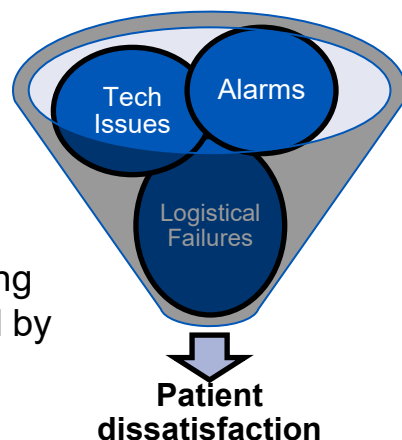


Electronic to Elastomeric: Inpatient Pharmacy Innovation for HaH Antibiotics

Leah Webster, PharmD, BCPS¹, Troy Coffman, DNP, R.N.², Lorraine Neal, R.N.², Lysa Brown, R.N.², Maya Bolling, R.N.², Earl Dullas, R.N.², Hieu Tran, R.N.², Lucia Nolan, PharmD, BCSCP¹, Chloe Gernhard, PharmD, BCPS, CPh¹, Haesuk Heagney, PharmD, MHA¹, Calvin Tucker, PharmD, MBA¹, Haleigh Tatko, PharmD¹, Melissa McCrary, M.M.S., P.A.-C⁴, Renny Ma, M.H.S.A.³, Johnna Palic, M.H.A.³
¹Department of Pharmacy, ²Department of Nursing, ³Department of Administration, ⁴Department of Medicine

BACKGROUND

- **Practice:** Quaternary academic medical center serving ~120 HaH patients per month across ~1,200 sq miles
- **Dispensing model:** Hybrid – compounded sterile products (CSP) dispensed by hospital pharmacy
- **Problem:** Hospital-supplied 24-hour Antibiotic Infusions
- Electronic Ambulatory Pumps
 - CSPs dispensed in bag, connected in home
 - Aligned w/ hospital dispensing
 - Patient experience impacted by complications
 - Inefficient use of resources



INTERVENTIONS

- **Objective:** Dispense 24-hour antibiotic infusions in elastomeric devices (supported by stability data)
- Team: pharmacy, nursing, informatics, providers, operations
- Target Drugs (Phase 1): piperacillin/tazobactam, nafcillin
- Secure Enterprise Approval: compounds and devices
- Select and Procure Devices: safety, stability, PAR levels
- Build EHR Orders: device scanning, BUD included
- Educate Teams: internal and external service providers
- Test, Go-Live
- Monitor Outcomes: complication rates, compounding TAT (time from dispense to checked/ready for pickup)

RESULTS

	Pre-intervention*	Post-Intervention*
Complications ^β	38.5 % (22/57)	13.7% (7/51)
TAT mean	76 min	89 min
TAT median	72 min	79 min

*includes total continuous electronic and elastomeric infusions; β - subset of patients reviewed by RN

Intervention Phase Adjustments

- Optimize restock process
- Prime before dispense
- Time-to-RT clarifications
- Reinforce unclamping line
- No y-site administrations

Post-Intervention Complications

Electronic	Elastomeric
3 downstream occlusion	2 leaks (dispense issue)
1 air in line	1 device left clamped

DISCUSSION

- Pharmacy-driven strategies enhance the reliability of infusion therapies for HaH patients.
- Widespread in outpatient care, elastomeric devices are less typical within inpatient pharmacy practice.
- Replacing electronic pumps with elastomeric devices may improve outcomes but requires collaboration across disciplines.
- Accurate device selection is critical to safety.
- Future studies will explore expanded use of elastomeric devices to other medications, guided by stability data.