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# "Will Using Telemedicine with Medical Command during Situational Awareness Escalation Add Value to Patient Care?"

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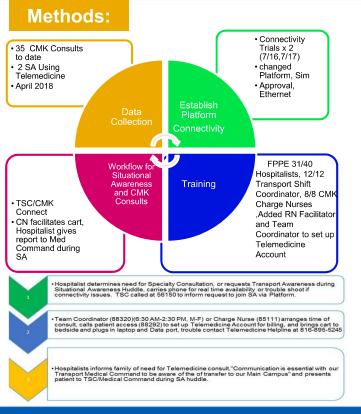
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### **Background:**

Children's Mercy Hospital Kansas (CMK) is a 42 bed satellite inpatient pediatric hospital, which is 30 minutes away from PICU and NICU resources at the Children's Mercy Hospital Adele Hall Campus tertiary pediatric center. Since NICU and PICU resources are unavailable on site, a program entitled, "Situation Awareness" (SA) has been in place for over two years to call together a collaborative huddle to discuss escalating care for a deteriorating patient. Traditionally, the hospitalist, respiratory therapist, bedside and charge nurses respond, implement escalated cares as needed. This may include transport to the main campus or schedule a follow up collaborative huddle within the next 1-2 hours, to review care interventions and patient status. The timeliness of a transfer to the main campus may be delayed by availability of a transport team, and/or by belated notification to the Transport Shift coordinator (TSC), or Medical Command (Intensivist).

## Aim:

By January 2019, to decrease overall total number of SA huddles at CMK. Currently CMK has the highest # of SA huddles than any Adele Hall care team. Utilizing telemedicine for clinically deteriorating patients for bedside evaluation when there is a delay in transport team availability or a significant change in clinical status requiring NICU/PICU expertise. Goal is to decrease the overall number of SA Huddles at CMK, and decrease the # of SA > 3 huddles (1-2 hours apart) compared to seven other inpatient units at Adele Hall. Telemedicine will allow Medical Command to see (video conference), assess (USB medical devices to examine patient with exam camera, and stethoscope) and improve communications with the on-site team. Currently, Medical Command is unaware of SA, or change in clinical status until the decision to transfer. QI intervention offering Telemedicine to the SA Huddle will improve communication and Medical Command awareness when there are significant changes in patient acuity at CMK.



### **Discussion:**

The most common diagnosis for transfer is Respiratory Distress. Currently in our SA work flow, Transport Shift Coordinator/Med Command may not be aware of worsening acuity in a CMK inpatient until the request for transfer occurs. This is the last step in the SA Huddle process and may not occur (Oct-Dec 2017 87% 21/24 patients) until > 3 SA huddles have taken place, 1-2 hours apart. Decreased staffing from 0000-0630 with one Hospitalist when frequent SA huddles may occur on multiple HFNC patients is a safety concern. Chart review showed all transfers to PICU were appropriate and timeliness barrier may have been delay in transfer with multiple SA Huddles, and delay in transport team availability. High risk patient identified for SA Huddle included any patient with Pediatric Early Warning Score (PEWS) >= 5, HFNC initiation, or cardiac PEW >=4. Conclusion: Telemedicine helps triage the most appropriate level of transport team (critical vs. noncritical) when deteriorating patients are determined to need escalation and transfer of care. Telemedicine offers PICU expertise in caring for deteriorating patients and facilitates transport and care communication readily. Telemedicine enables critically deteriorating patients to receive Medical Command expertise, readily at the bedside. Trials with equipment helped to identify connectivity limitations, understand the need for smaller laptop cart, and our time to connection improved from initially 13 minutes with an older Platform to < 1 minute with the new Platform. The exam camera was found to be reliable, and we had some challenges with our USB stethoscope. Technology, when not used on a regular basis, can create staff anxiety and user errors. Training and practice, Medical Team Buy in, and a Medical Command Champion all are imperative for this to be successful.

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