Improving the Safety of Children Receiving Chemotherapy

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Background/Introduction

- Chemotherapy is essential in treating children with cancer
  - Narrow therapeutic window
  - Errors in total dose, timing, rate, or route can lead to significant harm
- Pediatric chemotherapy treatment orders at ECU Health remained hand written or typed
  - Increased potential for error in transcribing, order entry, and administration
  - Increased delays in patient treatment
- Implementation of computerized provider order entry (CPOE) for chemotherapy in the pediatric population

Aim Statement – decrease the number of chemotherapy order related safety events by 50% through implementation of a CPOE, for the pediatric oncology population within three months after implementation
In February 2019 proposal submitted requesting pediatric oncology population be transitioned to CPOE by utilizing EPIC Beacon oncology module

- **Setting**
  - Pediatric inpatient and outpatient setting

- **Stakeholders**
  - IS team, physicians, pharmacy, pediatric nursing leaders, educators, children’s hospital administrators and EPIC specialist

- **Time course**
  - April 2022 - May 2023

- **Measures**
  - Safety intelligence events pre and post implementation
Results

Preplanning: September 2021 – September 2022

- 32 safety events
  - Wrong route, wrong timing, wrong dose, wrong rate, monitoring

Pre-implementation: October 2022 – May 2023

- 8 safety events
  - Orders included wrong dose, wrong timing, monitoring

Post-implementation: June 2023 – December 2023

- 1 event
  - Order included wrong dose
Conclusion

- Key Findings
  - Significant decrease in safety intelligent events by 50%
  - Standardization of chemotherapy treatment plans for pediatrics decrease risk for ordering errors
  - Positive feedback from frontline team members and providers

- Lessons Learned
  - Time allotted for builds and validation significantly underestimated
  - More in-depth education through replicated workflows (representative of all disciplines present)
  - Education of patients/families prior

- Challenges
  - Unsigned treatment plans and appointment requests

- Next Steps
  - Complete protocol builds
  - Monitor compliance of signed treatment plans and active request
  - Continue monitoring of SI events