Clinical Effectiveness

CLINICAL EFFECTIVENESS NEWSLETTER

Welcome to the first issue of the Advocate Clinical Effectiveness Newsletter. This bi-monthly offering will keep you informed about the current and future Clinical Effectiveness (CE) projects being developed and implemented across the system. The mission of the Clinical Effectiveness team is to continuously improve the standard of care across the Advocate system, evidence-supported and achieved through best practices. The scope of our work is to achieve value through decreased variation in physician-driven practice, with safety, quality, and cost-effective care as the key drivers of each Clinical Effectiveness project.

Value = High Quality Health Outcomes + Service Excellence + Patient Satisfaction relative to Cost to Deliver Care

As Clinical Effectiveness projects have evolved, we have looked to our physician, nursing and other multidisciplinary care providers to serve as champions and to provide clinical expertise. We have used several tools and tactics to help in the communication and execution of our projects, including: education through CBTs, grand rounds, physician to physician dialogue, the use of electronic media, and use of thought leaders. Communication for our projects includes multiple touch points to ensure the effective delivery of our message. Education and training is followed up by feedback and tracking of metrics to guide performance and address outliers through corrective action, if warranted. Where available, we utilize existing processes to improve performance, including the use of formularies, supply chain restrictions, electronic decision making tools, hard stops, and powerplans to help drive change, facilitate consistency and hard-wire best practice. Additionally, a few of our projects feed into the Clinical Integration program, so that key measures can be used to incentivize APP physicians to follow value-added behaviors.

We are getting better at developing ideas and executing on many critically important initiatives at the site and system level. Our success to date is a direct result of your valued partnership, active engagement, and support. This shared experience and collaboration is helping to shift the Advocate culture as an organization on the journey to best practice and population health management. Thank you!

Debra O'Connor, DO
VP of clinical effectiveness



SEPSIS: An often missed and preventable cause of in-patient death

Sepsis is subtle, deadly, and easy to miss. It is a leading cause of mortality and morbidity at Advocate and across the United States. Both mortality and stewardship are negatively impacted when delays occur in recognizing sepsis syndrome and/or in intervention response times. This can allow progression to the more serious diagnosis of septic shock. Prevention of deadly consequences requires organizing the care team into a posture of:

- Front-line, direct care provider intervention and process design
- Preoccupation with failure: "Is this patient deteriorating?"
- Creating organizational structures to allow experimentation in getting the science to the bedside
- Commitment to measurement

It is the goal of the sepsis initiative to decrease septic shock mortality by 50% in 2017 and to leverage high-reliability principles in our mobilization plan. Administration at Advocate realized that clinical expertise was needed to get the job done, so they chartered the Clinical Effectiveness Sepsis Steering Committee and gave authority for all decision-making and process improvements.

We've had a number of great site experiments:

- Simulation drills for first responders
- Commitment to an 'every patient every shift' screening program by nursing
- Development of hand-off tools and methods
- Redesign of EMR tools by 'first-responder' groups
- Development of nurse-driven protocols to escalate care in 'at risk' patients
- Leveraging our eICU to extend care to the bedside

SEPSIS TASK FORCE: Initiatives Update

- ED Sepsis Powerplan go-live: October 2016
- ED Sepsis Task Force Electronic Orders go-live: October 2016
- Lactic Acid 'Auto-Orders' in design phase (improves early diagnosis)
- Evaluation of RN-driven protocols (in progress)
- Simulation Training available for front-line staff (favorable results at Trinity)
- Simulation Training implementation at CMC for high-risk units
- Site experiment with Simulation Training for first responders (to be leveraged as a system standard)
- Pediatric screening and sepsis protocols with targeted completion by January 2017
- Implementation of Gabby's Law across Advocate 2017

GABBY'S LAW: From Sepsis Safety Event to Public Policy

Gabriela Galbo, age 5, died from septic shock on May 11, 2012 after her sepsis went undiagnosed for approximately 5 days after presenting to Carle Foundation Hospital in Illinois. On August 18, 2016, Governor Bruce Rauner signed Gabby's Law into effect across all Illinois Hospitals. Along with New York State, Illinois is one of the first states in the nation to put mandates into effect that require hospitals to adopt and implement:

- Sepsis screening protocols for adults and children
- Identification of the severity of the sepsis syndrome: Sepsis, Severe Sepsis or Septic Shock
- Appropriate treatment for patients suffering from the condition
- Updated protocols and staff training at intervals to ensure staff are prepared to identify and save these patients

Additionally, hospitals are required to collect and act on clinical quality and outcomes data for the patient care rendered. Hospitals are also required to periodically train first responder staff on how to implement sepsis protocols. On hand to observe the bill signed into law, Tony Galbo, Gabby's father observed: "It's going to save seniors. It's going to save children, which is most important. It's going to save you." said Tony Galbo. "Sepsis does not discriminate."

Advocate's system Clinical Effectiveness Sepsis Committee, led by Dr. Michael Ries and Sharon Otten, RN, will be partnering with the Advocate Children's Hospital team, led by Dr. Larry Roy, to ensure Advocate's sepsis care practices are evidence-supported and implemented across the system, and that we are compliant with Gabby's law.

Questions? Contact: Beth Halperin, RN, Mgr. Transfusion Safety and Clinical Consultant, Clinical Effectiveness: beth.halperin@advocatehealth.com

LAB UPDATE

The system Clinical Effectiveness Lab Initiative, led by Dr. Leo Kelly (ALGH), Dr. Larry Roy (ACH) and Dr. Imad Almanaseer (ACL) has been working to decrease waste and improve the effectiveness of how laboratory studies are used in patient care. To date, four task forces have developed tactics to improve lab testing in the following key areas:

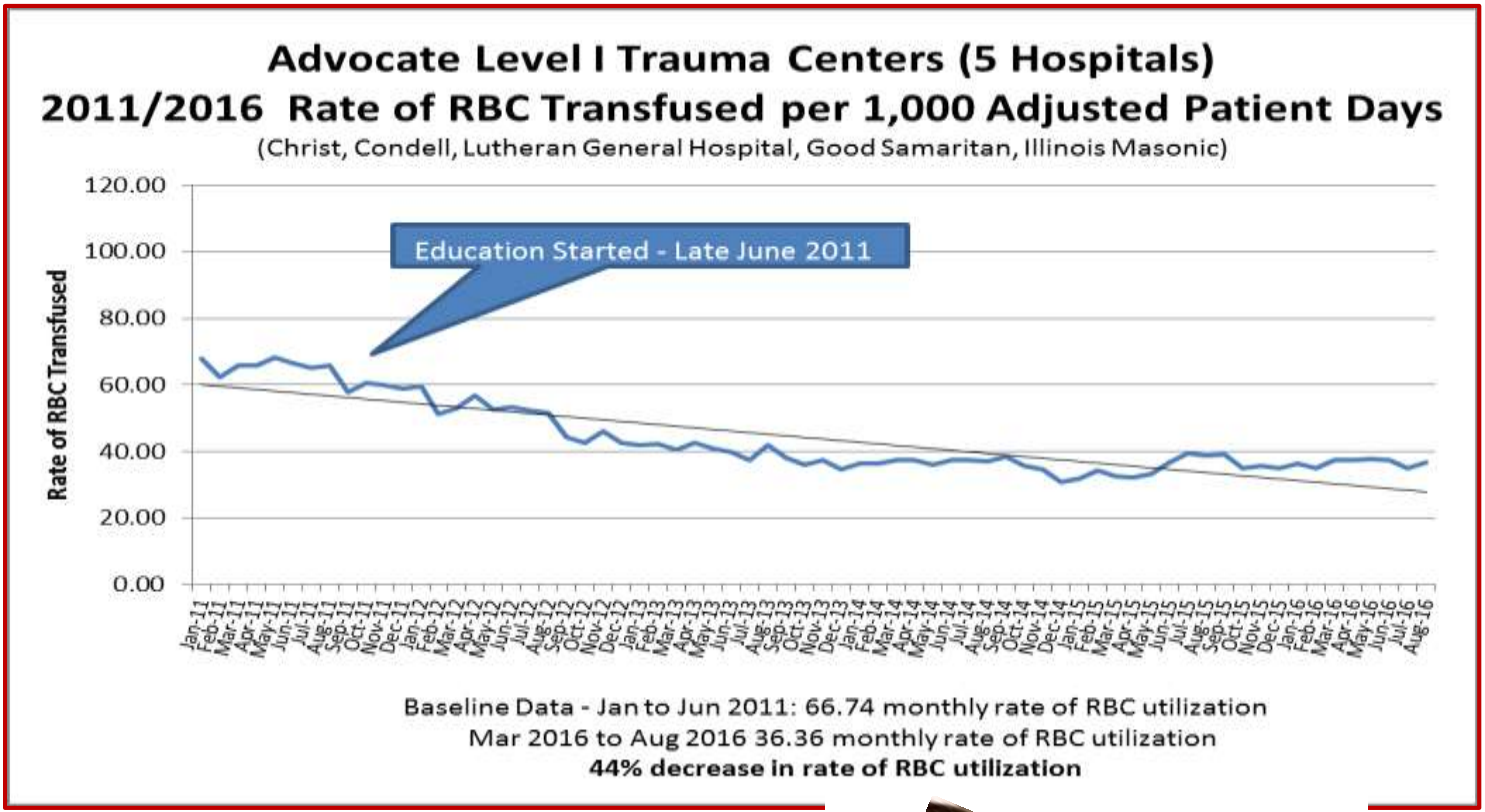
- Repeat and Daily Testing of commonly used tests (outside of physiologic windows)
- Genetic Testing for adults and pediatrics (started with Factor V Leiden/APC Resistance Swap)
- Pre-operative/Pre-admission Testing (standardized pre-op labs, H&P to guide other clinical needs)
- Obsolete or Limited Utility Testing (Education then removal of obsolete tests from formulary)

Results to date show significant success in improving use of tests in a clinically effective way. Next on the horizon will be expansion of the lessons learned into the outpatient care arena.

Questions? Contact: Beth Halperin, RN, Mgr. Transfusion Safety, and Clinical Consultant, Clinical Effectiveness: beth.halperin@advocatehealth.com

TRANSFUSION SAFETY

RBC use has stabilized at both Level I and Level II sites.



New projects:

- Massive Transfusion Audit program
- Adult and pediatric guidelines review and re-introduction
- New RN education – on line, New MD education coming in 2017

Questions? Contact: Beth Halperin, RN, Mgr. Transfusion Safety and Clinical Consultant, Clinical Effectiveness: beth.halperin@advocatehealth.com

CE and PHARMACY INITIATIVES:

IV Acetaminophen

Evidence-supported guidelines for appropriate use are in place and are being followed consistently across the system. Our partnership with Pharmacy Directors has been invaluable. Total savings on this initiative since starting in 2015 are $961K with more than $1 Million in cost avoidance as well.

Other Pharmacy Initiatives

- Use of Exparel
- VTE Prophylaxis

POLICY UPDATE:

Standardize the System NOT the Patient

As the system moves toward standardization to reduce variability, the "Death by Neurological Criteria" was one of the first polices to be reviewed by the new Policy Committee. It is currently out for review by our Critical Care and Neurology content experts.

More information to come!

Questions? Contact: Michelle Ruther, RN, MSN, Clinical Consultant, Clinical Effectiveness: michelle.ruther@advocatehealth.com

JOINT REPLACEMENT LEARNING COLLABORATIVE

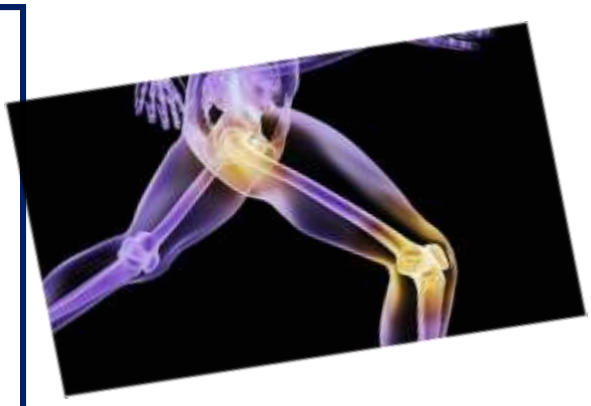
Our total joint replacement (hip and knee) collaborative goal is to partner with our Orthopedic Surgeons, OR Directors, Nurses, Physical Therapists, Supply Chain colleagues, and other key stakeholders to support use of evidence-supported best practice and processes that promote improvement in safety, quality of care, outcomes, service excellence and value-based management. The main areas of focus are:

- No foley use during surgery unless deemed appropriate, and if needed, then removal within 12-24 hours
- Early mobilization of patients on day of surgery (by PT with nursing back-up)
- No CPM use
- Expanded in-person pre-op educational offerings and redesign of educational content to align the in-person and upcoming online "Total Joint Learning Class" offerings (late 4th qtr. 2016)
- Use of a pre-operative discharge-assessment tool (i.e. RAPT tool) by surgeons
- Discharge of patients to Home with Home Health or to self-care as appropriate
- Discharge patients to PAN SNF, when SNF care is appropriate based on risk factor assessment and patient evaluation

Tools Available:

On the Clinical Effectiveness website, we have Shared Decision Making tools and PAN SNF network information available for use. (https://advocatehealth.sharepoint.com/sites/AO/Dept/clinical-effectiveness/Pages/Total-Joint-Replacement.aspx)

Questions? Contact: Khushnaz Bamboat, MHA, Senior Business Analyst, Clinical Effectiveness: khushnaz.bamboat@advocatehealth.com



VTE PREVENTION – TOTAL JOINT SURGERY

Every Patient Every Time

- Document the patient Risk Assessment (high or low)
- Document Contraindications (if any)
- Order RIDS (Rapid inflation device boots)
- Medicate with appropriate pharmaceutical choice

Use the VTE Powerplan

Questions? Contact: Michelle Ruther, RN, MSN, Clinical Consultant, Clinical Effectiveness: michelle.ruther@advocatehealth.com

ORTHOPEDIC ON-LINE JOINT CLASS

Pre-operative educational offering (Q4 2016)

Special thanks to Diane Eckhouse, Rae Salus, the site Orthopedic Coordinators, and Advocate Home Health leaders, who helped in the development and review of the educational content provided in this offering to patients, family members and caregivers.

More to come on the official launch date!

Questions? Contact: Khushnaz Bamboat, MHA, Senior Business Analyst, Clinical Effectiveness: khushnaz.bamboat@advocatehealth.com

TIME-DRIVEN, ACTIVITY-BASED COSTING (TDABC)

TDABC: Knee/Hip Replacement

- Quality/Discharge Disposition results over the course of the Orthopedic Total Joint initiative to date:

Metrics	Under 65y/o		65y/o +	
Average Length of Stay	6%	↓	7%	↓
Physical Therapy – Day of Surgery	54%	↑	47%	↑
Readmission Rate	49%	↓	61%	↓
Discharge to Home	8%	↑	32%	↑
Discharge to Skilled Nursing Facility	22%	↓	21%	↓
Discharge to Acute Rehab	4%	↓	35%	↓

Data compares Jan – Aug 2016 against 2014 baseline.
Readmission Rate only runs thru Jun 2016 due to data lag.

STAAR – SURGICAL TEAM APPROACH TO ADVANCED RECOVERY

STAAR is an integrated, multidisciplinary and evidence-based practice that collectively and synergistically:

- Facilitates functional recovery of the patient
- Reduces postoperative complications by 30% or more
- Reduces care time (LOS) by more than 30%
- Delivers value through better outcomes, reduced readmissions, and cost-effective care management

Several Pilots are currently in process at BroMenn, GSAM, IMMC, LGH, and Trinity hospitals. Surgeries targeted include Colorectal, Total Joint Arthroplasty, and Spine Surgery currently.

Tools Available:

New system Powerplans to outline the project; Standardized RN and Patient Education; Cheat Sheets for RN and Unlicensed Assistive Personnel (UAP); Pre-Surgical Testing forms.

Visit the CE Website for More Information

https://advocatehealth.sharepoint.com/sites/AO/sites/advocate/departments/clinical-effectiveness

Support from Senior Leadership and the Clinical Effectiveness team is always available!

Questions? Contact Michelle Ruther, RN, MSN, Clinical Consultant, Clinical Effectiveness: michelle.ruther@advocatehealth.com

NICU UPDATE

A new collaboration between Clinical Effectiveness and the Advocate Children's Hospital has led to the development of a Neonatology Steering Committee focused on improving outcomes through evidence-supported standardized processes and protocols for newborn and NICU care. The committee is made up of neonatologists, pediatricians, NICU nurses, and perinatal content experts representing all sites across the system. The kick-off meeting was held in mid-September and the following four priority areas to focus initial efforts on were chosen:

- Use of Glucose Gel for Hypoglycemia management in the at-risk newborn
- Standardizing Respiratory Management in the Golden Hour and beyond to decrease ventilator days and reduce the potential development of bronchopulmonary dysplasia (BPD)
- Antibiotic Stewardship in the NICU
- Feeding Protocols to reduce the need for Total Parenteral Nutrition (TPN) days and to lower the chance for development of Necrotizing Enterocolitis (NEC)

Questions? Contact Maryann Bertrand, RN, Clinical Consultant, Clinical Effectiveness: maryann.bertrand@advocatehealth.com

CLINICAL EFFECTIVENESS AND SUPPLY CHAIN COLLABORATION

The Advocate Clinical Advantage: Combining active physician engagement and collaboration with sourcing experts to drive best products choices and favorable contracting decisions.

- The Technology Review Committee went live in Q4 2016
- Spine Pilot: Drs. Doppenberg, Karahalios, Abusuwwa and Muro created site savings for cervical/lumbar spine surgeries
- Spine Osteobiologics Contracts: Supplier consolidation completed with current and future savings anticipated
- Stent Contracts: Stent contracts renegotiated by SharedClarity one year early with additional savings achieved
- Spine Implant Contracts: On 11/1/2016, the system contracts were consolidated down from about 30 suppliers on formulary to a more reasonable six suppliers across the system with current and future savings anticipated
- CRM Contracts: Price at the pump cost reductions and incentives partially achieved
- Wound Dressing Standardization – Achieved through collaboration with Advocate Home Health, a wound care physician champion (Dr. Frank DiMaria), Advocate wound care nurses (inpatient and outpatient), and Supply Chain

CLINICAL EFFECTIVENESS PROJECT AND TEAM WINS!

TIME-DRIVEN, ACTIVITY-BASED COSTING (TDABC) – TOTAL JOINT REPLACEMENTS

- Discharge Disposition: Significant reduction in SNF utilization

SEPSIS

- Septic Shock % has decreased from 28% (2015 YTD) to 23% (2016 YTD)
- SSE (Serious Safety Events) have decreased significantly for adults
- Site experiments improving care delivery: Green time clock, Screening, Simulation…
- Improving bundle compliance

STAAR - Surgical Team Approach to Advanced Recovery (STAAR)

- Reduction in LOS, Complications and Readmissions

LAB

- Due to education and pre-op guidelines that rolled out in January 2016, there has been a 66% reduction in the over $1 Million worth of lab denials from prior years.

CE OB/GYNE SERVICE TEAM:

- Standardized Vaginal Packs across the system
- Standardized C-Section Packs across the system

ROBOTICS

The Robotics Surgery Steering Committee and the newly formed Clinical Effectiveness (CE) Robotics Service Team are working to ensure SAFETY, improve QUALITY, and control COST associated with robotic surgery at all Advocate hospitals. To achieve these goals:

- The Robotics Coordinators and Surgeons at each site have worked to standardize their robotics instrument trays.
- The Robotics Steering Committee has strengthened the credentialing policy for robotics reappointments.
- Clinical Effectiveness is developing a quality scorecard to track surgeon performance on quality metrics agreed upon by the Steering Committee.
- Use of a Data Collection Tool (created by Tom Summerfelt, VP Research) has been implemented across the system to standardize the collection of important data elements, including reposable use, surgeon console time, crew efficiencies (i.e. case set-up and room turnaround times) during robotic cases, and to identify areas for process improvement and cost-effective management.

Please encourage your staff to use this tool!

A video to train robotic crew members on the use of the Tool resides on the CE SharePoint site. Also, coming soon to the CE SharePoint site: A Robotic Crew Training video that highlights opportunities for process efficiencies in the surgical suite during robotic surgical cases.

PROJECTS	SHOUT OUTS GO TO:
SEPSIS	Dr. Michael Ries for taking a leadership role on the system Sepsis Steering Committee and for sharing his expertise on sepsis management to help drive improvement. Dr. Patricia Lee and Deb Polster, CNS, for leading the great teamwork at IMMC that has consistently delivered significant improvements in sepsis management locally, and for their willingness to share best practice ideas.
SEPSIS	Sharon Otten, RN for her engagement, leadership and role in driving system sepsis goals. Raeann Fuller, RN for sharing her expertise and the great work on sepsis management at Condell. Dr. Bill Adair for sharing his insights on data to drive results.
LAB	Dr. Leo Kelly (Adults), Dr. Larry Roy (Peds), and Dr. Imad Almanaseer (ACL) for their great collaboration and leadership in driving appropriate lab utilization efforts across the system
STAAR	Dr. Chuck Derus, Dr. Bruce Dillon and the Ops Improvement Team at GSAM (led by Kate Woolard) for their great collaboration and team work in launching the colon pilot and setting up the soon to go-live spine protocols. Dr. John Park and Flo Kiokemeister, RN and the LGH surgical team for sharing lessons learned from their 'Patient-Centered Surgical Home' model and the use of STAAR. Dr. John Jaworowicz and Angie Turner, RN for their leadership on the colorectal pilot at BroMenn.
STAAR & OR LEADERSHIP	Cindy Mahal van Brenk, RN, and all the site OR Directors for their engagement, commitment and valued input on the STAAR program protocols and process changes.
TDABC: JOINT COLLABORATIVE and CV SURGERY	Dr. Alex Gordon (Orthopedics) and Dr. Simon Adanin (Anesthesia) for leading the Orthopedic Service Team and Pain Protocol best practices development. Dr. Bill Baylis and the Orthopedic surgeons at CMC, who developed a 'Geriatric Hip Fracture Protocol' for the system. Dr. Pat Pappas, Dr. Tony Tatooles, and the CV Work Group at CMC, who helped reduce LOS an average of 2 days for CABG and 1.7 days for Valves, while continuing to provide high quality care for their patients.
POWERPLAN DEVELOPMENT	Anesthesiologists, Surgeons and Nurses who have taken the time to develop, review and provide thoughtful comments on STAAR Powerplans: Dr. Mary Kay Bissing, Dr. John Martucci, Dr. Dean Feldman, Dr. John Park, Dr. Bruce Dillon, Dr. Kenji Muro, Dr. Ann Stroink, Dr. Abusuwwa, Dr. Rich Lim, Dr. Alex Gordon, Dr. David Ondrula, Dr. Estrada, Dr. Marc Mesleh, Kristin Peterson, RN, Marge Kearney, RN, Mary Dailey, RN, and Flo Kiokemiester, RN.

Please Note: There are so many others who have been instrumental to the success of many of the site and system Clinical Effectiveness initiatives, past and present, and we would like to thank all for their participation on committees, for assisting with analytics, for helping facilitate education and implementation, and for sharing best practices to improve the quality of care that we provide the patients who we are so privileged to serve.

NEW POWERPLAN RELEASE DATES

- STAAR Colorectal Post-op Powerplan - January 2017
- STAAR Spine Pre/Post-op Powerplans - January 2017
- VTE for Total Joint Replacement Surgery Powerplan - December 2016
- Geriatric Hip Fracture Powerplan - January 2017

Questions? Contact: Michelle Ruther, RN, MSN, Clinical Consultant, Clinical Effectiveness: michelle.ruther@advocatehealth.com

UPCOMING EVENTS: 2016-2017

- **December 20, 2016** – Sepsis Committee Meeting
- **November 22, 2016** – Lab Committee Meeting
- **November 29, 2016 –** Technology Review Committee
- **November and December, 2016 –** NICU Work Group Meetings
- **December 5, 2016 –** Lunch and Learn, Update on Sepsis
- **December 9, 2016 –** Clinical Effectiveness Governing Council Meeting
- **December 20, 2016 –** Sepsis Collaborative Meeting
- **March 6-8, 2017** – Outside Speakers on the STAAR principles and implementation have been engaged. There will be both in-person and telepresence educational offerings with CME, as well as some site visits by Dr. Aloia and his partner, Dr. Gottumukkala.

The Clinical Effectiveness Team:

Dr. Debra O'Connor, VP of clinical effectiveness
- Oversees CE Projects and Service Teams
- Advocate Clinical Advantage/Technology Review Committee
- Shared Clarity Clinical Review Council

(630-929-6130)

Husain Esmail, MHA, Director of clinical effectiveness (CE) projects
- Directs CE Projects, Timetables and Deliverables
- Specialty Pharmacy - Business Development

(630-929-5745)

Beth Halperin, RN, Mgr. Transfusion Safety and CE Clinical Consultant
- Transfusion Safety
- Sepsis Management
- Laboratory Utilization
- Pharmacy – IV Acetaminophen

(630-929-5743)

Michelle Ruther, RN, MSN, Clinical Consultant
- **S**urgical **T**eam **A**pproach to **A**dvanced **R**ecovery (STAAR)
- TDABC – Hip/Knee Joint Replacement Collaborative
- TDABC – CV Surgery: CABG and Valve
- TDABC – Shoulder Replacement Surgery
- Wound Care

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Maryann Bertrand, RN, BSN, Clinical Consultant
- Robotics: Margin Management Improvement
- Neonatal Intensive Care Unit (NICU) Initiatives

(630-929-5634)

Julie Deeke, MHA, Senior Business Analyst
- Multiple Projects
- Sepsis, NICU, STAAR

(630-929-8194)

Khushnaz Bamboat, MHA, Senior Business Analyst
- Multiple Projects
- TDABC: Knee, Hip, Shoulder

(630-929-8649)

Alex Miloshov, Senior Business Analyst
- Multiple Projects
- Robotics, CV Surgery, Pharmacy

(630-929-8195)

QUESTIONS?

We are interested in your questions and comments, please e-mail:

Michelle Ruther, RN, Clinical Consultant, Clinical Effectiveness: michelle.ruther@advocatehealth.com or Dr. Debra O'Connor, VP Clinical Effectiveness: debra.oconnor@advocatehealth.com with your thoughts or suggestions regarding this newsletter

For more information or results on our Clinical Effectiveness Projects, we encourage you to visit us on SharePoint in the lower left hand corner of your intranet site OR click on the following link to our Clinical Effectiveness website: https://advocatehealth.sharepoint.com/sites/AO/sites/advocate/departments/clinical-effectiveness