensive care unit (NICU) have a higher risk of depression. Opportunities to screen parents of NICU infants are limited. Military families in overseas environments may be at higher risk for depression due to detachment from social supports and mental health resources. Identification of parents at risk for depression is an important step in promoting health and wellness for military service members and their families.

OBJECTIVES: To implement depression screening for mothers and fathers of infants who require a prolonged NICU admission. The project aligned with the Ready Reliable Principles of Preoccupation with Failure and of Constancy of Purpose.

METHODS: A Plan-Do-Study-Act (PDSA) model was utilized to establish a process to screen parents of NICU infants. A working group was formed which included a neonatologist, NICU nurse, medical technician, and psychologist. The Edinburgh Postpartum Depression Screen (EPDS) and Public Health Questionnaire-9 (PHQ-9) were identified as validated tools to screen for postpartum depression (PPD) and major depressive disorder (MDD), respectively. The screening tools were given to parents of all infants admitted to the NICU for ≥ 7 days after seven days and again prior to discharge. Parents who screened positive were offered a referral to behavioral health.

RESULTS: 43 parents completed depression screening after 7 days and/or prior to discharge. 19% of parents screened positive for PPD or MDD after 7 days or prior to discharge. 26% of mothers and 10% of partners screened positive. No parents endorsed thoughts of self-harm/suicidal ideation.

CONCLUSION: One in five NICU parents screened positive for depression a week after birth or prior to

discharge. This represents a significant military population with depression that may otherwise go unrecognized without screening. Further study is required to determine risk factors, protective factors, and the best interventions for parents who screen positive.

Determining Progesterone Threshold for Fresh IVF Cycles in a Military Facility

Organization: Brooke Army Medical Center

Primary Clinical Community: Women and Infant

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Continuous Process Improvement

Abstract:

INTRODUCTION: In vitro fertilization (IVF) cycles are monitored for premature progesterone rise, which contribute to implantation failure. Progesterone thresholds prompting recommendation for freeze-all cycles vary between institutions, depending on laboratory assay and patient population. To our knowledge, this has not been evaluated at a military treatment facility.

METHODS: A retrospective chart review was performed; all IVF cycles with fresh embryo transfers between 2016 and 2019 at Brooke Army Medical Center (BAMC) were eligible. Serum progesterone levels were obtained via electrochemiluminescence assay on Roche Cobas 800 36 hours or less prior to ovulation trigger. The number of clinical pregnancies (CP, n=190) and live births (LB, n=159) were stratified by progesterone levels.

RESULTS: Three hundred forty-five women who underwent 393 fresh embryo transfers were included in the analyses. Progesterone was significantly lower in patients with a CP ($0.693\text{ng/mL} \pm 0.300$) versus those without a CP ($0.758\text{ng/mL} \pm 0.438$, $p=0.04$). Patients with a progesterone $<1.3\text{ng/mL}$ are significantly more likely to achieve a CP (49.7% v 28%, $p=0.035$). On linear regression, when controlling for age and parity, a progesterone level $\geq 1.3\text{ng/mL}$ is significantly negatively associated with CP ($p=0.045$). When controlling for age and parity, a progesterone level $<1.3\text{ng/mL}$ trends toward a significant association with LB ($p=0.1$)

CONCLUSION: A progesterone $<1.3\text{ng/mL}$ was established as a significant threshold for CP, and should be considered in future fresh IVF cycles at BAMC. However, there was lack of statistical significance for LB given this progesterone level, possibly impacted by the low number of patients with higher progesterone (n=25), which resulted in only 6 live births.

Education and Training SharePoint Project

Organization: 39th Medical Group - Incirlik

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

The Air Force Medical Service (AFMS) Training Matrix is intended to be Education and Training's comprehensive guide for AFMS Training Requirements in a consolidated format. However, there are multiple additional requirements for medical personnel that go beyond the AFMS Training Matrix. Some of these are driven by Air Force Instruction (AFI) and The Joint Commission (TJC). There are different

regulations for each training and they are located on a variety of training platforms. This makes the process difficult to find personal training requirements and creates a single point of failure for Medical Group's Education and Training Departments.

For medical personnel, it has been mandated the trainings are accomplished based on member's Air Force Specialty Code (AFSC). Not completing these trainings may result in members not being able to perform their medical duties.

Upon inspection of Education & Training's processes, it was identified there was no tracking system in place to accurately capture the staff's training status. With no tracking system in place to inform members of what they were due for, training completion percentages suffered.

In conclusion, Nagehan Nayir created a one-stop shop via SharePoint for all the assigned trainings, sign-up tools, and training requirements.

External Resource Sharing Agreement (ERSA) with Civilian Hospital C

Organization: Naval Health Clinic Oak Harbor

Primary Clinical Community: Surgical Services

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

In April 2021 our External Resource Sharing Agreement (ERSA) with a local civilian hospital was cancelled without warning. Without the ERSA, our Orthopedic Surgeon no longer had an operating room to perform surgeries and our Military Treatment Facility (MTF) no longer had the capability. This caused a gap in our patients' ability to receive orthopedic surgeries in a timely manner. Some of the cancelled surgeries for active duty were able to be rescheduled to another MTF.

Among other reasons, we quickly recognized this was not sustainable and was not in the best interest of our Orthopedic Surgeon's patients. The process of utilizing another MTF created waste, potential defects, and variation throughout the entire process. This was not conducive to delivering highly reliable or the Ready Reliable Care. Applying the Ready Reliable Care principle of continuous process improvement, we initiated a project to optimize specialty care for our beneficiaries, reduce waste, and increase our Orthopedic Surgeon's Knowledge, Skills and Abilities (KSA) to ensure wartime readiness. We started with the main objective of our project, establishing an ERSA with a different local civilian hospital.

Our objective in establishing an ERSA was achieved within two months from initial contact with a new civilian hospital. Soon after, our Orthopedic Surgeon was able to perform his first surgery at the new ERSA site. We collected surgery (workload) data while operations (procedures) were performed at a second MTF and then continued to collect workload data with the new ERSA site. Prior to the new ERSA we were only able to perform procedures on six patients during a four month period. Within the first four months at our new ERSA site we completed procedures on 45 patients showing a dramatic increase in productivity. In conclusion, this project was successful for all parties involved.

High Fidelity Simulation of Acute Neurology Enhances Rising Resident Confidence: Results from a Multicohort Study

Organization: Brooke Army Medical Center

Primary Clinical Community: Critical Care/Trauma

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: N/A
Domain of Change: Continuous Process Improvement

Abstract:

The matriculation from internal medicine to neurology residency can be challenging. The most cogent approach to address this transition has yet to be identified. Studies show that simulation is highly effective at reinforcing knowledge and skills while improving learner confidence. We present the design and outcomes of a multi-institution, annual acute neurology simulation program. We hypothesized that incoming neurology residents would report (1) improved confidence with managing acute neurologic emergencies, (2) cite a high degree of educational value and (3) demonstrate improvement in their technical knowledge. Our military, Level 1 trauma institution's simulation lab was utilized to develop and execute simulations for rising neurology residents based on ACGME Neurology milestones. Simulations included acute embolic stroke, status epilepticus in an austere environment, and brain death evaluation with family counseling. Residents completed matched pre- and post-assessments to assess confidence, technical knowledge and perceived educational value. Over three years, 15 rising neurology residents from two training programs completed three high-fidelity acute neurology cases. The self-reported acute neurology skills confidence improved after each simulation. These skills included assessing for and identifying contraindications to tPA, identifying acute ischemic stroke, identifying clot retrieval candidates, identifying clinical and electrographic SE, diagnosing and treating SE, identifying contraindications to and confounders of brain death diagnosis, performing the exam and delivering bad news to families (all $p < 0.05$). Technical knowledge also statistically improved with the stroke ($p = 0.046$) and brain death simulation ($p = 0.039$), but not the SE simulation ($p = 0.296$). Participants reported an average perceived personal value of 4.25, 4.7 and 4.8 (out of 5) for the SE, brain death and AIS simulations, respectively. High fidelity simulation of neurologic emergencies enhances confidence and knowledge of rising neurology residents with high degrees of personal educational value. Academic hospitals can consider incorporating simulations into their residency training.

**Implementation of 32wk Routine Obstetrical Appointment Contraception Packet:
Increasing Utilization of Postplacental IUD Use by Increasing Patient Education**

Organization: Brooke Army Medical Center
Primary Clinical Community: Women and Infant
Secondary Clinical Community: Military-Specific Care
Clinical Support Service: Patient Centered Care
Non-Clinical Support Service: Medical Facility Enhancement
Domain of Change: Continuous Process Improvement

Abstract:

Long term reversible birth control (LARC) has failure rates comparable to sterilization. Post-placental insertion following vaginal or cesarean delivery allows patients to easily access effective, safe, and long-lasting contraception with few contraindications. Significant risks of short-interval and unintended pregnancy includes preterm birth, adverse neonatal outcomes, and decreased educational and occupational achievement of caregivers. The military health system is unique in that our patient population has free universal health care. However patients still have barriers to care: obtaining child care to attend appointments, accessing care, and knowing what birth control options are available/recommended prior to delivery. An information packet was created at Brooke Army Medical Center educating about postpartum contraceptive options including post-placental IUD. The informational packet counsels about the risk of expulsion verses and benefits of immediate LARC placement. This packet was given to expectant mothers during their 32 week appointment when contraceptive options are routinely discussed. Our "32 week packet" was implemented fall of 2018. Essentris (Military EMR) reports were analyzed from 2017 to 2021 identifying postpartum discharge summaries where post-placental IUD was selected as the desired contraceptive option. Our statistical analysis used a Chi Squared Test to compare percent post-placental IUD utilization by year. After implementation of the 32 week packet,

there was a significant increase in post-placental IUD utilization. Administration of an informational packet is easily reproduced and could be utilized across the DOD and civilian obstetric clinics to decrease the incidence of unplanned and short term interval pregnancies and their complications. Given the current legislative and social barriers to reproductive health, reducing the barriers-to-care and providing reliable contraception is now more important than ever.

Implementation of a Rapid HIV Screening Program in the Emergency Department

Organization: Brooke Army Medical Center

Primary Clinical Community: Primary Care

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Medical Facility Enhancement

Domain of Change: Continuous Process Improvement

Abstract:

REASONS FOR INITIATIVE: Guidelines recommend human immunodeficiency virus (HIV) screening for all patients evaluated for sexually transmitted diseases (STDs). However, current practice in the Emergency Department (ED) is to defer HIV testing to Primary Care Managers (PCMs).

PROJECT INITIATIVE: The purpose of this continuous process improvement project was to identify HIV screening gaps in the ED and design an approach to close them. We implemented rapid HIV testing in the ED for patients at risk of HIV acquisition. Ready reliable principles involved in this project were commitment to resilience, constancy of purpose, and reluctance to simplify.

PROJECT DESIGN AND MEASUREMENT: Project design used the PDSA cycle and was a multidisciplinary collaboration. Patients with Neisseria gonorrhoea/Chlamydia trachomatis (GC/CT) testing ordered in the ED pre- and post-intervention were selected for chart review to assess HIV screening practices. Barriers to ordering HIV testing in the ED were identified - testing was not routinely being ordered due to delay in obtaining the result. Rapid HIV testing was introduced in the ED as the primary intervention. ED providers were educated to order HIV testing in patients who presented with an STD chief complaint.

SUMMARY: A similar number patients in the pre-intervention (N=303) period compared to the post-intervention (N=268) period presented with an STD-related chief complaint (13.5% vs. 17.2%), tested positive for either GC or CT, or both (13.5% vs. 10.8%), and received empiric treatment for GC/CT (38.3% vs. 34.3%). HIV screening in the ED significantly increased both overall (4.3% vs. 19.8%; $P < 0.001$) and in patients treated empirically for GC/CT (9.7% vs. 30.4%; $P < 0.001$). Among at risk patients without HIV testing performed in the ED, PCM follow-up was low and HIV screening was not commonly performed by PCMs during those visits (6.2% vs. 8.4%; $P=0.350$).

CONCLUSION: Implementation of a rapid screening protocol in our ED resulted in a nearly 5-fold increase in HIV screening.

Implementation of the Acute Care Clinic Easy Scheduling System (ACCESS) at the Brooke Army Medical Center

Organization: Brooke Army Medical Center

Primary Clinical Community: Primary Care

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Information Technology Resourcing

Domain of Change: Continuous Process Improvement

Abstract:

BACKGROUND: Emergency departments ED have continued to struggle with overcrowding, causing delays in patient care and increasing stress on the medical staff and resources. This was further illustrated during the recent COVID-19 pandemic, where we saw large unpredictable surges to the ED as hospitals tried to meet the medical needs of patients while trying to minimize the spread of COVID. A previous study from the Department of Emergency (DEM) at the Brooke Army Medical Center (BAMC) found that nearly half of the patients presenting to the ED could have been managed in a primary care setting. We sought to pilot an alternate appointment scheduling system, Acute Care Clinic Easy Scheduling System (ACCESS), to allow patients to see and book available appointments while waiting in the ED waiting room.

MATERIALS AND METHODS: Our appointment display system was created through collaboration with the BAMC Information Management Division. A Tableau data interface connects to the Composite Health Care System CHCS to view available primary appointments across the San Antonio Military Healthcare System (MHS). These are displayed in real-time on multiple TV screens outside the ED at and in the waiting room. Patients were provided signage that provides a way to call or use a web-based interface to immediately schedule the open appointments within the next 48 hours. Patients voluntarily opted to use this system and may opt to leave the ED if another appointment became available within an acceptable time frame to them.

CONCLUSION: Expansion of the ACCESS system within the MHS may: 1) help reduce ED crowding, 2) improve access to care through a live-tracking system that patients can review and from, and 3) reduce the number of unfilled primary care appointments. The system in place in the BAMC ED serves as a template for other MTFs to use.

Improve the Patient Experience by Increasing ATC at Kirtland AFB

Organization: 377th Medical Group – Kirtland AFB

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: Personnel Communication

Domain of Change: Continuous Process Improvement

Abstract:

With multiple changes occurring within the TRICARE Operations and Patient Administration (TOPA) department, patients were experiencing extreme wait times on the appointment line. There were multiple ICE comments submitted on the appointment line, some stating that their wait time was 15 minutes or more simply to make an appointment. Patients were also making comments to fellow employees, on and off work, regarding the extreme wait times for making an appointment. With this high concern, the Medical Group Commander deemed it necessary that there be some effort in aligning two of the Ready Reliable Care principles to this processes improvement; Respect for People and Constancy of Purpose. A focus was put on the appointment line agents, in regards to their needs to being met to complete their duties, and to the perception of the patients, in regards to their time being wasted.

Improving Diabetes Management

Organization: HQ US Army MEDDAC Bavaria

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

This is an improvement in a process project. From January 2020 to January 2021, the diabetes mellitus (DM) screening for enrolled patients declined from 90% to 64%, 31% below the goal of 95% per HEDIS metrics (Healthcare Effectiveness Data and Information Set). The initiative began with creation of a DM Clinic Team and development of an internal DM Clinic standard operating procedure (SOP) written by the clinical dietitian. A metric screening tool was created by the clinical pharmacist. An education and screening sheet for the clinic was created by optometry. Foot exam training was completed and included in the DM Clinic visit. A foot exam sheet was created and uploaded into HAIMS upon completion of the visit. Patients were referred to the DM Clinic Team by their PCM (i.e. new diagnosis or identification of need) and by using the CarePoint data to identify patients not currently meeting recommended DM standards (A1c $\geq 7\%$ or due/overdue on screening metrics). The improvement target was not only to increase HEDIS diabetic screening (DHA Population Health Monitored metric) from 63.64% to $\geq 94.89\%$, but also to have a comprehensive diabetic management process. This project used this critical input to identify the at risk population while monitoring changes in health status and achieving an improved A1c (decrease average A1C-blood glucose level %) and managing other potential health issues which may result from uncontrolled diabetes (retinopathy, foot exams for neuropathy). This project is aligned to the Ready Reliable Care principles Deference to Expertise and Reluctance to Simplify: The initiative used Subject Matter Experts (SMEs) in Diabetes Management (Registered Dietician, Clinical Pharmacist, Optometrist, Nurse Case Managers) to explore, mitigate, and overcome the inherent patient risks involved in the highly complex process of Diabetes Management. This is a lean leader certified project through DHA.

Improving MEDDAC-Bavaria Nurse Case Management Workload Accuracy

Organization: HQ US Army MEDDAC Bavaria

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Medical Management

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Continuous Process Improvement

Abstract:

Our organization defines "A Ready Medical Force" as an essential factor of our Strategic Plan. Under the vision "A culture preoccupied with improving every day," we aim for continuous process improvement through a systematic data driven approach actively searching out gaps in our Health Care Delivery. Defense Health Agency (DHA) Procedural Instruction (PI) 6025.20 states, "MTF Case Managers will identify performance improvement opportunities in alignment with MHS Quadruple Aim strategic performance plans." The DHA standard processes and tools decrease Nurse Case Management (NCM) practice variation across the enterprise in alignment with DHA's goal of providing consistent patient experience and outcomes along with determining NCM effectiveness and costs. These processes are outlined in DHA-PI 6025.20 and the Military Health System Coding Guidance Appendix D, Case Management. From OCT 2019 to SEPT 2020, the average NCM workload accuracy was less than 2% for all MEDDAC-Bavaria (MEDDAC-B) NCM workload.

Our organization took a systematic data driven approach in examining our NCM program. The evaluation identified multiple systemic failures attributed to the initial program inception. MEDDAC-Bavaria's goal is to be greater than 85% workload accuracy. To meet this goal we produced the Nurse Case Management Policy (MEDDACB 40-68-7-1) defining NCM services and standardize business processes along five lines of effort: (1) case manager identification; (2) training and education; (3) performance standards; (4) quality and outcomes measurement; and (5) interdisciplinary activities to insure sustainability of program success.

As of 31MAY22 NCM countable workload is 91.9%. Success of the NCM Program is monitored using our NCM System. Data is drawn from CHCS Coding Info Report and processed through Microsoft Access, Excel, and PowerPoint to complete monthly progress report. The NCM Report is briefed at multiple monthly MEDDAC-Bavaria committee meetings. Our NCM system is a direct example of a culture preoccupied with improving daily.

Improving Mental Health Screening in Pediatric Subspecialty Clinics

Organization: Brooke Army Medical Center

Primary Clinical Community: Complex Pediatrics

Secondary Clinical Community: Behavioral Health

Clinical Support Service: N/A

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Continuous Process Improvement

Abstract:

Mental health screening allows for early identification of patients at risk of mental health disorders such as anxiety and depression. The Defense Health Administration Procedures Manual 6025.01 established that all patients greater than 12 years of age should receive annual mental health screening. To improve the rate of mental health screening in this at-risk population an A3 approach to quality improvement was undertaken in the Pediatric Subspecialty Clinic at Brooke Army Medical Center BAMC. The ultimate goal was to screen 50% of new adolescent patients by June 2022. Medical records from September 2020 to March 2021 of new patients seen in the pediatric cardiology and pulmonology clinics at BAMC were reviewed for completion and scores of mental health screens. A standard operating procedure outlining scoring, reviewing, and referral recommendations was given to all providers in these clinics. A post-implementation chart review was conducted 8 weeks after implementation. With initiation of MHS Genesis, the standard operating procedure had to be adjusted and a root cause analysis was performed. Pediatric gastroenterology clinic was added. Additional education for providers was done for coding, billing, documentation, and what to do with positive results. A post-implementation chart review was conducted for 8 weeks after the adjustments. Over the course of two iterations, the mental health screening of new adolescent patients in pediatric subspecialty clinics increased 794%. Our providers went from screening 6% to 50% of all new adolescent patients, which achieved our goal. With increased surveillance of an at-risk population, more adolescents will receive the standard of care and address their mental health accordingly. With further refinement of the SOP and expansion of the subspecialties utilizing it, this project will span the entire subspecialty clinic, expand to other MTFs and garner more evidence to improve screening at the primary care clinics of San Antonio.

Improving Naloxone Co-Prescribing Rates for Patients at Elevated Risk of Opioid Overdose

Organization: Navy Medicine Readiness & Training Command Camp Pendleton

Primary Clinical Community: Military-Specific Care

Secondary Clinical Community: N/A

Clinical Support Service: Pharmacy

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

Deaths from opioid overdose have increased fivefold since 1999, with more than 564,000 persons having died due to overdose involving prescription opioid. Naloxone, an opioid reversal antagonist, has been available for decades in the United States and can safely reverse an overdose from opioids when

administered promptly, including heroin, fentanyl and prescription opioid drugs. The CDC and the Substance Abuse and Mental Health Services Administration have called for expanded patient access to naloxone through standing orders at pharmacies, distribution through local organizations, and training basic emergency medical staff on how to administer the drug. In support of naloxone distribution, the Defense Health Agency DHA mandated co-prescribing of naloxone for patients at elevated risk of opioid overdose and implemented a new measure to track the rate of naloxone co-prescribing based on an approved criteria. At Naval Hospital Camp Pendleton, the average prescribing rate of naloxone for those at elevated risk of opioid overdose was at 15.3% Jan 2021 and below the DHA benchmark of 90%. In October 2021, the pharmacy department at Naval Hospital Camp Pendleton implemented a new screening process to identify patients at elevated risk of opioid overdose utilizing available screening dashboards, opioid registries and online opioid calculators. Patients at high risk of opioid overdose received a naloxone nasal spray based on an approved pharmacy standing order. The objective of the new initiative is to increase naloxone prescribing rate to a minimum of 60% by 1 October 2022. As of April 2022, the Naloxone co-prescribing rate increased from 26.8% Oct 2021 to 53.6% April 2022. Current results may be valuable in navigating and understanding effective ways to prevent opioid overdose.

Improving Point-of-Use Decontamination

Organization: Navy Medicine Readiness & Training Command Camp Pendleton

Primary Clinical Community: Surgical Services

Secondary Clinical Community: Surgical Services

Clinical Support Service: N/A

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Continuous Process Improvement

Abstract:

Poor decontamination practices are a leading factor for surgical site infections attributing to \$10,000 - \$43,000/patient per infection. After internal checks identified areas for improvement on point-of-use decontamination practices throughout the Medical Treatment Facility's Main Operating Room and 12 clinics, a leadership team from Sterile Processing Department SPD sought to establish uniform policies and streamline educational channels. Remaining aware of the seven Ready Reliable Care principles, particularly Sensitivity to Operations and Reluctance to Simplify, the SPD team worked with the Public Affairs Office to create a 6:26 minute descriptive video and linked to YouTube via QR code to allow easy access to proper steps and consistent transfer of knowledge despite high personnel turnover. Inspections conducted a month following the video release showed a dramatic increase in compliance across the Main Operating Room and 12 clinics from 91% to 99% on 11 measures in "point-of-use/removal of gross soil" and "transportation" categories, and sustained 99%-100% compliance for a full year following the initial implementation in June 2021. The new educational resource has contributed to the goal of hospital compliance in the removal of gross soil and keeping instruments wet, as well as Defense Health Agency's goal of a high reliability organization by reducing variation and establishing sustainable processes across clinical communities in care and service delivery.

Inaugural MEDDAC Process Improvement Showcase

Organization: Fort Meade MEDDAC

Primary Clinical Community: Primary Care

Secondary Clinical Community: Surgical Services

Clinical Support Service: N/A

Non-Clinical Support Service: Administrative and Management Work at all levels

Domain of Change: Continuous Process Improvement

Abstract:

During the calendar year of 2021, The Fort Meade Process Improvement PI Committee met regularly to collect, review and discuss new and ongoing Process Improvement projects throughout the MEDDAC. Prior to October 2021, a forum did not exist to showcase superior and exceptional Process Improvement Projects performed by the MEDDAC Staff. Furthermore, a setting or large gathering to review and vote on various PI Projects rich in data improvement was not possible in the midst of a global Pandemic. Hence, a Process Improvement Showcase Committee formed to create an unprecedented venue both virtually and in person to illustrate constancy of purpose and preoccupation with failure demonstrated by a myriad of vibrant and remarkable talent by some of the most committed MEDDAC Healthcare Clinicians in the Military Health System.

OBJECTIVE: To encourage and enhance an organizational environment rich in Continuous Process Improvement thereby improving the organization's delivery of safe, quality care that is evidenced based and data driven.

Leveraging Civilian Partnerships to Improve Data Quality

Organization: Naval Health Clinic Quantico

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Population Health

Non-Clinical Support Service: Administrative and Management Work at all levels

Domain of Change: Continuous Process Improvement

Abstract:

Breast cancer screening is a means to promote patient safety through the early identification of breast cancer. The metrics for breast cancer screening at Naval Health Clinic NHC Quantico were consistently below the benchmark in the Healthcare Effectiveness Data and Information Set HEDIS. It was noted that many patients were seeking medical care at network providers, and while we did receive outpatient reports, we questioned whether all the data from our network providers were transferring to our system. Through a coordination with Mary Washington Hospital, we were granted access to their electronic health record EHR through Epic Care link. We discovered numerous mammograms within their system that were not being captured in HEDIS. This information was utilized to HEDIS metrics accordingly, and since that intervention, NHC Quantico has not only exceeded the benchmark, but has led the market in the breast cancer screening metric, consistently averaging over 75%, an 11% improvement in screening rates being captured now through HEDIS. Sensitivity to operations, commitment to resilience, and improved communication and liaison between our civilian counterparts can help improve patient care, and tracking known measures that improve health outcomes.

Nursing Assessment of an Emergency Department Culture for Pressure Injury Prevention

Organization: Brooke Army Medical Center

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

BACKGROUND: Pressure injuries are associated with increased length of stay, decreased quality of life, and increased pain, morbidity and mortality. The Emergency Department ED is uniquely positioned to early identify at-risk patients and implement preventative measures. Staff voiced concern regarding lack

of familiarity with identifying at-risk patients and pressure injury prevention measures.

OBJECTIVES: The project aimed to assess the ED culture towards pressure injury prevention, availability of prophylactic supplies, and prevention education.

METHODS: A pre-survey was distributed at change of shift huddles to determine baseline knowledge of culture, supplies, and staff knowledge. Based on pre survey results, the following needs were identified and implemented: an ED Skin Team, prophylactic supplies stocked, education on risk factors, organizational policy and newly stocked supplies, the creation of a quick reference sheet for at risk patients and dressing ion guide. Training was provided through in-services and monthly Skin Team meetings. A post-survey was distributed approximately 12 months later.

FINDINGS: The project was implemented in a busy level 1 trauma center, averaging 75,634 patients annually. The pre- and post- survey was returned by 52 and 39 nurses respectively. The survey demonstrated: risk assessment tool use in ED 63% vs 79%, risk factors identified 53% vs 77%, availability of preventative supplies 21% vs 95%, inclusion of skin assessment in the hand-off report 67% vs 84%, education on prevention 60% vs 98% and staff perception to the importance of prevention in the ED 76% vs 95%.

DISCUSSION: Strategies to mitigate pressure injuries start in the ED. By stocking preventative supplies, providing pressure injury education and providing guidance to the ED, nurses reported increased awareness of patients at-risk in the ED and the importance of pressure injury prevention.

Operation PINC HRO

Organization: Naval Branch Health Clinic Kearny Mesa

Primary Clinical Community: Primary Care

Secondary Clinical Community: Women and Infant

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Continuous Process Improvement

Abstract:

The Department of Defense health care system has been scrutinized for the lack of access to care for active duty women and beneficiaries on contraception during peak momentum of operational commitment, COVID-19 pandemic resulting in critical shortage of privileged and non-privileged providers to execute the requirement established by DHA initiative. Recent studies reported increased unintended pregnancy rate, which ultimately impacts productivity and a failure in the health care system of the military. To minimize the overwhelming amount of referrals to the command and grant access, Naval Branch Health Clinic Kearny Mesa has managed Operation PINC Process Improvement for Non-Delayed Contraception. The objective of the program is to maximize access to care to health professionals trained in contraception, provide the lack of education regarding available contraceptives, and avoid any interruption of contraception in the event of a deployment. Current statistics for Obstetrics and Gynecology (Ob/Gyn) referrals have been stagnant at the command. This article is to present how NBHC Kearny Mesa continuously strives with resilience to provide reliable care and our reluctance to simplify care by providing Operation PINC.

Optimizing Access to Mental Health Services

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: Primary Care

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

Our initiative was to fill a gap in care identified by the Primary Care Behavioral Health Clinic (PCBH), which aligns with the following DHA Clinical Community: MHS Clinical Communities. In November 2021, we observed a disproportionate volume of patients seeking services to address symptoms of Seasonal Affective Disorder (SAD). As a team, we began researching mental health resources in hopes of implementing preventative measures for our patient population. The success in the implementation has led PCBH to expand resources gathered to assist with symptoms experienced during the Alaskan Summer months.

Our project initiative required us to streamline mental health information to address two vastly different Arctic weather challenges that occur in Alaska. Our objectives for our initiative are as follows: 1. Increase access to care in our PCBH, in turn, offsetting the need for specialty care for our Mental Health Clinic, 2. increase preventive outreach services for the Alaskan environment, and 3. raise base wide awareness for over 120K members.

The objectives were measured using two data collection methods: reviewing patient's charts on a quarterly basis and tracking organizations affected. We offset the need for specialty care, and increased our access to care by 35%. This resulted in saving a total of \$300,000 in specialty care over 10 months. We closed our identified gap in care by 100%, and raised base wide awareness of 35K members by 95%. Currently, our initiative is being discussed to be inter service oriented. We plan to push our initiative to other Wing wide agencies and to refocus our initial objectives.

Optimizing the Active Duty Dental Program (ADDP) Process and Access-to-Care

Organization: Navy Medicine Readiness & Training Command San Diego

Primary Clinical Community: Dental

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

Operational Dental Readiness (ODR) for the command is at an average of 90.65%, below the BUMED mandated minimum of 95% from March 2020 to March 2021. In order to increase the ODR, clinics are referring patients through the Active Duty Dental Program (ADDP) in order to have patients treated in a more timely manner and in order to treat all diagnosed dental care. The data show that the average time it takes for the administrative staff to complete the referral is 59 minutes with a standard deviation of 31 minutes per patient, observed in the month of May 2021. This limits the number of patients that can be referred in a day. This increase in administrative time causes an increasing backlog of patients needing dental treatment, which in turn causes a decrease in ODR impacting the sailors' ability to complete the Navy's mission. By decreasing the amount of administrative time needed to complete an ADDP referral, more referrals can be completed daily which will cause an increase in command-wide Operational Dental Readiness and access-to-care. The goal was to decrease the referral time from 59 minutes/patient to less than 15 minutes/patient on or before September 2021.

Optimizing the VIPRR Clinic

Organization: Brooke Army Medical Center

Primary Clinical Community: N/A

Secondary Clinical Community: Military Specific Care

Clinical Support Service: Patient-Centered Care

Non-Clinical Support Service: N/A
Domain of Change: Continuous Process Improvement

Abstract:

The Virtually Integrated Patient Readiness and Remote VIPRR Clinic's mission is to provide synchronous virtual care appointments to targeted populations with insufficient local primary care support. Beginning with four providers in 2019, the clinic was minimally accepted, reinforcing willing locations without written documentation or justification. The clinic became underutilized during the initial year and only assisted 4,718 service members scattered across the world. On March 11, 2020, the World Health Organization WHO d COVID-19, the disease caused by the SARS-CoV-2, a pandemic; support and acceptance of telemedicine took a 180-degree turn. VIPRR Clinic completed nearly 30,000 visits during the year with a mandate to grow. Slowly adding capacity with new providers, the clinic supported more than 52,000 service members in 2021. It quickly became apparent that demand outstripped capacity while no particular process to identify genuine requirements or priority existed. The VIPRR clinic was operating on a "First Come, First Service" model of care. Service members realized they could abuse the lack of access criteria by misstating their unit information for one of our supported locations annotated informally on an internal spreadsheet. It quickly became apparent that this was a patient safety issue, resulting in a final justification to reset and reorganize the unit prioritization and agreements process.

OTR (Operational Training Record) Initiative

Organization: David Grant Medical Center
Primary Clinical Community: Military-Specific Care
Secondary Clinical Community: Military-Specific Care
Clinical Support Service: N/A
Non-Clinical Support Service: N/A
Domain of Change: Continuous Process Improvement

Abstract:

The purpose of this initiative Operational Training Record (OTR) is to establish a digital form of tracking, recording, and journaling all active duty enlisted members' training. This includes and is not limited to all Airmen's Career Development Course (CDC), Job Qualification Standards (JQS) both previous and current, and training development progress reporting and other work center specific requirements. This initiative concurs greatly under the Continuous Process Improvement (CPI) principle. The objective was highly met throughout the whole 60th Med Group Staff and has become the main resource for the Med group's daily, weekly, monthly reporting source for all to use as a reference point. In conclusion, the OTR has been the primary "go to" program for all of David Grant Medical Center's Enlisted Training-related tasks.

Paper Tracking Record Integration

Organization: Peterson SFB Medical Clinic
Primary Clinical Community: N/A
Secondary Clinical Community: N/A
Clinical Support Service: N/A
Non-Clinical Support Service: Administrative and Management at all Levels
Domain of Change: Continuous Process Improvement

Abstract:

MTFs across the DHA were tasked to implement the new Paper Tracking Record (PRT) system by 1 May 2022. This required all physical medical records in the Peterson SFB Outpatient Records office be

created and relabeled into the new tracking system. The process of creating and relabeling requires every Airmen to first search if the patient already had a record created, this search can take the system anywhere from 30 seconds to upwards of 5 minutes. Once the search is completed the Airmen then have to manually enter all record information in order to create a new label for the record. SrA Jomar Cabigting discovered an expedited method to scan in records. SrA Cabigting saved a total of 10,000 person-hours, leading the flight to accomplish full inventory within 3 months and beating the suspense date. Cabigting's findings led Peterson SFB Outpatient Records Department to be #1 out of 47 total record rooms during Wave 3 of the PRT implementation cycle.

Pharmacy CPI – Patient Wait Times

Organization: Joint Base Elmendorf-Richardson (JBER) Hospital

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Pharmacy

Non-Clinical Support Service: Administrative and Management work at all Levels

Domain of Change: Continuous Process Improvement

Abstract:

On 7 September 2021, Lt Col Cody Hess asked me to be the lead for the JBER CPI Project. Due to the high, negative Interactive Customer Evaluation ICE submissions, long patient wait times, and my passion for process improvements, I accepted the challenge. The High Reliability Organization HRO principles discussed in this report embark on a mission to commit to applying high reliability concepts for the 673rd Medical Group. The HRO key principles were essential for the Pharmacy Department's continuous process improvement initiative that not only improved patient wait times and negative ICE submissions, but also improved communication within the organization. It generated an understanding of the processes between multiple departments to achieve outcomes for patients and staff. Building a diverse team involving multiple professions helped identify internal and external inefficiencies, which drove multiple process changes and new Electronic Medical Record (EMR) features. This CPI successfully removed waste, streamlined processes, and improved efficiency that ensured high reliable performance techniques, which ultimately decreased patient wait times and negative ICE submissions.

Prioritized NMSK Sick Call

Organization: Shaw AFB

Primary Clinical Community: Neuromusculoskeletal

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Information Technology Resourcing

Domain of Change: Continuous Process Improvement

Abstract:

BACKGROUND: Neuromusculoskeletal (NMSK) issues and problems account for 25% of all military medical visits, restricting readiness. Care burden increases with time, and symptoms may not resolve, now becoming chronic. NMSK care realizes savings and better outcomes if focused on early access. One Physical Therapy (PT) visit costs approximately \$100 and TRICARE allows 22 visits off-base per referral resulting in potentially \$2,200 in care costs per patient. Most acute patients are better in 1-4 visits, resulting in \$1,800 savings and mission person-hours saved in off-base travel/visits. Access to Care (ATC) norms are 2-8 weeks of direct and indirect physical therapy.

GOAL: Reduce NMSK ATC to one day via NMSK daily one-hour Monday-Friday "sick call" for patients with symptoms up to two months.

HRO Principles: Reluctance to Simplify, Sensitivity to Ops, Deference to Expertise, Respect for People.

RESULTS: NMSC ATC reduced to one day from 2-8 week norms for priority patients. Reduced PCM workload by 75-150 patients/month and decreased no-show/patient cancellation rates, saving \$250,000/year in MSK imaging. MSK HEDIS metric dropped to best in MTF history. Base wins due to efficient physical therapy care in 1-4 visits versus 22 visits off-base. This initiative saved \$1.8K/18 person-hours per patient referral in many cases. \$1.4M/12.2K hours for 677 off-base referrals for CY21, not even including travel time to off-base clinics. Units seek immediate Physical Therapy care via Prioritized direct-access; no waiting up to 8 weeks ER to PCM to PT. Patients rely on efficient care with less chronic issues eroding readiness.

CONCLUSION: Reliable NMSK sick call hours save time, money, and mission person-hours, delivering ready, deployable forces. Recommend Prioritized NSMK sick call across DHA units as applicable. Physical Therapists may need help to identify ideal times and locations for NMSK sick call.

Reducing Pharmacy Wait Times at Moncrief Army Health Clinic

Organization: Moncrief Army Health Clinic

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Pharmacy

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

Moncrief Army Health Clinic (MAHC) Pharmacy is in Fort Jackson, South Carolina, the Army's largest Initial Entry Training Installation. MAHC Pharmacy provides services to over 150,000 beneficiaries and processes excess of 450,000 prescriptions annually. From November 2018 - August 2019, the pharmacy was not meeting MEDCOM standards with the average wait time exceeding 150 minutes.

MAHC's Pharmacy Team of 45 Army Active-Duty Service Members and Department of the Army Civilians collaborated on a Pharmacy Performance Improvement PIIA-3 project to improve Soldier Medical Readiness, Health Care Delivery, and Patient Experience by reducing patient wait times without compromising patient safety. The 27-month January 2020 - March 2022 PI project comprised of new pharmacy software and hardware procurement and installation, modernizing and standardizing current pharmacy workflow, and six new Pharmacy Lines of Effort aimed at increasing and simplifying the patient's pharmacy access to care. During the PI Project and unanticipated COVID-19 Pandemic, MAHC Pharmacy continuously innovated and adapted processes to ensure beneficiaries received their medications timely, safely, and mitigated the risk of COVID-19 transmission to staff and other patients. Process improvements and increased efficiencies resulted in MAHC Pharmacy yielding a 160-minute reduction in patient wait times and 700% increased patient satisfaction and experience.

Standardized Enteral Feeding Protocol: Impact on Growth, Central Line, and TPN days in Very Low Birthweight Infants

Organization: U.S. Naval Hospital Okinawa Japan

Primary Clinical Community: Women and Infant

Secondary Clinical Community: Critical Care/Trauma

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Continuous Process Improvement

Abstract:

BACKGROUND: Very low birth weight (VLBW) preterm infants, defined by a birthweight of 1500g, are at high risk for nutritional deficits and poor postnatal growth. They have immature oral feeding skills and gut development. Standardization of enteral feeding practices has been shown to improve clinical outcomes including improved growth, reduced total parenteral nutrition (TPN) use and central line days, and reduction in the rate of necrotizing enterocolitis (NEC). In a small overseas Department of Defense (DoD) neonatal intensive care unit (NICU), enteral feeding practices varied among providers who were often new fellowship graduates from different training backgrounds.

OBJECTIVES: To design and implement a standardized enteral feeding protocol with the goal of improving growth while reducing central line days, TPN utilization, and NEC rates in VLBW infants. The project aligned with the ready reliable principles of Deference to Expertise and Reluctance to Simplify.

METHODS: A Plan-Do-Study-Act PDSA model was utilized to create an evidence-based enteral feeding protocol. Before implementation, details of the protocol were discussed with all NICU stakeholders. Growth parameters weight gain at 7, 14, and 30 days; change in head circumference and length at 30 days, days requiring TPN, central line days, and necrotizing enterocolitis incidence were compared between one-year epochs before and after feeding protocol implementation.

RESULTS: 20 VLBW infants were included in the study period. Following feeding protocol implementation, weight gain at 14 days and 30 days improved by 108% p0.02 and 25.2% p0.04, respectively. A non-statistically significant trend towards improved change in length, head circumference, TPN days, central line days, and incidence of NEC was also observed.

CONCLUSIONS: Implementation of an enteral feeding protocol improved growth, while showing a trend towards reduced TPN use, central line days, and NEC incidence in VLBW infants. Our results highlight the importance of implementing evidence-based protocols to improve outcomes in small, remote, non-academic military healthcare settings.

Streamlining Training Records

Organization: Navy Medicine Readiness & Training Command Iwakuni

Primary Clinical Community: Women and Infant

Secondary Clinical Community: N/A

Clinical Support Service: Inpatient Care

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Continuous Process Improvement

Abstract:

REASONS: Unit training records for registered nurses and corpsmen were extensive, making tracking compliance and completion difficult. At the start of the project, there were 1122 and 881 fillable items for Registered Nurse and Corpsman training records, respectively. Gaps in complete documentation across training records could lead to a failure in a Joint Commission inspectable program.

OBJECTIVES AND RRC PRINCIPLES: The goal of this project was reducing fillable training record items dates, initials, signatures, etc. and auditing time by at least 50% each. Streamlining training records in this manner falls within the Ready Reliable Care RRC Continuous Process Improvement domain and principles of Preoccupation with Failure and Sensitivity to Operations.

DESCRIPTION: This project was completed as a Lean Six Sigma LSS Green Belt Project, utilizing the Rapid Improvement Event (RIE) Define-Measure-Improve-Analyze-Control (DMAIC) methodology.

SUMMARY: Utilizing Elsevier Clinical Skills (ECS), unit training record fillable items were reduced by 79%

overall with 81% reduction for RN training records and 79% for HM training records. Additionally, auditing time was decreased by 75%, from an initial 20 minutes per record to only 5 minutes per record.

CONCLUSION: This project utilized an existing online program to decrease overall training record completion and workload by 75%, increasing the time nurses and corpsmen spent engaged in more value-added work, such as patient care and unit activities. This project presents replicable solutions to other facilities across the military health system that are experiencing the same problem identified in this project: staff unnecessarily consuming large amounts of time completing training records and tracking training compliance when a more efficient process can be adopted.

Use of AutoHotkey Scripts to Improve Workflow, Enhance Patient Safety and Reduce Clinician Burnout

Organization: Brooke Army Medical Center

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Continuous Process Improvement

Abstract:

Electronic health systems that do not communicate increase administrative burden, complicate and slow clinical workflow, and exacerbate burnout. In this initiative, AutoHotkey scripts were developed to mechanize replicative tasks, decrease transcription errors and streamline workflow. Over time, AutoHotkey scripts were designed to accomplish increasingly complex administrative tasks, applied to different clinical settings and reconstructed for MHS Genesis - an outstanding example of Continuous Process Improvement.

AutoHotkey scripts were created for common functions for Dermatology in legacy electronic health systems then reprogrammed for MHS Genesis. The Biopsy Helper Tool leveraged optical character recognition and AutoHotkey to auto-fill patient identifiers and biopsy details into consents, pathology laboratory orders, procedure notes and biopsy logs. A separate AutoHotkey script enabled patient-specific, site-specific specimen labels to be generated, increasing label legibility and reducing the risk of wrong-site surgeries. Using AutoHotkey to biopsy logs and photo databases mitigated the risk of failure to follow-up abnormal biopsy specimens. The Isotretinoin dose tracker enabled dermatologists to quickly and accurately determine whether patients had received the target cumulative dose of Isotretinoin. AutoHotkey scripts have saved hundreds of person-hours in Dermatology alone.

AutoHotkey scripts were applied successfully in other areas. The Immunization script used a flight roster to generate encounters in MHS GENESIS, print patient wristbands, order vaccines and scanned vaccine with appropriate patient education, enabling basic military trainee clinics to administer and document immunizations rapidly and accurately. The Surescripts script auto-filled prior authorization paperwork for non-formulary requests. AutoHotkey script supported maintenance of a database for ongoing professional peer evaluation.

AutoHotkey scripts can bridge interface issues that exist with electronic health systems, including MHS GENESIS. Automating replication of specific user input decreases transcription errors, improves documentation accuracy and increases efficiency, thereby enhancing patient care and increasing patient safety. Additionally, decreasing administrative burden streamlines clinical workflow and decreases burnout.

Patient Centeredness Award Submissions

Air Force Targeted Care: Building a More Efficient Mental Health Clinic

Organization: Air Force Medical Readiness Agency

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

Air Force (AF) Mental Health (MH) Clinics are challenged in their patient care mission by significantly increased demand for services compounded by relatively flat growth in MH providers and staff. From 2015-2019, workload steadily increased with ADSM MH utilization and administrative encounters increasing by 32% and 79%, respectively, while MH provider availability decreased 16% (2017-2020), risking prolonged treatment, swollen caseloads, and staff burnout. Targeted Care (TC) was developed to address these concerns via standardized workflow designed to connect ADSMs to the most appropriate helping resource. The workflow emphasizes: 1) Focused, brief assessment to determine the most appropriate medical/non-medical resource based on presenting concerns (i.e., vectoring and triage); 2) Leverages group therapy as primary modality for care; 3) Medical readiness focus to more efficiently treat and terminate care; and 4) Use of the MH technician paraprofessional skillset.

A 5-month pilot study was initiated to explore: 1) Scalability for potential service-wide deployment; 2) Impact of the vectoring-triage process; and 3) Effect on access to care (ATC). Nine AF MTFs were selected with a focus on bases with diverse mission-sets, sizes, and geographical locations. Data collection was conducted Feb 2022-Jun 2022 and centrally collected in collaboration with DHA J-9. Results supported scalability with clinics successfully transitioning to the TC workflow within 60-90 days. Results reinforced use of vectoring to increase ATC with sites connecting 54% of new MH contacts to other helping resources and recouping the equivalent of 1,100+ individual therapy hours. The workflow also positively impacted service availability with the number of patients in clinic and encounters in direct care increasing 10% and 15%, respectively. Additionally, the number of patients in group therapy rose 58% and group encounters expanded by 75%. Pilot study data suggest TC is a viable, cost-neutral solution to improve mental health ATC.

Caregiver Post-Partum Screening

Organization: Shaw Air Force Base Clinic

Primary Clinical Community: Women and Infant

Secondary Clinical Community: N/A

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Patient Centeredness

Abstract:

Keeping patient centeredness in mind, one of the Pediatrics Clinic technician observed that post-partum depression screening was offered only to the biological mother at well-baby appointments, yet there were times when the biological father would be the only caregiver at the appointment. At those times the post-partum depression screening was not provided to the father, this sparked the inquisitiveness in the technician. They wondered if fathers would be at risk for post-partum depression since many experience couvade syndrome. After some preliminary research, they concluded that fathers could be at-risk for post-partum depression after the birth of a child. Hence began the full development of an inclusive post-partum screening tool that was created and utilized in the Pediatric Clinic.

Using the Edinburg Postnatal Depression Scale as the foundation, the technician created a local, all-inclusive screening tool for any caregiver. The Pediatrics Clinic modified their well-baby appointments to include the new screener, track positive scores, and provide resource information to those with at-risk indicators. After a six month testing and observation of both the biological mother and additional caregiver, the all-inclusive tool produced 23 positive scores out of the 303 completed screenings, and of those 30% were of the secondary caregiver. With these results and supporting research, it is evident that post-partum depression screening for biological mother and the non-gestational parent or secondary caregiver should be a standard practice across the military health services.

Centering on Patients: Communication Upgrades for a Quality Experience

Organization: Navy Medicine Readiness & Training Unit Fallon

Primary Clinical Community: Dental

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

Between May 2021-2022, the NMRTU Fallon Dental Department designed and created six critical documents to increase the quality of patient experience by reducing confusion for patients. The initial goal was to increase Dental Health Index to the BUMED standard of 65% by creating internal communication routing slips to reduce scheduling errors; however, the dental team went above and beyond to overhaul all patient documents. Additionally, monthly social media educational posts were developed and shared to the Clinic Facebook page.

Four guiding HRO principles were embodied to address this mission-critical problem:

1 Reluctance to Simplify: By striving to avoid blaming past leadership for the existing documents or lack of forms, we focused on creating solutions rather than dwelling on the status quo.

2 Respect for People: These projects exemplify respect for our patients. By having professional and clean forms, the patients are more informed and a deeper mutual trust between patient and clinician is fostered. In turn, patients have an improved perception of our team, the clinic, and the Military Health System on the whole.

3 Commitment to Resilience: By having recurring all-hands process improvement meetings, our team has continued to improve step-wise upon itself in each meeting.

4 Sensitivity to Operations: By being mindful of how patients perceive care and identifying where common patient questions and concerns arise, we were able to address problems by creating better documents which were readable, clean, and grammatically correct. In engaging with Social Media, we are attempting to modernize the way we communicate with today's patients.

Since upgrading our written communication systems, our clinic has seen a 27% increase in the Dental Health Index. Synergistic benefits of this project were a marked increase in pride in the clinic, reduced miscommunications, and improved patient flow.

Implementation of Patient-Centered Technology to Improve Satisfaction and Reduce Pharmacy Wait Times

Organization: Fort Belvoir Community Hospital

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Pharmacy

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

The COVID-19 global pandemic served as a catalyst to change pharmacy operations. In the pre-COVID-19 era, patients checked in at the pharmacy windows, waited in the lobby for pharmacy staff to fill their medications, and returned to the window for medication dispensing. At our pharmacy department, the entire process could take up to two hours, and the waiting area could be filled with over one hundred patients. Pharmacy leadership needed to develop a creative solution to decrease wait times, increase patient satisfaction, and comply with OSHA and CDC regulations to minimize COVID-19 lobby exposure.

The objective of this initiative was reduced wait times as measured by Q-Flow data and increased patient satisfaction as measured by ICE data. This was accomplished by collaborating with DHA to implement Q-Anywhere technology for patients to pre-activate prescriptions outside of the medical treatment facility. This innovative solution allows patients to activate prescription from anywhere in the world, obtain status updates, and receive direct communication from the pharmacy. This solution aligned with the RRC principles of sensitivity to operations, respect for people, commitment to resilience, and reluctance to simplify.

From April 2019 to April 2020, the average pharmacy lobby wait time was 42 minutes and the average ICE patient satisfaction was 70%. Pre-activation via Q-Anywhere was initiated and the pharmacy lobby reopened in April 2021. From April 2021 to April 2022, the average pharmacy lobby wait time was 7 minutes and the average ICE patient satisfaction was 89%. The implementation of Q-Anywhere with pre-activation was a patient-friendly tech solution that improved communication method with patients, dramatically improved patient experience, and access to care as evidenced by a statistically significant 19% increase in patient satisfaction and an 83% decrease in lobby wait times.

Improve Appointment Booking Process and Patient Satisfaction

Organization: Navy Medicine Readiness & Training Unit Iwakuni

Primary Clinical Community: Military Specific Care

Secondary Clinical Community: N/A

Clinical Support Service: Diagnostic Imaging

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

BACKGROUND: NMRTU Iwakuni has ten individual departments where patients can call directly to schedule appointments. Ten individual departments are: Medical Homeport, Marine Centered Medical Homeport, Audiology, Behavioral Health, Immunization Clinic, Physical Therapy, Radiology, Optometry, Occupation Health, and Dental. However, most patients call the Medical Home Port MHP appointment line.

PROBLEM: From MAY-AUG2021, NMRTU Iwakuni received 7negative ICE comments expressing dissatisfaction with the appointment booking experience. Issues included long wait times and dropped calls. Data collected reveal that only 53.1% of calls to the MHP appointment line were for MHP booking requests while 46.9% were non-MHP booking requests that resulted in a transferred call.

POST DATA: Four weeks following the implementation of the clinic phone tree, non-MHP appointment related calls to the MHP Appointment Line decreased to 16.2%, exceeding our target goal of 23.45%. There were no negative ICE comments submitted from 06OCT-22NOV2021, exceeding our project goal of 4.

Improved Co-Management of Postoperative Refractive Surgery Patients

Organization: Naval Health Clinic Oak Harbor

Primary Clinical Community: Military-Specific Care

Secondary Clinical Community: Primary Care

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

While our Military Treatment Facility (MTF A) does not perform refractive surgery, we do have a very robust Optometry department. The nearest MTF (MTF B) that performs refractive surgery is approximately 70 miles away and, due to the uniqueness of our location, there are some challenges that come with traveling to MTF B. The one day and one week postoperative appointments were being done at MTF B and the one month, three month, six month, and 12 month appointments were being done at MTF A. We proposed to change this to allow the one week postoperative appointment to be completed at MTF A.

We felt this proposal was aligned with the Ready Reliable Care Domain of Change Patient Centeredness. This change was not only a focus on patient safety but also to improve the quality of care the patient experienced. Eliminating the need for our active duty service members to travel to MTF B would decrease the time away from their work center, improve continuity of care for our postoperative patients, increase patient satisfaction, and save patients out of pocket money expenses for the one week postoperative appointment.

Our objective was achieved by collaborating with MTF B to ensure this was possible and then initiation of the one week postoperative appointment at MTF A for patients based near MTF A. Prior to implementation, we obtained baseline data in order to evaluate the effectiveness of this project with post implementation data. We were able to determine that in eight months post implementation we had significantly increased our relative value units (RVUs) by 115%, and improved patient satisfaction by 100%. During this time we were also able to decrease the cumulative time patients were away from work by 500 hours and saved each patient approximately \$115.00. Overall, this entire project was a success.

Improving Inpatient End of Life: A Palliative Approach

Organization: Brooke Army Medical Center

Primary Clinical Community: Primary Care

Secondary Clinical Community: Oncology

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Information Technology Resourcing

Domain of Change: Patient Centeredness

Abstract:

BACKGROUND: Over 2 million people die in the United States every year; about one-third of those deaths occur in hospitals despite data showing most Americans would prefer to die at home. Research also shows that when palliative care is involved early, there is less use of diagnostic testing near the end-of-life, which is more in line with patients' goals.

AIM: Our aim was to reduce unnecessary lab draws near the end of life by 50% and by doing so make patients' end-of-life transition more in line with their goals of care.

METHODS: We examined whether lab draws occurred for patients near the end-of-life. We looked at whether labs were drawn on the date of the patient's death and whether labs were drawn for patients on

comfort care. To improve patient care we created a new combined palliative care/comfort care order set at Brooke Army Medical Center. We compared this data with the old separate palliative care and comfort care order sets as our pre-intervention data and the new comprehensive palliative care/comfort care order set as our post-intervention data for adult ward patients from June-Oct 2021. .

RESULTS: With implementation of a new combined palliative care/comfort care order set, we showed a 40% reduction in labs on the date of death. We also demonstrated a 20% reduction in labs for patients on comfort care. The new combined order set was more comprehensive and reduced lab draws by 57% compared to the old separate palliative care and comfort care order sets.

DISCUSSION: Death is bound to occur in the hospital. Physicians have a role in improving the quality of patient care at the end-of-life. Involving palliative care early in the process can help ease the transition for patients and create an environment that is more in line with their goals of care.

Improving Physical Therapy Purchased Care Recapture of Low Back Pain Encounters

Organization: Naval Health Clinic Hawaii

Primary Clinical Community: Neuromusculoskeletal

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Patient-Centered Care

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

PROBLEM: The command had numerous Active Duty personnel with low back pain being referred to network providers from July to November 2021. During this period, the command lost 2,895 physical therapy (PT) encounters for low back pain to the network resulting in over \$99,000 being spent in the network for the five month period.

METHODS: A Lean Six Sigma DMAIC process was used to address the problem.

RESULTS: The total number of network visits was reduced from a baseline of 2,895 encounters to 1,360 encounters (a 47% reduction) and an approximate annual cost avoidance of \$99,071 to \$44,401 (a 45% reduction).

CONCLUSION: Implementation of a low back class targeting common mechanical lower back pain patients for Active Duty personnel was shown to decrease leakage to the network.

Increasing Virtual Women's Health Appointments

Organization: NMRTU Everett

Primary Clinical Community: Primary Care

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

Some active duty service women might delay or forgo seeking healthcare for routine and/or acute needs due to numerous circumstances. This delay can potentially lead to long term health issues, deterioration of health and lack of deployment readiness, which can be a detriment to our patient population and our military mission.

Historically, the majority of available appointments within the Women's Health Clinic were allocated for in-person visits with the provider. A change in the appointment template, adding an additional 15 virtual appointments, increased the number of virtual appointments available each week to 30. The objective was to increase the access of care to patients who did not require an in-person visit, in turn increasing mission readiness as active duty would be away from their workplace a decreased amount of time. Additionally, this would also increase in-person appointment availability, decreasing wait time.

This improvement project was aligned with the Ready Reliable Care principle "sensitivity to operations" as this project was not only focused on how the people, processes and systems impact the healthcare outcome of the patient but also the outcome of the military mission. Additionally, acknowledging the difficulties with in-person appointments and implementing an appointment type that allowed the patient more flexibility showed our dedication to the Ready Reliable Care principle of "respect for people" as we built mutual trust and respect between our patients and the healthcare team.

Our objective was achieved by implementing this change on December 13, 2021. We measured if we met our objective by continuously reviewing our virtual appointment booking availability. We were able to meet our goal of implementation by offering 30 virtual appointments for most weeks. Due to several reasons, we did find that all of the virtual appointments were not always available and/or utilized.

Leveraging a Virtual Check In Queue to Decrease Patient Wait Times and Increase Patient Satisfaction in the Pharmacy

Organization: 45th Medical Group – Patrick AFB

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Pharmacy

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

BACKGROUND: Wait times are cited as a main contributor adversely influencing working conditions in pharmacies, which can affect staff retention rates and burnout (Tsao et al., 2020). High acuity as well as high prescription volumes leave no room for errors and can often lead to increased wait times. The Pharmacy at the MTF has historically struggled with long wait times as demonstrated through various feedback modalities including Interactive Customer Evaluation (ICE), Congressional Inquiries, Happy or not Kiosk, green cards, and direct complaints. Prolonged wait times for patients do not only affect patient satisfaction but also clinical outcomes, patient retention as well as the likelihood of medical malpractice claims (Prakash, 2010). After evaluation of the data, wait times were identified as the predominant issue and new solutions to reduce wait time were brainstormed. Developing a process that focuses on patient experience and quality of care, the MTF centered the initiative on the Ready Reliable Care Principles of preoccupation with failure, sensitivity to operations and respect for people.

OBJECTIVE: Leveraging already existing technological systems, the pharmacy implemented Q-Anywhere, a virtual check in queue for prescription activation. The objective of the initiative was to decrease patient wait times and increase patient satisfaction.

METHODS: The success was measured through quantitative and qualitative metrics: decrease in total patient wait times for Q-Anywhere compared to in-person check in and patient satisfaction.

RESULTS: Q-Anywhere utilizers experienced a 37.6% decrease in wait times compared to in-person utilizers. Patient satisfaction increased by 3% while total patient response rates increased by more than 28% leading not only to happier but also more engaged patients.

CONCLUSION: The sustainability and reproducibility of Q-Anywhere has demonstrated to be a

progressive tool that should be implemented enterprise wide. Cost for training, advertising and implementation is minimal and can be accomplished with already allotted resources.

Mental Health Targeted Care Group Model

Organization: Little Rock Air Force Base

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Patient-Centered Care

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

Mental Health Clinics across the Air Force struggled to meet the most basic mission. Between 2017 and 2020, the Air Force outsourced nearly 203,000 mental health Total Force encounters at a cost of \$22.5 million dollars. Additionally, the rising demand for mental health services, increased patient need acuity, limited and/or reduced staffing, and the disconnection between base helping agencies contributed to poor access leading to suboptimal care.

Between the same years 2017-2020, Little Rock AFB's Mental Health Clinic's Active Duty encounters increased by approximately 11%. Demand was not matched with increases in manpower. To the contrary, staffing allocation for Little Rock's Mental Health clinic remained between 50%-70%. The clinic resorted to multiple, unsuccessful solutions in order to increase availability. Examples include walk-ins automatically receiving care, provider templates expanding, and technician intakes increasing. This resulted in caseloads becoming too difficult to manage. Mental Health staff routinely worked extended hours in order to document and close encounters. Access may have temporarily increased, but the health and morale of our providers/technicians degraded over time while access remained poor.

Rather than continue with a typical increase in patient load, the staff implemented a Targeted Care (TC) model, designed to provide a sustainable, effective care and treatment plan through group therapy. Instead of treating one patient per appointment we are now treating roughly seven. Appointments should increase by over 100 monthly, time is not completely lost to no-shows, and technician training is a natural byproduct by attending and co-facilitating groups.

Note that model was Surgeon General Approved, has been tested at pilot clinics, and is consistent with DHA guidelines and standards.

OB HEART

Organization: Brooke Army Medical Center

Primary Clinical Community: Women and Infant

Secondary Clinical Community: N/A

Clinical Support Service: Patient-Centered Care

Non-Clinical Support Service:

Domain of Change: Patient Centeredness

Abstract:

The Virtually Integrated Patient Readiness and Remote (VIPRR) Clinic's mission is to provide synchronous virtual care appointments to targeted populations with insufficient local primary care support. Beginning with four providers in 2019, the clinic was minimally accepted, reinforcing willing locations without written documentation or justification. The clinic became underutilized during the initial year and only assisted 4,718 service members scattered across the world. On March 11, 2020, the World Health

Organization (WHO) declared COVID-19, the disease caused by the SARS-CoV-2, a pandemic; support and acceptance of telemedicine took a 180-degree turn. VIPRR Clinic completed nearly 30,000 visits during the year with a mandate to grow. Slowly adding capacity with new providers, the clinic supported more than 52,000 service members in 2021. It quickly became apparent that demand outstripped capacity while no particular process to identify genuine requirements or priority existed. The VIPRR clinic was operating on a "First Come, First Service" model of care. Service members realized they could abuse the lack of access criteria by misstating their unit information for one of our supported locations annotated informally on an internal spreadsheet. It quickly became apparent that this was a patient safety issue, resulting in a final justification to reset and reorganize the unit prioritization and agreements process.

Optimization of Patient Centeredness, Education, and Access to Neurologic Care in Alaska: An Underserved Market

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: Behavioral Health

Secondary Clinical Community: N/A

Clinical Support Service: Precision Medicine

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

Alaska represents an austere civilian neurology market with wait times often exceeding 90 days, massive distances between military treatment facilities, and under-served Veterans Affairs (VA) beneficiaries and remote training locations. Delays in management are common, often resulting in profound morbidity due to limited access to care. A total of 9 military installations require access in accordance with high-tempo operations with fewer than 12 community neurologists in the entire state.

The 673d Medical Group Neurology clinic, led by Dr. Jeanna West-Miles, identified an opportunity to innovate patient-centered access and care delivery through a pilot program tailored to address unique solutions to Defense Health Agency (DHA) Alaskan-Market challenges. The project focused on patient centeredness and constancy of purpose via deference to expertise; a foundational principle of evidence-based neurology and aligns with the Neuro-musculoskeletal Military Health System Clinical Community.

Appointment scheduling was returned to Neurology clinic staff to optimize availability and provide rolling VA access when active duty tempo diminishes. Neurodiagnostic studies, nerve conduction studies, electroencephalogram and electromyogram were triaged into appointment slots of different durations to maximize access to care. Non-pharmacologic interventions for headache, back pain and neck pain were pioneered to include osteopathic manipulation, botulinum toxin injection, implementation of Cefaly devices, and use of Trigger Point Injections and Sphenopalatine Blocks. Scheduling was reworked to accommodate access to these therapies, which vastly improved management of pilots, security forces, and explosive ordinance disposal personnel, all of whom require drug-sparing therapies to maintain readiness.

As a result of the program, at least 10 pilots have been retained in current duty positions and greater than 90% of security forces retained in required AFSCs. Current interactive customer evaluation survey satisfaction rate is 100%. Narcotic usage for chronic neuropathic pain and headache has been reduced by more than 50% over the past 36 months. Wait times for initial appointments and electrodiagnostics have been reduced by 25%. Wait times for special procedures are a third of the anticipated time compared to community care. Access to care for specialized procedures is consistently within DHA-mandated timeframes despite clinic manning shortages.

Penicillin Allergy Testing and Clearance: Patient-Centered Readiness Initiative through Non-Allergist Engagement

Organization: Navy Medicine Readiness & Training Command Portsmouth

Primary Clinical Community: Primary Care

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Patient Centered Care

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Patient Centeredness

Abstract:

Penicillin allergies are common with a far-reaching impact on the military healthcare system. These allergies lead to increased healthcare costs, increased morbidity and mortality, and decreased force readiness. 90% of reported penicillin allergies do not represent a true allergy and most patients can be safely tested and cleared of their allergy.

The objective of this project is to establish a standard operating procedure (SOP) and responsibility assignment matrix (RACI) that can be disseminated enterprise-wide in order to identify penicillin allergies that can be cleared via direct oral challenge by a non-allergist, removed from the electronic medical record resulting in decreased healthcare costs and increased force readiness. This was accomplished by the development of the Penicillin Allergy Testing and Clearance (PAT-C) protocol with a scalable SOP and RACI that have been uploaded to the DHA SPIDR repository for enterprise-wide access and continued refinement. We have demonstrated the effectiveness of this process by screening 313 patients with penicillin allergies over a period of 18 months at a single facility with a total of 148 patients successfully cleared from their penicillin allergy. Importantly, this process was led by primary care physicians with only subspecialist allergy oversight.

This simple process that can be replicated by the non-allergist in military treatment facilities and in the deployed environment saved a single facility approximately \$224,000 annually with the immeasurable benefit of increased force medical readiness while focusing on patient-centered care. We present here an elegantly simple, standardized process that can be readily replicated and expanded through the use of a RACI matrix that is housed on the SPIDR repository and is frequently updated to reflect continued transparent process improvement updates.

Point of Service Vaccine Administration during Routine Obstetric and Gynecologic Clinic Care

Organization: Joint Base Elmendorf-Richardson (JBER)

Primary Clinical Community: Women and Infant

Secondary Clinical Community: N/A

Clinical Support Service: N/A

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

Our Women's Health Clinic (WHC) noticed patients were delaying the receipt of influenza and tetanus/diphtheria/acellular pertussis (Tdap), which are recommended for every pregnant patient in every pregnancy. Additionally, gynecologic patients often would benefit from the human papilloma virus (HPV) vaccine to prevent cervical/vaginal cancer. Patients would express intent to receive these immunizations but did not always follow through if there was a line at the Immunizations Clinic. To maximize receipt of recommended vaccines, the WHC demonstrated continuous process improvement by initiating a point of care vaccination program to administer three vaccines (influenza, Tdap, and HPV) to patients while they

are at their routine appointments with the objective of increasing vaccine compliance. This initiative aligns with the Ready Reliable Care principle of sensitivity to operations by recognizing the current processes in the Medical Group and their impact on patient vaccine compliance. The initiative also embodies the principle of reluctance to simplify by delving into the roadblocks to vaccine receipt and streamlining the patient experience.

In the first 12 months of the program, 1069 vaccines were administered and receipt of vaccines when recommended increased 50% on the same day. In chart review over a month before and after the initiative, 50% more patients received their vaccines the same day the vaccine was recommended. This continuous process improvement initiative for point of care vaccinations was the first in PACAF. The results show a marked increase in recommended vaccinations and could be easily implemented at primary care and other specialty clinics across the Defense Health Agency.

Rapid Initiation of Antiretroviral Therapy by Virtual health in Service Members Newly Diagnosed with HIV Infection

Organization: Brooke Army Medical Center

Primary Clinical Community: Primary Care

Secondary Clinical Community: Military-Specific Care

Clinical Support Service: Connected Health

Non-Clinical Support Service: N/A

Domain of Change: Patient Centeredness

Abstract:

BACKGROUND: Delays in HIV anti-retroviral therapy (ART) have been associated with worsened patient and public health outcomes. Shortening the duration between diagnosis and ART initiation would mitigate these risks.

OBJECTIVE: We aimed to decrease duration between HIV diagnosis and ART initiation.

HRO PRINCIPLES: Reluctance to sSimplify, Sensitivity to Operations

DESCRIPTION: Under the traditional protocol (TP), regional active duty (AD) Army members and worldwide AD Air Force members were evaluated in-person centrally for comprehensive HIV management at the time of diagnosis, leading to delays in therapy initiation while travel was arranged. The virtual protocol (VP) was adopted to initiate ART earlier. Under the VP, the HIV clinic provided primary care providers a list of labs required prior to ART initiation. After collection, HIV physicians conducted ad hoc telephonic counseling, initiated ART, and arranged a future comprehensive appointment. The VP initiative began in February 2020. We collected data on all AD members with incident HIV diagnosis from February 2018 to February 2020 (the pre-initiative period) and from February 2020 to February 2022. Patient demographics and clinical data were obtained through chart review. Variables were analyzed using 2-tailed t tests or Fisher's exact using GraphPad™ 2022.

RESULTS: Eighty-two patients were diagnosed during the TP, 72 during the VP. Clinical and demographic data between groups were similar. The time from HIV notification to ART initiation was shorter with the VP compared to the TP (15 days vs 25 days; $p < 0.05$). Similarly, time from notification date to comprehensive specialty evaluation was faster during the VP (19 days vs 25 days; $p = 0.03$).

CONCLUSION: The VP was associated with a faster ART initiation and specialty evaluation, statistically decreasing the window of HIV transmission risk. Future studies investigating virtual health protocols for other time sensitive medical interventions are warranted given the geographic distribution of the Armed Forces.

Telehealth Referral Management Tool

Organization: Navy Medicine Readiness & Training Command Rota Spain

Primary Clinical Community: N/A

Secondary Clinical Community: N/A

Clinical Support Service: Patient-Centered Care

Non-Clinical Support Service: Administrative and Management Work at all Levels

Domain of Change: Patient Centeredness

Abstract:

Telehealth is an innovative means of delivering healthcare in remote environments. For remote Military Treatment Facilities (MTFs), coordinated access to specialized healthcare historically relied on phone or encrypted email contact from originating site to distant site. This process is cumbersome, resulting in increased risk for error, delay in access to specialty care, and patient dissatisfaction. Given the complexity of the problem at hand, team members from four Department of Defense (DoD) MTFs and a Defense Health Agency (DHA) CPI leader planned the way forward. Key stakeholders included Telehealth (TH) clinic leads, referrals management, healthcare business, nursing, patient administration, and informational technology.

Harnessing Lean Six Sigma (LSS) methodology, the providers' location (HUB) and the patients' location (SPOKE), site MTFs piloted a shared off-network Referral Management (RM) tool in October 2021 and implemented a standardized process in December 2021. The RM tool enabled and streamlined specialty referral communication and management. By the end of the pilot, the HUB and SPOKE site completed 14 TH referrals reducing the average time for referral processing completion from 103 to 13 minutes. Time for referral completion is defined by measuring the time to review, appoint, transcribe, input, disposition, and contact the patient for TH referrals. After the notable success of the pilot and demand for the RM Tool (RMT), the team explored additional opportunities to expand the shared off-network RM process with other OCONUS MTFs. New objectives included increasing the utilization of the shared RM tool to support virtual care to remote and regional MTFs.

One month after implementation, four SPOKE sites implemented the shared RMT as interim measures to reduce man-hour requirements until dedicated TH personnel can be hired. At the six month follow-up the average time for referral completion decreased again to six minutes. RMT now includes seven OCONUS and two CONUS sites.

Tele-Pain and Patient Centeredness

Organization: Walter Reed National Military Medical Center

Primary Clinical Community: Surgical Services

Secondary Clinical Community: Primary Care

Clinical Support Service: Pain Management

Non-Clinical Support Service: Patient/Staff Collaboration

Domain of Change: Patient Centeredness

Abstract:

Chronic pain affects over 100 million American adults and the prevalence is significantly higher among U.S. military personnel. Compared to 26% of the general population, approximately 46% of the active duty military return from deployment with chronic pain. For patients at remote military treatment facilities (MTFs) within the Department of Defense (DoD), geographic barriers are an obstacle when needing adequate care for chronic pain management^{1,2} Often, the specialty health services are not offered on base or outside the facility. Pain specialists mostly reside at the major military medical centers. This problem results in increased travel costs and time away from their mission to receive care.³

The National Capital Region Pain Initiative (NCRPI) enhances the access and quality of care for pain patients while promoting readiness, restoration of function and relief of pain at the same time as reducing the misuse of opioids. To address the high prevalence of chronic pain among U.S. military personnel, but with limited access to chronic pain specialists, the NCRPI and its team of providers successfully pioneered a Tele-Pain Program.

Patient-centeredness is the Ready Reliable Care (RRC) Domain of Change that the Tele-Pain Program encompasses and the two RRC Principles that they embody are Sensitivity to Operations and Deference to Expertise.

The most recent inclusion of telemedicine to Guantanamo Bay Naval Base allowed military beneficiaries to remain on base and receive specialized pain care, which would have cost approximately \$24,000 and \$35,000 for 16 patients total (See Tele-Pain and Patient Centeredness Attachment 1). NCRPI successfully serves five locations with their tele-health services and carved the way for the widespread need for telemedicine during the COVID-19 pandemic. In order to establish virtual health visits as a component of the Military Health System (MHS) health care paradigm, NCRPI keeps patient-centeredness as their primary goal.