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## Upcoming Events

Surgery EPT	10/22
Emergency EPT	10/27
Obstetrics EPT	11/2
Opioid Stewardship	11/11

### Diagnostic Stewardship Summit:

- 10/14: Respiratory Panel by PCR
- 10/20: GI Pathogen Panel by PCR and C Diff Toxin by PCR
- 10/30: Urine, Culture

## A MESSAGE FROM THE SAINT LUKE'S CARE CMO

### Sepsis

We can all agree that sepsis kills people. We can also agree that sometimes the presentation of sepsis is subtle. Finally we probably can all agree that there are cases of sepsis that the initial diagnosis is missed, causing harm to the patient. In fact it is estimated that from electronic health record analysis that up to 20% of sepsis cases are initially missed. The Saint Luke's Health System wanted to do better.

In October 2019, a sepsis "Hackathon" led by our Chief of Operational Transformation, John Wood started the ball rolling. Multiple departments within the SLHS participated. There was input from the SLHS Innovation Center, Enterprise Analytics, System Quality, Clinical Informatics, Medical Informatics, and Saint Luke's Care. We collaborated with the goal being faster and more accurate identification of patients with sepsis to facilitate, aggressive, timely treatment which would in turn lead to better patient outcomes.

We knew that we wanted to implement the Epic predictive model for early identification of sepsis. This is a validated tool that utilizes machine learning, a form of AI, and mathematical regression theory to universally screen patients for risk of sepsis. Given the foresight of our CMIO, Dr. Carl Dirks, we had been running the model silently for over a year and had data on the performance of the tool with our own patient population. Like all predictive models, it is not 100% accurate, but as utilized in the SLHS sepsis redesign it exhibits around 80% accuracy in identification of true negative and true positive cases. Pretty good in the real world of delivering acute medical care to some of our sickest patients.

We decided to concentrate on two clinical areas, potentially septic patients arriving in the emergency department and inpatients that may become septic while hospitalized. We utilized two different predictive model thresholds, a lower threshold on the inpatient side to trigger a lactate standing order to nursing staff, and a higher threshold to alert providers. We developed streamlined order set content which included an order for "clinical time zero" which prompts a sepsis "checklist" that tracks completion of key interventions to confirm that appropriate treatment was occurring in a time sensitive manner. We also added a button allowing the provider to drop a sepsis diagnosis in the chart without having to go to the problem list.

# Sepsis

A “sepsis alert” and a “sepsis prediction score” were both easily seen in the storyboard portion of the Epic screen. All of these tools provide a much more well-rounded and comprehensive approach to the evaluation and treatment of septic patients.

Initially we trialed this sepsis redesign at St. Luke’s Hospital and St. Luke’s South in May. The whole system was brought up in August. The data we have collected thus far is favorable. The ultimate goal is to move the needle on mortality over time. Here are some highlights:

- Over 300% increase in sepsis order set utilization
- SLH setting unprecedented highs for bundle compliance for Severe Sepsis (83% in May and 80% in August)
- Average Antibiotic Turnaround Time 54 minutes faster with use of Clinical Time Zero (versus no CTZ usage) – Metro facilities in August
- 83% better identification of coded cases with the new BPAs vs the old BPA in August

I would like to personally thank the numerous individuals that contributed countless hours to this project. Their hard work and dedication is clearly paying off. Not to mention this process improvement was implemented in the middle of the COVID-19 pandemic. Pretty impressive in my opinion. If you would like to listen to the recording from the Medicine Grand Rounds delivered by Dr. Carl Dirks on this topic from 18 Sep 2020, the link is here: <https://slhs.webex.com/slhs/lr.php?RCID=a724586262b54733bf21f973440c810d>

<https://slhs.webex.com/slhs/lr.php?RCID=a724586262b54733bf21f973440c810d>

Password is: 2wTaigmf

I want to personally thank all Saint Luke’s Care members for their continued efforts to deliver the best care to our patients despite having to cope with the realities of the COVID-19 pandemic. We will get through this together.

Thanks for reading and I hope you have a great Saint Luke’s day.

William M Gilbirds II, MD



## New Saint Luke’s Care Director!

Congratulations to Cara Johnston on becoming the new Director of Saint Luke’s Care! Cara has worked tirelessly for SLC for several years, her contributions to the success of SLC projects have long been recognized. Help us congratulate Cara on her new role!

# Medical Protocol to Conditional Orders – Live September 30<sup>th</sup>

A select group of medical protocols have been converted to a new naming convention and approval process - Conditional Orders (listed below). Of the current medical protocols, the only documents that remain in that format are: Imaging/Contrast, RATE and Sleep Medicine. The content and how the medical protocols are accessed in Epic or Forms Library (Citrix) did not change.

## Key take aways:

- When using the format or naming convention of **medical protocol**, we must follow the current process of annual content review as well as approval by the entity Medical Executive Committees, CNOs and the System Pharmacy and Therapeutics Committee as per policy. This current process takes on average 2-3 months to complete.
- With this change, we hope to lessen the regulatory burden and create a more efficient and timely process for content updates.
- Moving forward, the conditional orders will be reviewed at a minimum of every 3 years by the appropriate Evidence-Based Practice Team and subject matter experts.
- This request originated from the Medical Protocol and Standing Orders Oversight Committee, which includes leaders from Health Information Management and Regulatory.

## Medical Protocols converting to Conditional Orders:

Medicine
Standard Electrolyte Replacement Conditional Orders
Aggressive Electrolyte Replacement Conditional Orders
Standard Electrolyte Replacement Conditional Orders (Outpatient Infusion Centers)
Hyperbaric Oxygen Therapy (HBOT) Glycemic Intervention Conditional Orders (SLE & SLN)
Pediatrics
NICU Conditional Orders
Blood Glucose Screening for Neonates Conditional Orders
Initiation and Weaning of Inhaled Nitric Oxide Conditional Orders (SLH Only)
Cardiovascular
CVS Post-Op Glycemic Control Conditional Orders (SLH Only)
CVICU Post-Op Initiation of Mechanical Ventilation Conditional Orders (SLH Only)
CVICU Post-Op Ventilator Weaning and O2 Therapy Conditional Orders (SLH Only)

# Medical Protocol to Conditional Orders – Live September 30<sup>th</sup>

Critical Care
Diabetic Ketoacidosis Conditional Orders
Hyperosmolar Nonketotic Hyperglycemic State Conditional Orders
ICU Intensive Glucose Control State Conditional Orders
Prone Positioning Conditional Orders
ARDS/ALI Mechanical Ventilation Conditional Orders
Sedation Vacation / Titration Conditional Orders
Targeted Temperature Management Post Arrest Conditional Orders (36 Degrees)
Targeted Temperature Management Post Arrest Conditional Orders (33 Degrees)
Radiology/Vascular Access
Vascular Access RN Line Placement Conditional Orders

## EPT Updates

Saint Luke's Care (SLC) Evidence-based Practice Teams (EPTs) are continuously meeting to address the needs of providers and other clinicians. Creating and modifying order sets and other clinical documents are just a few of these activities.

For more information on EPT activities and SLC multidisciplinary projects, click [HERE](#) to view the most recent updates.

- Behavioral Medicine EPT
- Blood Management
- Cardiovascular EPT
- Critical Care EPT
- Medicine EPT
- Opioid Stewardship Program
- Radiology EPT

## SLC Breaking News!

Saint Luke's Care will now be extending membership opportunities to Advanced Practice Registered Nurses! We're thrilled to be embracing APRNs into the SLC family!



## COVID Treatment Task Force Updates:

- Members include: Sarah Boyd, MD, Ryan Gallagher, MD, William Gilbirds, MD, Majdi Hamarshi, MD, Ryan McNellis, MD, Andrew Schlachter, MD, Nick Bennett, Pharm D, Jeannette Ploetz, Pharm D, Leigh Ann Milburn, Pharm D
- The group continues to meet bi-weekly to review current literature and evidence that surrounds COVID-19 treatment modalities
- Remdesivir consults are now reviewed by the SLHS pharmacist team
- Convalescent Plasma process optimization and physician education created
- Testing and Re-testing guidance document updates
- COVID-19 Order set changes over the last quarter have included (but not limited to):
  - Steroid dosing
  - Treatment options for pregnant patients
  - VTE prophylaxis

## SHOUT OUTS

A huge thank you to everyone involved in the Medical Protocol & Conditional Orders transition. Without the leadership of Sharon Korzdorfer, Lisa Riggs and Megan Hibler this initiative would not have been possible!

A special shout out to Dr. Sarah Boyd and Nick Bennett for their extensive work on the publication: *Use of Procalcitonin and a Respiratory Polymerase Chain Reaction Panel to Reduce Antibiotic Use via an Electronic Record Alert.*

To check out the article click on the link below.

[https://intranet.saintlukeshalthsystem.org/slhs/DocumentManager/FPT\\_Documents/SLC%20Monthly%20Summaries/2020%20Summaries/Use%20of%20Procalcitonin%20and%20a%20Respiratory%20Polymerase%20Chain%20Reaction%20Panel.pdf](https://intranet.saintlukeshalthsystem.org/slhs/DocumentManager/FPT_Documents/SLC%20Monthly%20Summaries/2020%20Summaries/Use%20of%20Procalcitonin%20and%20a%20Respiratory%20Polymerase%20Chain%20Reaction%20Panel.pdf)