

## 2020 MHS MILITARY ALLIED HEALTH LEADERSHIP EXCELLENCE AWARD

### JUNIOR PROVIDER

*LT Benjamin K. Mattox (USN)*



Benjamin K. Mattox, PA-C, Dr-PH, LT, MSC, USN is recognized for his contributions while serving as Program Director of the Orthopedic Physician Assistant Fellowship, he was responsible for establishing the first ever doctorate program in post graduate orthopedic education for Navy physician assistants. During his time as chair of Navy Medical Readiness Training Command's Tissue Oversight Committee, this committee was awarded the 2019 DHA High Reliability Award in Patient Safety for their efforts in managing the safe and reliable use of tissue, a practice that was also recognized as a BUMED 'best practice'. He is an operationally driven provider with experience in health care delivery and enhancement to Navy Special Warfare Groups two, four and EOD group two increasing navy special warfare access to care by 87%.

### SENIOR PROVIDER

*LTC Thomas H. Edwards (USA)*



LTC Thomas H. Edwards is recognized for his contributions to the US Army Institute of Surgical Research, Medical Research and Development Command and Military Medicine at large. For the past three years he has led a diverse group of individuals supporting the nation's foremost combat casualty care research laboratory to include the veterinary medical group, the core research laboratory, the business development office, the statistical support service and the clinical research support department. Simultaneously, LTC Edwards serves as the deputy director of research for the ISR helping to lead a group of nearly 350 military, civilian and contract personnel towards the goal of developing new and better ways to save lives on the battlefield. While performing these important duties, LTC Edwards leads the K9 Tactical Combat Casualty Care Committee's Education and Training sub-committee. In this role he led the foremost experts across the Department of Defense to establish the first ever consensus guidelines to establish care for military working dogs injured in combat.

## **JUNIOR NON PROVIDER**

*LT Christopher S. Greil (USN)*



LT Christopher S. Greil is recognized for his contributions to Training Air Wing Four, Naval Air Station Corpus Christi, and Military Medicine at large. As a naval aerospace physiologist, his research and scholastic contributions have helped advance both naval aviation and aerospace medicine. He co-developed several innovative solutions designed to mitigate the physiological risks associated with manned flight including advances in airsickness tolerance and inflight hypoxia awareness. His efforts have helped to optimize the warfighter and have improved combat survivability. An outstanding investigator, educator, and mentor, LT Greil currently serves as faculty and aeromedical advisor to the line.

## **SENIOR NON PROVIDER**

*Maj (Dr.) Mari M. Metzler (USAF)*



Major Mari “Mars” Metzler has a distinguished career culminating in her current position as the Headquarters Air Combat Command Aerospace Physiology Training Manager, also serving as interim squadron commander of ACC’s largest training support squadron; winning awards at multiple levels. Maj Metzler is a trusted Flight Safety Officer, and has investigated multiple aircraft mishaps, most recently serving as Medical Member on the 2018 Thunderbird Accident Investigation Board at Nellis Air Force Base. Additionally, as Tyndall’s Aerospace Physiology Flight Commander during Hurricane Michael, she led her flight through the worst natural disaster in the installation’s history, quickly restoring aerospace physiology support requirements to the F-22, Combat Systems Officer, and Air Battle Manager formal training courses. Major Metzler exemplifies the whole person concept, and has proven herself a superb allied health professional, leader and teacher.

Major Metzler also volunteers her time as a Major in the Civil Air Patrol, and as a commercial pilot and flight instructor. In this capacity after Hurricane Michael, she coordinated with FEMA, flying over 120 hours of Civil Air Patrol disaster response, assessing damage to 15 cities in 5 counties.

# 2020 MHS FEDERAL MILITARY NURSING EXCELLENCE IN LEADERSHIP AWARD

## JUNIOR MILITARY

*CAPT Tiffany R. Massenburg (USA)*



CPT Tiffany R. Massenburg is recognized for her contributions to Landstuhl Regional Medical Center, U.S. Army Europe, and Military Medicine at large. She has made clinical, educational and developmental contributions that impact both the military and surrounding communities. As a mentor, volunteer and innovator she has assisted with community summer camps, facilitated women's bible studies, coordinated thirteen officer professional development sessions within the year and supported 10 unit practice councils through the implementation of 16 evidenced based practice and performance improvement projects. CPT Massenburg is a compassionate leader who strives for excellence in everything she does and influences those around her to do the same, she is currently serving as the Clinical Nurse officer in Charge of the Mother Baby Unit in the Division of Women's Health and Newborn Care.

*LCDR Jonathan D. Hamrick (USN)*



LCDR Jonathan D. Hamrick, NC, USN is recognized for his contributions to Naval Medical Center Portsmouth, U.S. Fleet Forces Command, and the Department of Defense. He has made significant clinical and academic contributions to Military Medicine and extensive operational support of the warfighter. His role as a Navy Nurse Anesthetist aboard the USS BATAAN was essential in the recently declassified 2017 United Arab Emirates crash in Yemen, providing life-saving blood transfusions, intraoperative anesthesia care, and post-operative critical care management, saving six lives and ultimately contributing to the success of the 2020 Abraham Accords signed between Israel and UAE. He is a dedicated leader, educator, and mentor and continues to influence Military Medicine strategic plans and policies.

*Maj Aubrey E. Reid (USAF)*



Maj Aubrey E. Reid is recognized for her distinguished career as a nurse and leader. Maj Reid's diverse Air Force nursing experience was showcased as she was selected to take on responsibilities that are distinguished for the nursing career field. As a readiness expert, she supports combat capabilities of Team Vandenberg's Space Operations Command, 30th Space Wing, and 51 Tenant Units delivering \$11.2 M in Comprehensive medical and dental care.

### **SENIOR MILITARY**

*LTC Sarah D. Eccleston (USA)*



LTC Sarah D. Eccleston is recognized for her contributions to Madigan Army Medical Center, the Army Nurse Corps, the Military Health System, and Congress. She has a distinguished career as a critical care nurse and currently as the Battalion Commander of US Army Health Clinic Vilseck. LTC Eccleston advocates for evidence-based decision making and has empowered many to implement system change with this process. She co-led a team who composed an enterprise-wide joint professional practice model, impacting nurses across the MHS. LTC Eccleston has a talent for team-oriented problem solving and innovation which are vital for the success and future of Military Medicine.

*CAPT Dixie L. Aune (USN)*



CAPT Dixie L. Aune is recognized for her contributions over an exemplary and distinguished career as a Navy Nurse in a variety of clinical, operational and executive settings. As a Junior Officer, she was the recipient of the Association of Women's Health, Obstetric & Neonatal Nurse of the Year. Recently completing her Doctorate of Nursing Practice, her list of achievements and diverse assignments is a testament to her lifetime commitment to Military Medicine.

In her current role as Chief Nursing Officer for Naval Medical Center Portsmouth, her talent and commitment to the overall mission was demonstrated as she took on the challenging role as the COVID-19 Hospital Incident Command Center Planning Chief. Through her diligent leadership and meticulous execution, Naval Medical Center Portsmouth was able to deploy 67% of our inpatient staff to New York City in less than 72 hours, while at the same time preparing to manage a community wide surge of inpatients. CAPT Aune is a superb nurse and leader. She represents the very best in military medicine and is a role model for others to emulate.

*Lt Col Michele S. Suggs (USAF)*



Lt Col Michele S. Suggs is recognized for her pivotal contributions throughout her career by ensuring mission success through her relentless demonstration of improving its effectiveness, operational readiness, and mission accomplishments, all while focusing on its most important weapon's system, its Airmen. Through her partnerships with NATO, she drove its standardized global Critical Care Air Transportation education platform. While deployed as a Critical Care Nurse, she directly supported 5,000 Aeromedical Evacuation flying hours, 798 combat missions, 3 major hurricane operations that treated and transferred 210,000 coalition patients spanning 124 nations. She strategized the USAF's Nurse Corps Accession process by partnering with the Air Force Recruiting Service and Air Force Education and Training Command to co-author its scroll guidance resulting in adjudicating 1500 Congressional mandates. Her direct influence to fuel both our National Defense and National Security Strategies are recognizable through her building new administrative processes, guiding strategic management initiatives/compliance, and steering the development of our Airmen and global partners.

## 2020 MHS FEDERAL CIVILIAN NURSING EXCELLENCE IN LEADERSHIP AWARD

### JUNIOR CIVILIAN

*Victor M. Ulloa Sr. (USA)*



Victor M. Ulloa is recognized for his contributions to William Beaumont Army Medical Center, The Regional Health Command-Central, The U.S. Army Medical Command, and The Department of the Army. He is an instrumental instructor in ensuring that safe and quality Licensed Practical Nurses join the fighting force in the U.S. Army Medical Center of Excellence. As a retired First Sergeant, he is a superb role model and leader. His accomplishments include implementation and sustaining the first Cadre Training Course offered at a Military Treatment Facility, which was noted to be a best practice during the Annual Medical Center of Excellence Hospital Based Training Event. He developed a COVID-19 specific physical assessment training utilized to train Division medics in support the of the FT. Bliss pandemic response plan.

### SENIOR CIVILIAN

*Helen K. Crouch (USA)*



Helen K. Crouch's selfless efforts have made a significant impact in the field of Infection Prevention and Control within the Military Health Care System (MHS). She has distinguished herself as one of the top leaders in her field with an aptitude for successfully implemented infection prevention standards in the operational setting and MHS. In response to COVID-19 pandemic she quickly established a team for an agile response to assist the medical and dental facilities. She has demonstrated a commitment to using innovative solutions to effectively improve patient outcomes and prevent harm. She was a key expert in response to the epidemic of multidrug-resistant bacterial infections occurring in the combat wounded from Operations Iraqi and Enduring Freedom. She continues to provide invaluable training and mentoring of deploying infection control officers. She has proven herself a most valued member of the Army and Department of Defense medical community, striving to ensure that the best possible care is provided to our military members, dependents, and other beneficiaries.

*Christine K. Yuhas (USN)*



Christine K. Yuhas (RN) is a proactive and positive educator, mentor, and change champion for Navy Medicine Readiness and Training Command (NMRTC) Corpus Christi and its branch clinics at Navy Medicine Readiness and Training Units Fort Worth, Kingsville, and NMRTC San Antonio Detachment. She has 35 years of diverse clinical nursing experience and provides the command with invaluable evidence-based best practice, published research, and national resources for guidance. RN Yuhas started out as an EMT-A and has worked to enhance her clinical acumen with significant experiences in Flight, Critical Care, Cardiac Catheterization Laboratory oversight and Level 1 Trauma Nursing. RN Yuhas has logged over 5,000 direct patient-care flight hours in helicopters, fixed wing, and ground transports. As a previous Regional Flight Director of Base Operations in the states of Texas, Oklahoma, Missouri, and Arkansas she was directly responsible in managing 1,000 Flight Registered Nurses, Paramedics and Pilots in the timely execution of critical care transports for patients. Her ability to work seamlessly in all of these environments sets her apart from her peers while supporting the Infection Prevention and Control mission of the command. NMRTC Corpus Christi is fortunate to have a high-caliber employee such as RN Yuhas aboard.

*Sheila R. Hannon (USAF)*



Sheila R. Hannon is recognized for her contributions to the 28th Medical Group, Ellsworth Air Force Base, SD. She has made clinical, educational, mentorship, and leadership contributions to the Department of Defense medical community as well as the local community. She is a leader in providing high reliability, safe care in the medical community and strengthening trust with the relationships built with the local community. Her leadership is demonstrated by her passion in promoting excellence through education and mentorship to enhance patient safety and quality care while serving as the Director of Quality and Risk Management in support of 17,000 beneficiaries at one of only two B-1B installations in the world.

*Stephanie A. DeLuca (DHA)*



Stephanie A. DeLuca, RN, BSN is recognized for her contributions to the Department of Obstetrics and Gynecology, Fort Belvoir Community Hospital, National Capital Region Market, and the U.S. Military Health System. Her vast experience includes being a founding nurse of a thriving private sector women’s health practice. In support of the U.S. Defense Department readiness, she applied her vast experience in obstetrics and gynecology to deliver quality care to National Capital Region based active duty service members, their families and interested stakeholders. The sum of her efforts resulted in safe care to at-risk obstetrical patients throughout the fight against COVID-19; positively advances nursing theory, and will impact how DHA administers women’s health for the foreseeable future.

## 2020 MHS FEMALE PHYSICIAN LEADERSHIP AWARD

### JUNIOR

*MAJ Shannon N. Foster (Army)*



MAJ(P) Shannon N. Foster is recognized for her contributions to Brooke Army Medical Center, Joint Base San Antonio, and Military Medicine at large. She is a clinician educator who serves as Associate Program Director and core faculty of the only joint Air Force/Army sleep medicine fellowship program in the DOD. Her research has contributed greatly to the field of sleep medicine and military medicine as whole by highlighting sleep disorders in military service members. She is an enthusiastic mentor for junior officers in medicine and leads by example.

*Maj Kattie D.S. Hoy (USAF)*



Major Kattie D. Hoy is recognized for her distinguished work as the Program Director for the Nellis Air Force Base Family Medicine Residency, as well as her contributions to academic, clinical, and operational Family Medicine throughout her career. Starting in residency and continuing today, she has maintained a focus on mentoring her peers and subordinates. She has directly supported the transition of four residents into FM faculty positions, as well as developed the teaching skills of seven junior faculty members. As program director, she supported multiple female residents who hosted “women in medicine” meetings to discuss concerns that affect female physicians both professionally and personally. Additionally, in her first year as program director, she recruited an intern class with 70% female physicians, increasing the male to female ratio close to 1:1 for the first time in the program’s history. She is also dedicated to the operational mission serving as SGH for 6 months as a new O-4 on her initial deployment and subsequently leading an all-female Embedded Health Team on a three week mission to Guyana, South Africa.

*LCDR Bridget K. Cunningham (Navy)*



CDR Bridget K. Cunningham, MC, USN is recognized for her contributions to Naval Medical Center Portsmouth, Portsmouth, VA and Military Medicine at large. Her leadership and initiative have led to groundbreaking achievements affecting the very fabric of the culture surrounding patient safety and quality of care at NMCP. Her work in the quality curriculum development is impacting multiple generations of physicians. She is a force in Navy Medicine whose leadership inspires excellence.

*LCDR Ekwutosi M. Okoroh (PHS)*



LCDR Okoroh is recognized for her strong and unwavering commitment to serving vulnerable communities. She has provided critically needed obstetrics and gynecology (OB/GYN) services. She has educated and mentored ~100 residents, fellows, and medical students, mostly women of color. She has represented CDC on the American College of Obstetricians and Gynecologist's Underserved Committee providing public health and medical expertise to the development of guidance documents. Lastly, she has enthusiastically supported CDC's mission to build state and local public health capacity by mentoring and recruited OB/GYN residents to apply for CDC's Epidemic Intelligence Service Program, the premier applied epidemiology program in the nation.

## SENIOR

*COL Lisa M. Foglia (Army)*



COL Lisa M. Foglia is recognized for her contributions to Womack Army Medical Center, Fort Bragg, Regional Health Command-Atlantic, Central North Carolina Market and the Defense Health Agency. She has spearheaded the Graduate Medical Education Expansion at Womack, leading to DHA approval to add three new residency programs to the existing training platform – which represents the largest GME expansion in the military. She is a leader in the American College of Obstetricians and Gynecologists Armed Forces District, currently serving as the Chair-Elect. She is an educational leader, serving as a Maternal-Fetal Medicine Board Examiner and as a member of the Council on Resident Education in Obstetrics and Gynecology Education Committee, which drives national OB/Gyn curriculum and faculty development. She has previously served as the Maternal Fetal Medicine Fellowship Director and OB/Gyn Residency Program Director, both at Madigan Army Medical Center.

*Col Pamela M. Williams (USAF)*



Col Pamela M. Williams is recognized for significant her contributions to the practice of military medicine and for being an exemplary role model for other female physicians through her personal achievements, leadership ability, and community service. A nationally recognized educator and family physician, she has had a distinguished career in academic medicine in the military, currently excelling in a pinnacle career position as the Associate Dean for Student Affairs at the Uniformed Services University. She has served the MHS as a leader across the full arc of academic roles including Clerkship Director, Program Director, Director of Medical Education, Assistant Dean and now Associate Dean. She is a mentor of many and a true role model for all.

*CAPT Kristina V. Morocco (Navy)*



CAPT Kristina V. Morocco is recognized for sustained clinical leadership culminating in her service as the Navy OBGYN Specialty Leader/Consultant to the Navy Surgeon General and first DHA Women and Infants Clinical Community Chair. A GME educator and women's health care advocate, she improved patient safety and maternal quality assurance programs through tri-service standardization of perinatal care policies and procedural instructions designed to reduce unbeneficial variation and reduce maternal morbidity. Her contributions also included tri-service collaboration on numerous women's health care policies including contraception access and development of a novel multidisciplinary menopause condition based program to address unmet patient needs, improve quality of life, and reduce co-morbidities. She continues community mentorship efforts by establishing Lean In programs for peers and through volunteer work as a Girl Scout troop leader in the local community.

# **Advancement toward High Reliability in Healthcare Awards by Clinical Communities**

## **Leadership Commitment Awards**

### **Optimizing Emergency Department Transfer Decisions Days (Carl R. Darnall Army Medical Center)**

**POC: Dr. Joan Ingram**

**Commander: COL Richard Malish**

In the summer of 2019, an opportunity to improve our medical facility's leakage concern was readily acted upon when leaders noticed the medical treatment facility MTF transfers from our emergency department ED to network care totaled 109 patients in the month of July. A review of the transfers determined that many could have been managed successfully at the MTF. Thirty percent of the transfers were discharged from the network ED, never requiring admission, indicating an overassessment of acuity by MTF providers. Leaders assessed the paradigm of liberal transfers to the network as a problem with potential existential consequence. Such a process undermined the purpose and relevance of an inpatient ward and intensive care unit ICU and deprived the entire healthcare team of opportunities to practice the full spectrum of skills required for deployment readiness. A multidisciplinary team approach to reduce patient transfers was initiated in July of 2019. The goal of the project was to admit patients who could be managed safely at the MTF in order to improve occupancy rate and patient acuity thus directly improving the readiness of all healthcare team members and to improve patient safety by reducing unnecessary transitions of care. After 12 months, the percentage of patients transferred from the ED to the network was reduced. The impact to case mix index CMI and average daily patient load ADPL were also examined. Three high reliability organization HRO principles were key to this project. The first principle is sensitivity to operations. Upon initiation of the project, there were many preconceived notions about why patients were transferred. It became apparent that numerous processes, policies, and biases had to be addressed. Commitment to Resilience is the second key HRO principle. The rationale for transfer was retrospectively compared to the treatment provided by the network. Identified gaps were discussed, and lessons learned were embraced. Lastly, Constancy of Purpose was demonstrated by the entire command team who was actively engaged. Despite setbacks with process changes and sporadic resistance, the team remained focused, never failing to provide the why and offer support.

### **COVID COMBAT OCONUS MTF (U.S. Naval Hospital Rota)**

**POC: CDR David Paz**

**Commander: CAPT Andrew Archila**

Shortly after the COVID epidemic was identified, our small overseas community hospital, committed to ready reliable care, began preparing for worst case scenarios. Within weeks, our host nation recorded the highest daily death rate of any country from COVID. Preoccupied with failure, our Hospital Incident Command System HICS anticipated the risks associated with COVID and initiated a single hospital entry point. HICS deferred to facility and regional public health experts as well as local physician champions to align guidelines with evolving higher authority guidance and host nation policies for screening. Expanding capacity was the team's next objective, yielding a 10-fold increase in the number of negative pressure rooms and creating a new 1-bed physician-led contingency Intensive Care Unit. By mid-February we established robust telework options, issuing

over 45 CAC-enabled laptops, obtaining a 10fold increase in telework connections and establishing multiple teleconference lines. Committed to resilience, a base construction battalion replaced our initial sole entry point pop-up tent, with a climate-controlled rigid shelter. Fostering mutual trust and respect with our patients we established a local COVID nurse advice line and frequent social media Public Affairs announcements to ensure clear patient care communication. With constancy of purpose, our HICS team created and implemented a thorough agenda with checklists and actionable items monitoring personal protective equipment inventory and testing supplies as well as requested support to the host nation and operational units. Initial COVID testing was limited but we persevered through adversity, becoming the first regional hospital to initiate Biofire and COVID antigen testing. Sensitive to operations, our mental health team doubled virtual health appointments to provide needed care. In summary, as an overseas island in the COVID-19 storm, with healthcare services gapped for 3 months, we had no adverse patient outcomes, zero evidence for COVID-19 transmission and 100% force health protection success.

### **Highlighting Quality as a High Priority: Seizing the Opportunities of a Pandemic through Preventive Care and Vulnerable Population Outreach (Carl R. Darnall Army Medical Center)**

**POC: Dr. Joan Ingram**

**Commander: COL Richard Malish**

The coronavirus disease-2019 COVID19 pandemic has strained healthcare systems in ways both varied and numerous: Strain on existing resources, the need to repurpose capabilities, uncertainty among patients, and the suspension of routine care. Our facility, like many, paused routine care during a period of community stay-at-home orders during initial containment efforts. In addition to embracing virtual care, we sought to identify the ways we could best meet our patients' needs during an unprecedented period. We have long committed to value-based quality outcomes in primary care, and therein we identified two opportunities within our altered operations. We sought to safely use suppressed visit demand and low community disease spread to prioritize proven preventive care, and target our highest risk patients. This included Healthcare Effectiveness Data and Information Set HEDIS measures, evidence-based well visits, and outreach for our most vulnerable patients affected by the pandemic. Our objective was to target prevention of "second wave" poor outcomes for those whose preventive and routine care were subverted by infection concerns. Our objective was measured through monitoring of HEDIS action lists in Carepoint and tracking the outcomes of patients contacted by case managers. The objective was achieved through targeted, organized outreach; adaptation of methods to the changing healthcare environment; and close tracking of data by leadership. Guiding HRO principles included preoccupation with failure, constancy of purpose, and reluctance to simplify. Preventive measures were accomplished at an accelerated rate, as over 4,000 cancer screenings were completed in total from April 2020 through mid-July. Outreach to vulnerable patients to date has identified 264 patients who required care coordination with case management and their primary care manager. These efforts have revealed that proactive, targeted outreach to patients can mitigate secondary risks of the current pandemic that may be serious and hidden to both staff and our beneficiaries.

## **Respiratory Clinic Implementation and Continuous Process Improvement at an Overseas Military Treatment Facility (U.S. Naval Hospital Okinawa)**

**POC: LCDR Mitchell Selco**

**Commander: CDR Ray Portier**

Due to the worldwide COVID-19 pandemic, we initiated a respiratory clinic within the existing Family Medicine spaces at an OCONUS Military Treatment Facility MTF. This was developed with three goals in mind: maintain operational readiness, maintain a ready medical force, and protect our ability to care for our patients. As the largest, most capable MTF in the region, we expected large numbers of COVID19 infections which had the potential to overwhelm our system, cause large numbers of hospital staff to become unavailable, and degrade our capability to complete our mission and care for our patients. In anticipation of this, the Family Medicine Department was displaced to an alternative location in order to allow a respiratory clinic with cohorted staff and patients within existing clinical spaces. All respiratory patients were directed to the rear of our hospital and were triaged by an EMT trained corpsmen to the Respiratory Clinic or Emergency Department. The clinic was manned from 0700-2200 with bookable appointments and included a portable X-ray machine and common over the counter OTC meds to prevent cross contamination of the virus to the rest of the hospital. Total number of patients, time seen, and patient origin was examined weekly to facilitate best use of resources allowing us to initially reduce the number of hours the clinic was open with minimal effect on Emergency Department usage and when events changed in our community, to increase the number of providers during peak demand times for the clinic. A respiratory clinic in a resource limited OCONUS facility can be set up to successfully triage and treat patients while protecting the majority of the hospital, maintaining readiness, and protecting our staff and patients. This can be done through Physician-led Clinical Quality Improvements prioritizing resources to achieve better care, better health, cost savings and improved readiness.

### **Culture of Safety Awards**

**“CODE STROKE: Improved radiology turnaround times following modification to radiologist user interface.” (Brooke Army Medical Center)**

**POC: CPT Rutger Gunther**

**Commander: BG Shan Bagby**

The Center for Disease Control CDC reports approximately 800,000 annual strokes in the United States resulting in 140,000 deaths. Stroke is a leading cause of long-term disability, and the American Heart Association Stroke Statistics subcommittee estimates expenditures related to the treatment of stroke cost \$34 billion per year. Early administration of tissue plasminogen activator tPA is critical to decrease the morbidity and mortality of acute stroke. The “Target: Stroke” initiative organized by the American Heart and Stroke Associations provides benchmarks for evaluation and treatment of stroke with a goal door-to-needle time DNT of less than 60 minutes at primary stroke centers. While there are no primary stroke centers within the Department of Defense DoD, we strive to provide the same quality of care. In our pursuit to become a high reliability organization HRO, our preoccupation with failure and sensitivity to operations helped identify an area for improvement which targeted the turnaround time TAT for acquisition and interpretation of CT head examinations, a critical rate-limiting step in the evaluation of acute stroke and component of DNT. Our department of radiology instituted an internal imaging benchmark of a 45-minute TAT and modified the radiologist’s user interface to help distinguish the more time-sensitive “code stroke” CT exams from other STAT studies with the objective of faster TAT. The improvements consisted of a unique exam title embedded with the text “STROKE” highlighted in

red, and a forcing function which enabled quick identification and prioritization. Pre-intervention CT head examinations from October 2018 to November 2019 demonstrated median TAT of 68 minutes. Implementation of user interface modifications from November 2019 to August 2020 was successful in achieving a statistically significant impact with median TAT of 48 minutes. This simple, zero-cost strategy achieved our objective of faster TAT in support of DNT for stroke patients.

### **Reducing Opioid Use in Post-Cesarean Deliveries (Naval Medical Readiness and Training Command Yokosuka)**

**POC: LCDR Jonathan Aukeman**

**Commander: CAPT Carolyn Rice**

Cesarean delivery is the most common inpatient surgical procedure among women in the United States, affecting 1.4 million women annually. The routine use of opioids for post-cesarean pain management has the potential to significantly contribute to the opioid epidemic in the United States. The number of opioid overdose deaths in the United States has more than tripled in the past 15 years. The abundance of prescription opioids available is a primary pathway for opioid abuse and diversion; 93% of those who undergo cesarean section have leftover narcotics.<sup>3,4</sup> 1 in 300 who undergo cesarean delivery become a persistent opioid user.<sup>5</sup> In light of the growing awareness of the association between overprescribing and new persistent opioid use, our facility OCONUS military hospital has committed to decreasing the reliance on opioid prescriptions for post-cesarean pain control. A multidisciplinary task force was formed with the objective of reducing postpartum opioid use prescriptions in patients who had undergone cesarean delivery. After reviewing opioid prescription patterns, the team posited that transitioning to an enhanced recovery after surgery ERAS protocol could significantly reduce postpartum opioid use. The ERAS protocol initiative successfully reduced post-cesarean opioid prescriptions. After adoption of the protocol, the total per patient inpatient opioid prescription dosage decreased by 45%, and opioid discharge prescription dosages decreased by 47.5%. There was no difference in pain scores in the group after adoption of the protocol as compared to the pre-intervention group. We believe that this initiative reinforced a culture of safety by addressing how overuse of opioids could lead to poor patient outcomes and other unforeseen adverse events, including the diversion of the medication. As part of this initiative, we address the High Reliability Organization HRO principles of preoccupation with failure, deference to expertise, and a reluctance to simplify.

### **Provider Recharge Initiative to Decrease Provider Burnout (Spangdahlem Air Base)**

**szPOC: Maj John Pistello**

**Commander: Col Alisha Smith**

Provider burnout is a public health crisis, with 46% of family physicians reporting symptoms. Widespread impacts include lower-quality patient care, higher rates of medical error, and elevated suicide rates among physicians. In May 2019, this Primary Care Behavioral Health PCBH team identified a trend in provider burnout within the Primary Care Flight and developed a novel program “Provider Recharge” to address this crisis. PCBH presented this concern and proposed solution to the Mental Health Flight CC, MDOS CC, and SGH, who all supported implementation of the Provider Recharge Initiative. Utilizing the HRO Guiding principle, Constancy of Purpose, PCBH persisted through adversity towards a common goal: reducing provider burnout by implementing an initiative aimed towards teaching skills and building team cohesion and trust. This six-month intervention involved one, 1-2 hour class per month. Class content included discussion of resiliency skills and Yoga Nidra. Pre- and post-qualitative interviews and quantitative self-report measures of well-being and provider burnout were administered. Participants also completed a feedback survey

following each session to test the interventions' effectiveness. Data was analyzed and presented to the primary care team and flight/squadron leadership. Summary: When comparing quantitative data pre- and post-intervention, there was a 12% increase in compassion satisfaction, a 23% decrease in burnout, an 11% decrease in secondary trauma stress, and an improvement in overall behavioral health. Qualitative interview data supports a significant improvement in team morale, cohesion, and communication. Limitations of this project include impact to implementation and possible data contamination from the COVID-19 pandemic. In addition, results were not gathered under strictly controlled conditions. Future directions include dissemination to other flights/military treatment facilities MTFs to target provider burnout in the military, thus improving clinician resilience, retention, productivity, and patient safety and satisfaction.

### **Creating Patient Safety Team Leaders through a Simulation-Based Interprofessional Root Cause Analysis (RCA) Course (Brooke Army Medical Center)**

**POC: Lt Col Renee Matos**

**Commander: BG Shan Bagby**

Background: Medical errors impact healthcare safety, quality, cost, and clinician well-being. Root cause analyses RCAs are a widely-used tool for patient safety events; however, team members may lack confidence and knowledge about the process. Objectives: To improve healthcare team members' knowledge and confidence regarding RCAs; to improve RCA strength of corrective action plans CAPs. Methods: A flipped classroom was used. 165 participants from 48 disciplines completed 5 hours of precourse content and surveys to assess baseline RCA knowledge, experience, and confidence. Course elements included: didactics and a facilitator-led simulated RCA with small groups including mock interviews and development of causal factors and CAPs. Pre- and post-surveys were compared. Statistical significance was evaluated for matched pairs and between groups using Wilcoxon Signed Rank Test. Strength of CAPs using VA Action Hierarchy were compared from all RCAs conducted in the 24 months preceding the initial course and in the 9 months following. Results: 164 of 165 surveys were completed. 56% of participants had no prior RCA experience; 86% had no prior training. Following the course, confidence in participating in an RCA, interviewing for an RCA, and leading an RCA improved from 45% to 98% p0.0001, 68% to 97% p0.0001, and 17% to 81% p0.0001 respectively. 62 of 70 89% participants from the first course completed a 9 month follow-up survey with persistent results. Post course, 14 institutional RCAs occurred with 57% 8 of 14 including a course graduate team member and the number of intermediate or strong corrective action plans increased from 56% to 68%, p0.1193. Conclusions: This interprofessional course created RCA-trained leaders, leading to improved confidence in RCA participation and leadership, with a trend toward improved quality of institutional CAPs. Sustainment and spread of the initiative presents an opportunity to increase knowledgeable RCA participants across the DHA and improve patient safety through adoption of high-quality CAPs.

### **The Impact of Risk and Safety Awareness in Reducing the Risk of Sharps Injuries and the Exposure to Bloodborne Pathogens during the Sterilization Process (Naval Medical Readiness and Training Unit Sasebo)**

**POC: HM1 Eduardo Bello**

**Commander: CDR Kyle Dohm**

Needle sticks and other sharp injuries are a severe problem in the health care industry. According to the Center for Disease Control and Prevention, approximately 385K needle sticks and other sharps-related injuries are reported every year by health care workers. The primary hazard associated with sharps injuries is the occupational exposure and the associated infection of HBV, HCV, HIV, and at least 20 other pathogens. The objective of this project was to reduce the risk of sharps injuries and the associated risk of exposure to bloodborne pathogens during the sterilization

process. This process improvement project was designed as part of our organization's culture of safety and commitment to provide a safe working environment for all of our members. Our team used the implementation principles of the Plan-Do-Check-Act concept to guide our analysis, decision making, and implementation. The objective was to decrease the risk of exposure to bloodborne pathogens by implementing a set of interventions to control the hazard. These interventions were designed to increase the risk of awareness, in-person communication, training, and a 6 x 2 laminated self-checklist, posted directly on the lids of the sterilization transport containers. As an assessment tool, we analyzed the number of instruments processed by the Sterilization and Processing Department SPD and its associated report of near-misses for 12 months. Since the intervention was in place for only ten months at the time of this report, we decided to only include ten months of the previous year to control for workload discrepancies. The risk assessment ten months prior to the intervention revealed that the department sterilized 19,816 instruments n19, 816, and recorded 71 unsafe events near-misses e 71, which correspond to 0.36 percent. After the intervention, the analysis revealed an improvement of 47 percent reduction in reported near-miss events from an n15, 534 with an e 29.

### **Develop MICC RN Perioperative Training Plan (Naval Medical Readiness and Training Command Okinawa)**

**POC: LT Mark Boyd**

**Commander: CAPT David Krulak**

No formal perioperative training is provided to Mother Infant Care Center MICC registered nurses who undertake circulating duties for over 200 cesarean section procedures performed annually. To devise and implement a formal MICC RN perioperative training program in accordance with Association of Perioperative Registered Nurses AORN standards for 25 registered nurses 100% on the MICC. HRO Principle: Deference to Expertise. Increased work flow, efficiency, and patient safety during cesarean section operative procedures on the MICC. Less frustration experienced by OB/GYN surgeons and Anesthesia providers during cesarean section procedures. Increased confidence/Less anxiety experienced by MICC nurses. To increase unit/command readiness. Decreased number of Patient Safety Reports PSRs on the MICC. Operational Definition: # of MICC nurses who have completed the MICC RN perioperative training program divided by total # of MICC nurses. Baseline: 0% - Intervention Goal: 100%. Primary Metric: Percentage % of MICC nurses who have completed the formal MICC RN perioperative training program. Secondary Metrics: Measure MICC nurse comfort, confidence, and anxiety levels; Measure surgeon confidence and frustration levels; Measure patient safety on the MICC pre and post intervention. Successful implementation of a formal perioperative training plan in accordance with AORN standards for all MICC nurses who perform circulating duties in the operating room for cesarean section procedures. Achieved a remarkable 100% success rate as all 25 nurses on the MICC completed the new training process. Conclusion: The training program has been a tremendous success, received a perfect score see Attachment 1 from NAVMED review for Lean Six Sigma Green Belt project submission, and currently there is a team led by 1920 Labor & Delivery and 1950 Perioperative nursing personnel to implement the program across all Navy/DHA medical treatment facilities. HRO Principle: Constancy of Purpose.

### **Culture of Safety (Vance Air Force Base Clinic)**

**POC: Ms. Stacy Nance**

**Commander: Col Lidia Ilcus**

The medical treatment facility experienced its last DoD-reportable event in 2015. This incident involved a delay of diagnosis nearly 24 months from patient encounter with abnormal lab, to eventual discovery of the medical condition and close out of reporting 2015-2017. Root cause

analysis revealed that the safety incident was the result of the following: missed opportunities to communicate amongst the healthcare team, assumptions that the active duty patient was “healthy,” expectation that others had addressed the lab and vital sign abnormalities and a breakdown of implementation of established norms that should have caught and addressed the clinical condition and, thereby, reduced harm. This incident highlighted an organizational culture that required process improvement in the High Reliability Organization HRO guiding principles of, “preoccupation with failure,” and “sensitivity to operations,” in order to course correct and resume the journey to High Reliability and zero harm. To this end, a change/initiative was required in the domain of, “Culture of Safety.” The objectives of the Culture of Safety primary care 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 by constancy of purpose and critical thinking as required by the principles of 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, and organizational awareness of HRO principles through institution-wide application of tools such as safety huddles, incorporation of HRO language, and safety moments/kudos. In summary, through intentional and concerted effort, it has been 1,845 days since the last DoD Reportable event, Patient Safety Reports PSRs have increased by 2,772 percent, and the tell-tale signs of a cross-clinic growing culture of safety are visible throughout the medical facility.

### **Continuous Process Improvement**

#### **DMH Readiness Clinic (Naval Medical Center Portsmouth)**

**POC: Mr. Johnny Johnson**

**Commander: CAPT Lisa Mulligan**

Demand for mental health MH services far exceeded the availability of specialty MH appointments, resulting in the inability to meet Defense Health Agency DHA access standards. The MH Readiness Clinic is a local innovation designed to improve active duty access to MH care and to increase force readiness through reduction in unnecessary utilization of care. It addresses the High Reliability Organization principles of sensitivity to operations, constancy of purpose, preoccupation with failure, commitment to resilience, and respect for persons. Utilizing a standardized screening and referral process, the MH Readiness Clinic was deployed by a provider-led team to assess active duty AD patient clinical and fitness for duty needs. It also coordinated case management services. AD access to care was measured by 3rd Next Available SPEC and Active Duty Days to Specialty Care. Appointment outcomes were tracked weekly via the electronic medical record EMR; i.e., The MH Readiness Clinic prevented the unnecessary utilization of 1,578 full mental health evaluations at the Military Treatment Facility MTF from May 2019 to June 2020, with reductions in 3rd Next Available SPEC 57% and Days to Specialty Care 74%. The standardized process has been successfully disseminated and replicated. The MH Readiness Clinic has increased access to care while prioritizing readiness. This project precipitated a continuous process improvement culture and advanced the model of a learning organization. The project has demonstrated replicability and sustainability for implementation at any MTF or embedded mental health clinic where active duty demand exceeds supply for psychotherapy and medication management services and a robust off base network exists. This project aligns with the MH screening priority of the Behavioral Health Clinical Community.

## **Implementation and Evaluation of 2-Step Testing Algorithm for Clostridioides difficile Infection (Brooke Army Medical Center)**

**POC: CPT Caitlin Bettger**

**Commander: BG Shan Bagby**

Polymerase chain reaction PCR detection of Clostridioides difficile cannot distinguish between infection CDI and colonization. In 2018, the Infectious Disease Society of America recommended a two-step testing algorithm for the diagnosis of CDI if stool sample submission criteria could not be enforced. In these situations, PCR+ samples should be followed by toxin enzyme immunoassay EIA. Discordant test results raise suspicion for colonization and not CDI. Our Antimicrobial Stewardship Program aimed to reduce inappropriate diagnosis and treatment of CDI through implementation of a two-step algorithm in August 2018. We assessed treatment and patient outcomes as part of continuous process improvement. All patients with PCR+ samples were evaluated from August 2018-September 2019. Demographic, laboratory, treatment, and outcome data were collected. Cases were grouped based on concordant PCR+/EIA+ or discordant PCR+/EIA- results. A subgroup analysis of discordant cases were compared by treatment status. Groups were compared by Chi-squared, Fisher's exact, or Mann-Whitney U tests. A total of 216 PCR+ tests were recorded; 71.8% were discordant. Concordant cases were more frequently treated for CDI 95.1% vs 66.5%, p0.01, had severe CDI 33.8% vs 18.7%, p0.05, and had higher 30 day readmission for CDI 8% vs 1.3%, p0.02. There was no difference in demographics, laboratory data, CDI risk factors, or outcomes for treated compared to untreated discordant cases. Notably, a high proportion of discordant cases received treatment even when Infectious Disease 73.9% or Gastroenterology 61.1% were consulted. A two-step CDI diagnosis strategy reduced antibiotic treatment by nearly 30% in discordant cases without increases in readmission or mortality. Estimated savings from antibiotic reduction was \$18,443.15. This low-cost intervention may be safely replicated at smaller facilities, particularly those without Infectious Disease physician or pharmacist support.

## **Reducing Repetitive Inpatient Phlebotomy by Adjusting Admission Order Set (Brooke Army Medical Center)**

**POC: CPT Crystal Forman**

**Commander: BG Shan Bagby**

Repetitive laboratory testing sometimes reflects a wasteful clinical practice which threatens the value of health care. Excessive phlebotomy can lead to hospital acquired anemia, increased costs, and unnecessary downstream testing and procedures. Reducing daily laboratory testing has the potential to reduce adverse patient side effects and reduce overall hospital expenditures. In alignment with the Society of Hospital Medicine's Choosing Wisely initiative, we aimed to reduce unnecessary Complete Blood Counts CBC and Renal Function Panels RFPs in patients admitted to the Internal Medicine service. We compared the number of RFPs and CBCs ordered for patients admitted to the Internal Medicine service pre and post intervention and subsequently changed the Internal Medicine admission order set from having the option to choose CBC and RFP qAM to qAM x2, thus requiring providers to consider the utility of these labs beyond the second day of hospital admission. A simple adjustment in our admission order set reduced unnecessary utilization of care in the form of repetitive laboratory testing obtained by 17.6% during the first 8 months after the intervention was executed compared to the 8 months prior. There have been no adverse outcomes reported to date. A meta-analysis published by Eaton et al. in 2017 demonstrated significant cost savings by other institutions who implemented changes to reduce repetitive phlebotomy without increase in adverse patient outcomes measured over a 3 year period. While it is difficult to assess change in morbidity and mortality from our system change, this effort reflects best practices as the standard of care mandates direct indication for ordering of each laboratory test for inpatient

medical treatment. Our intervention resulted in savings of over \$100,000 in an 8 month period, which projects to greater than \$160,000 in annual savings.

### **Implementation of a Code Sepsis Protocol in a Military Treatment Facility Emergency Department (Naval Medical Center San Diego)**

**POC: LCDR Felipe Grimaldo**

**Commander: CAPT Bradford Smith**

The Surviving Sepsis Campaign SSC created guidelines to improve the quality of care patients receive when being treated for sepsis. The Hour-1 bundle was a set of guidelines, released by the SSC that recommended clinicians act as quickly as possible to administer broad spectrum antibiotics, obtain blood cultures, start appropriate fluid resuscitation, measure lactate and begin vasopressors if clinically indicated. Ideally, these interventions would begin within the first hour of sepsis recognition. The Emergency Department ED treats a significant number of patients with sepsis. Therefore, an initiative was undertaken with the objective of improving adherence to the Hour-1 bundle metrics recommended by the SSC. In order to achieve the objective, a "Code Sepsis" Protocol was created and utilized in the ED. Code Sepsis was triggered on patients with a National Early Warning Score NEWS greater than or equal to 2. Once activated, the patient was immediately placed in a room and evaluated by a board-certified emergency medicine physician. The physician would then decide if the Hour-1 bundle should be initiated. If the bundle was initiated, times for each metric were recorded by the nurse. Code Sepsis was a new process that relied on the clinical staff of the ED to impact outcomes in patients with sepsis. Therefore, this initiative best aligns with the Sensitivity to Operations High Reliability Organization HRO principle. Five months after the initiative began, compliance with all of the metrics of the Hour-1 bundle had improved. Most importantly, compliance with antibiotic administration within one hour of sepsis recognition improved to 100% after implementation. Implementing Code Sepsis in the ED was an innovative solution that led to increased adherence to leading practices in sepsis care

### **Resource Allocation to Improve Operational Dental Readiness (Naval Medical Readiness and Training Command Portsmouth)**

**POC: LT Diana Cole**

**Commander: CAPT Lisa Mulligan**

In 2018, the Military Treatment Facility MTF and Dental Branch Clinics DBCs noted a stagnant trend in Operational Dental Readiness ODR with an average of approximately 89% and 1805 Class 3 Dental Patients. A Class 3 Dental Patient is expected to have a dental emergency in the next 12 months if left untreated. In commitment to Continued Process Improvement CPI towards the benchmark of 95% ODR, an innovative proposal to reduce the number of Class 3 Dental patients was initiated. To improve ODR by 2% by reducing the number of Class 3 patients by 20%. High Reliability Organization HRO Principles: A reluctance to simplify and sensitivity to operations facilitated staff understanding of the daily complexities as well as how to address root causes of shortcomings. This ultimately reduced unnecessary utilization of care via standardization of operations that enabled conversion of no-show appointments, optimization of templates, and matching of supply with demand in order to decrease private sector care utilization. Utilized 8-Step A3 Practical Problem Solving PPS to support this CPI. Actionable countermeasures were created and implemented to address the root causes identified by the clinical staff to ensure Ready Reliable Care. An accountability board was created for attentiveness to our commitments during team huddles. Results: From March 2018 through February 2020, there was a 36% decrease in Class 3 Dental Patients and a 4.5% increase in ODR. This CPI project produced results that doubled the initial ODR improvement goal while decreasing appointment failures via optimization of templates that increased access to care. The sustainability and reproducibility impact of this CPI project was

proven after implementation at other DBCs. Specifically, a decrease in Class 3 Patient totals by 40-60% and an increase in ODR by 4.5-6.0%, the latter exceeding the benchmark by 2%. Other 2020 Submissions

### **Active Duty Days to Specialty Care Cycle Time Reduction (U.S. Naval Hospital Guantanamo Bay)**

**POC: LCDR Eugene Smith, Jr.**

**Commander: CAPT Dale Ramirez**

Between September 2018 and March 2019, Active Duty AD Days to Specialty Care, the time a specialty consult is placed in CHCS by the provider to the actual Specialty Care provider appointment date, averaged 12.5 days per month. Excessive time to receive specialty care increases patient risk and overall patient dissatisfaction, while delaying the war fighter's return to full mission medical readiness. Increase the speed of care and recovery for AD personnel by reducing AD Days to Specialty Care Cycle Time from 12.5 days to less than 10 ≤ days. Optimize and standardize access to care processes, enabling a culture of high reliability. Institute compliance with Congressional guidance that beneficiaries be offered an appointment within 28 calendar days and DHA IPM 18-001 Right of First Refusal guidance. Developed standardized booking protocols and restructured all clinics to include a self-referral feature. Developed Future Referral Tracker and Referral Archiving template. Developed AHLTA Tasker template and training program for clinicians. PERFORMANCE MEASURE - This project focused on both reducing the cycle time average days as well as process variation as depicted in DEFECT Rates, where a DEFECT is a cycle time sample of 10 days. Summary of the quantitative information supporting the result: As a result of accurate root cause analysis and targeted improvement strategies, the Cycle Time DEFECT Rate was reduced by 51% TARGET 50% from a baseline of 98.56% to 48.13% with a similar reduction in average cycle time from 12.5 to 9.9 days within TARGET. The task of building a sustainable system that reduces AD Days to Specialty Care Cycle time was achieved resulting in improvements to Health Care Delivery and Command Readiness.

### **Cardiology Reduction in Lead Cycle (Naval Hospital Pensacola)**

**POC: Mr. Steven Turner**

**Commander: CAPT David Webster**

In 2018, our military treatment facility MTF no longer staffed an in-resident cardiologist. Subsequently, patient data from cardiac monitoring devices were referred to a geographically separated medical facility for interpretation by their resident cardiologist. Unfortunately, this led to an average cycle time of 61 days for the primary care manager PCM to receive results, confirmed by in-house data collected from October 2018 to February 2019. This cycle time was deemed unacceptable in providing timely cardiovascular care for our patients. Therefore, our MTF implemented improvements across a continuum of care initiative to reduce cycle time. A continuous process improvement CPI team of subject matter experts analyzed factors contributing to the delay in cardiac monitor results taking an extended amount of time before received by the patient's PCM. The goal of the project was to reduce the average cycle time of 61 days, from the patient's first encounter with the cardiology clinic staff at the MTF to the PCM receiving cardiac monitor results, to an average of 6 days. The CPI team monitored several measures related to time along the cardiac process cycle, and used the data collected to standardize the patient interface with monitoring equipment. Cardiology staff who were knowledgeable on cardiac equipment and testing procedures collaborated with the CPI team to create a standard operating procedure SOP. The CPI project achieved a 46% reduction in cycle time for cardiac monitoring test results, with an average 28-day reduction in turnaround time per cardiac monitoring test. This greatly enhanced the ability

of the MTF to achieve quality patient care that ultimately led to less down time of our military families and a robust readiness force.

### **The Babygram: Reducing Unnecessary Radiation Exposure in the Neonatal Intensive Care Unit (NICU) (Brooke Army Medical Center)**

**POC: LCDR Melissa Garcia**

**Commander: BG Shan Bagby**

In 2011, the New York Times published an article entitled, “The Radiation Boom: X-rays in unshielded infants.” This outlined the concerning practice of obtaining “babygrams” or whole body x-rays of infants, a common occurrence in neonatal intensive care units NICUs. The unit of interest, SUNY Downstate Medical Center, then undertook a successful process improvement project to reduce unnecessary radiation exposure in infants. Despite improvements elsewhere, in 2018 the “babygram” image remained a common occurrence in our NICU with nearly 80% of our x-ray images including both the full chest and abdomen. Our objective was to decrease unnecessary radiation exposure for neonates in the NICU. We determined appropriate surrogate measures of improvement to be: number of chest x-rays that include male gonads, percentage of images where order and imaging obtained match, and percentage of images with appropriate indication provided. The percentage of chest x-rays including male gonads decreased from 50% to 0% p0.001. Correct image obtained increased from a nadir of 36% to 100%. Specific indication for imaging increased from 46% to 93% p0.0072. Although not a primary outcome, frequency of “babygrams” did decrease from 81% to 20% p0.001. With the HRO principles in mind, specifically commitment to resilience and constancy of purpose, our ultimate goal is to continue to improve NICU imaging and expand this process to other sites within the MTF that image neonates. Ultimately, this is a process that has potential to be implemented across the DOD. We are inquiring into collecting a secondary metric of the potential cost-savings.

### **Patient Centeredness Awards**

#### **Alternative Immunization Clinics to Improve Vaccination Access during the COVID-19 Pandemic (Walter Reed National Military Medical Center)**

**POC: MAJ Elizabeth Simmons**

**Commander: COL Jeremy Edwards**

The United States declared a national emergency on March 13, 2020, in response to the rapidly spreading COVID-19 pandemic after all 50 states reported laboratory-confirmed cases 1. The demand for ambulatory medical care in the US fell by almost 60 percent and our facility’s immunization encounters decreased by 76 percent as patients became concerned about the risk of coronavirus exposure within a clinic or hospital setting 2. Our vaccination initiatives aimed to increase our immunization rates through offering two alternative immunization platforms aimed to reduce patient concerns about COVID exposure. It also encompasses the High Reliability Organization principle of preoccupation with failure through anticipating risk and finding a solution under the domain of patient centeredness. Our facility implemented seven weeks of alternative vaccination access through an After Hours Immunization Clinic which transitioned to a Drive Up Immunization Clinic. Almost 600 patients received immunizations at these clinics and improved our overall vaccination status from a low 23% of 2019 baseline immunization clinic encounters in early April 2020 to 78% at closure in June. The number of encounters served as a surrogate marker for vaccination rates. The alternative immunization clinic could serve as a model to facilitate future vaccinations during the continued COVID-19 pandemic, annual influenza vaccine drives, or other future biological crises.

## **Implementation of Virtual Behavioral Health Programming for Patients to Maximize Delivery of Services During Times in Which Individualized In Person or Group Settings Are Not an Option (Brooke Army Medical Center)**

**POC: Capt Lauren MacCoy**

**Commander: BG Shan Bagby**

Due to COVID-19, delivery of services for behavioral health programming were changed drastically as all services were delivered in a group setting and in person. Therefore, it was necessary that we develop a plan to reestablish delivery of services equally, while addressing increased challenges, as our patient population is unable to wear PPE as recommended by current CDC guidelines, due to potential safety risks. Patients will be provided a tablet downloaded with specific applications to facilitate group programming.

Applications utilized will be VA Video Connect for all facilitated groups delivered through staff, while Yoga, Home Workouts, Movies Anywhere will be delivered through an application monitored by staff. Upon completion of each group, patients will be encouraged to complete a survey. Data will be collected daily and monitored monthly for trends on which groups have the most impact of increasing patient knowledge, while reducing behavioral health symptoms.

In summary, virtual group programming increased patient knowledge, while reducing behavioral health symptoms. The combined group survey average for knowledge level increased from 5.4 to 7.7 with a  $p < 0.01$ , while 97% of patients stated this increase in knowledge reduced their behavioral health symptoms. As a result, this data helped to validate the significance virtual programming can have in the delivery of services. In conclusion, research has demonstrated support for the use of technology-based approaches to learning when face to face interactions are not available.

Furthermore, our own data suggests and supports how virtual programming can increase patient knowledge, while at the same time, reduce behavioral health symptoms.

## **Emergency Department Adaptations to COVID-19 (Carl R. Darnall Army Medical Center)**

**POC: Dr. Joan Ingram**

**Commander: COL Richard Malish**

The COVID-19 pandemic creates unique challenges for healthcare systems. While mass casualty protocols and plans exist for trauma-induced large-scale resource utilization events, contagious infectious disease mass casualty events do not have such rigorous procedures established. COVID-19 forced our Emergency Department ED to simultaneously treat seriously ill patients and evaluate large influxes of mildly ill or asymptomatic but concerned beneficiaries—while maintaining both staff and patient safety. The objectives of this project are to create an avenue to evaluate large surges of patients while minimizing hospital-acquired infections. We accomplished this by addressing the principles of 'Preoccupation with Failure' and 'Sensitivity to Operations.' After identifying areas for improvement and anticipating potential failures, we devised six healthcare delivery innovations to address those areas and meet our objectives: 1 Parallel ED Lanes, 2 Universal Respiratory Precautions, 3 Respiratory Drive Through RDT, 4 Medical Company, 5 Provider Triage, and 6 ED Quarterback Patient Liaison EDQB. To date, no staff or patients have contracted COVID-19 within the Emergency Department footprint. Our RDT has seen 16,994 patients and the medical company 1,109. Provider triage has redirected 465 patients, while our EDQB has interacted with 532 and redirected 93 patients for same-day appointments with their PCM. The system of care established at our MTF has been effective in maximizing staff and patient safety, while providing a new patient-centered healthcare delivery apparatus.

## **Increasing Access to Care and Minimizing Patient Wait Time to Enhance Healthcare Efficiency and Improve Patient Satisfaction (Naval Branch Health Clinic Everett)**

**POC: LT Courtney Rafferty**

**Commander: LCDR Andrew Rutledge**

The Optometry clinic was experiencing lengthy patient wait times for routine eye exams, trending upwards of 30 minutes spent in the waiting room prior to the patient being called back into the doctor's examination room. Currently, the average patient wait time across specialties is 18.22 minutes, and studies have shown long wait times are correlated with lower patient satisfaction scores. 1 Additionally, the access to care as defined by the third next available appointment for Optometry was at 43 calendar days as of 01 DEC 19. The TRICARE standard for access to care for Optometry/SPEC appointments is 28 calendar days. Increasingly limited staff, equipment and resources at the clinic are contributing to increased wait time and limiting appointment availability. Additionally, due to the strict and rigid templating in MHS Genesis, all patients, regardless of their appointment type needs, were being booked into slots for Routine Eye Exams REE. Understanding that ultimately patient wait times and access to care are two of the most significant components of overall patient satisfaction rates in healthcare and striving to improve the patient's experience is at the heart of patient-centeredness in a high-reliability organization. In the past six months, the Optometry clinic used Lean Six Sigma techniques to reduce the patient wait time by 87% and increase access to care by 51.4%, resulting in increased patient satisfaction as measured by positive ICE comments and a cost-savings of \$24,192, as well as projected patient wait time savings of 994 hours annually. Using Lean Six Sigma techniques to promote patient centeredness in healthcare can ultimately improve overall patient care, enhance patient and staff satisfaction, and increase clinic revenues with increased efficiency and delivery of care.

## **Special Care Referral to Book (U.S. Naval Hospital Guantanamo Bay)**

**POC: LCDR Eugene Smith, Jr**

**Commander: CAPT Dale Ramirez**

The DHA Performance Metric, Specialty Care Referral to Book, measures the time between when a specialty consult is placed in CHCS by the provider and the resulting specialty booking date is placed in CHCS. With the Target being 3 days or less and anything greater than 3 days is considered a process DEFECT, the monthly cycle time average July 2018 - January 2019 was 5.69 days with a corresponding 96.57% monthly average DEFECT Rate. Excessive referral to book cycle time and DEFECT Rates increases patient risk and overall patient dissatisfaction, while delaying speed of care/recovery for beneficiaries. The goal of this project was to increase the speed of care and recovery for beneficiaries, and standardize access to care processes, and institute and ensure compliance with DHA IPM 18-001. To achieve these objectives, we developed standardized booking protocols and restructured all clinics. The team reengineered the Primary Care Clinic check out sheet, instituted requirements for compliance with 24 hour Right of First Refusal guidance. As a result of accurate root cause analysis and targeted improvement strategies, Cycle Time DEFECT Rate was reduced from 96.57% to 35.45% - 63.74% reduction. The average cycle time was reduced from 5.69 days to 3.78 days - 33.57% reduction.