

Obeid Shafi

Clinical Informatics Fellow

Fellowship e-Portfolio

Operational

■ Management:

- PPMD-Prometheus-AC integration (completed):
 - Co-ordinating integration for data transfer using FHIR to an international registry for patients with muscular dystrophy ([in the news](#))
- Led the team at ACH which reviewed feasibility and improved testing criteria for pediatric EHR certification developed by the Drummond group ([in the news](#))
- Co-led CI Board review for fellows as the Chief Informatics Fellow
- PM for CDS requests (multiple- some examples below)
 - Transition from Insulin drip to SQ for DKA patients: successfully incorporated into workflow via an Order Set instead of BPA
 - Improved labs ordering process as per protocol for transplant patients
 - Religion and animal derived products, prevented BPA and alternate workflow being implemented
 - Improving tracheostomy care through standardization
- Clinical Informatics Rounds debrief and work allocation (bi-weekly)

■ Operations:

- ENT department consult:
 - Comprehensive multi-disciplinary assessment of outpatient clinic workflows followed by recommendations for improving efficiency
- EHR optimization: EASY process to optimize clinician productivity with the use of the EHR
 - Gastroenterology
 - Genetics
 - Rheumatology
 - Multiple sections since
- Tele-health:
 - Tele-NICU project for virtual consults from nursery alliance partners
 - Established process for one site, with 2 more sites in process and further statewide implementation planned
- BPA review process: in conjunction with CDS WG – reviewed foundation BPAs
- Pediatric Sedation database:
 - Project to improve the national database and automate the process of data collection from multiple sites
- Involved in developing pediatric EHR certification testing criteria for the inpatient setting with the Drummond group
- Review of Epic EHR functions and new HL7 pediatric EHR standards
- Provided at the elbow support for providers during transition to a different EHR login process (domain change from UAMS to AC login)

- Provided support to providers and IS teams during transition to a different vendor for speech to text in the EHR
- At the elbow support and training for attending providers as we transition to different resident schedule
- Home health monitoring project for NICU graduates (ongoing)
- CDS requests (ongoing) – as part of CDS WG
- In-person Clinical Informatics Rounds (bi-weekly)

■ **Data Extraction Request Consults (ongoing):**

Meeting with PIs and discussing in-depth review of available data (e.g., for different sets of diagnosis codes or ages), data quality concerns, optimizing then submitting data request and extracting EHR data (Caboodle/Clarity/SlicerDicer/etc.):

- EEG and MRI data for ML to identify seizures
- mHealth study for improving COVID vaccine uptake
- HUS study
- NICU microbiological samples
- RVP sequencing in COVID patients
- Vasopressors in septic shock
- Database for patients with pectus excavatum
- Appendectomy and post-op percutaneous drainage
- Esophageal food impaction study
- Left sided heart failure study
- Fetal MRI
- G-tube management – comparing LR and NW
- Severity of COVID illness with co-infection

■ **Data Science:**

- UTI predictive model:
 - Using machine learning to predict UTI in febrile infants, especially those caused by ESBL bacteria
- LOS prediction model for bronchiolitis:
 - Presented at ACH fellow's day
 - Presented as Poster at AMIA 2024
 - Presented as Oral Presentation at PAS 2024
 - Working on implementation using Cognitive computing module in Epic

Quality Improvement

■ **QI projects initiated during academic year**

- EHR Optimization to improve physician efficiency as part of CI consult service
- RQUEST: improving process for assigning protocols when ordering CT scans in Epic. Will help to reduce repeat imaging (which results in increased costs, decreased throughput, increased workload for staff, delays in patient care, and patient harm due to additional radiation exposure)
- Improving care for patients with new tracheostomy: Standardizing care through a road map and earlier education of caregivers to reduce LOS

Educational

- GPA – 4.0
- Courses completed as part of Graduate Certificate in Biomedical Informatics:
 - Information Modelling--From Data to Knowledge
 - Clinical Decision Support
 - Biomedical Informatics Research and Application Seminar
 - Health Informatics Quality and Patient Safety
 - Computational methods for informaticists
 - Machine Learning
 - Project Rotation [Incorporating SDOH into ML models via API]

Research

- Capstone Project:
 - Presented at ACH Fellow's Day
 - Poster presented at UAMS Student Research Day 2023:
 - Awarded 1st place among Fellows
 - Awarded Division of Research & Innovation Travel Award
- Guest Speaker:
 - PACS system. Healthcare Information System for Administrators. UAMS College of Public Health (Graduate School Course), Little Rock. November, 2023
 - IP systems. Healthcare Information System for Administrators. UAMS College of Public Health (Graduate School Course), Little Rock. September, 2022
 - Standards in Clinical Practice of Medicine. Department of Biomedical Informatics Seminar Series, UAMS, Little Rock. May, 2022
- Conferences:
 - AMIA CIC '22, '23, '24
 - PAS Toronto '24
- Publications:
 - HL7 PCHIT FP EHR standard – published in ACI
 - HIT Safety (in progress)

Others:

- Participated in the development of HL7 pediatric EHR standards
- Part of group reviewing nationwide pediatric safety events related to HIT and how they could be prevented by implementing SAFER guides (in collaboration by CHA PSO)- ongoing
- AMIA Monthly ITE Questions
- IHI Open School Basic Certificate Program in Patient Safety and Quality Improvement
- Epic certifications:
 - Physician builder (Advanced)
 - Physician builder (Analytics)
 - Cosmos Data Model
 - Cosmos Research Badge