

Navigating Unknown Terrain: Launching a Large-Scale Implementation of BCMA During a Global Pandemic

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AMBULATORY BCMA BACKGROUND

- Barcode Medication Administration (BCMA) has not had realized value in ambulatory and procedural areas until now
- VUMC executive stakeholders had an increased desire to implement BCMA in ambulatory spaces despite the challenges of a global pandemic, increasing clinic volumes, supply chain challenges, and staffing shortages
- New legislation passed in 2021 by the State of Tennessee allowed Certified Medical Assistants (CMAs) to administer certain medications in state-funded facilities. VUMC began immediately training CMAs to administer Flu and Covid vaccines safely using scanning-based technology
- 300+ Clinical Spaces were evaluated for implementation of the BCMA process for Nursing and Medical Assistant staff
- Special considerations and unique workflows in each specialty needed to be taken into consideration and vetted prior to administration, such as in the Surgical Clinical Spaces (as outlined below)

SURGICAL CLINIC BCMA CHALLENGES AND TRIUMPHS

Each surgical clinic medication administration process was analyzed, and front-line users engaged with Nursing Informatics to address hardware and workflow challenges. Clinics included Complex Burn, Plastic Surgery, Trauma, Surgical, and Wound Care.

Challenges:

- Medication administration process variations; some examples include:
 - Compounded medications prepackaged from companies without barcodes
 - Medication ranges
 - Multidose vials
 - Mixed syringes
 - Topical medications (single dose and multidose containers)
 - Billing and charging compliance issues
 - Recurrent ordering practices
- Unique clinic patient populations, diagnoses, and care situations
- Timely medication orders/procedural medication processes

Solutions:

- Clinic-administered medication preference lists in the EHR.
- Creation of new therapy plans for medications with an automated administration schedule
- Workflows for signed and held orders allowed for administration in a clinic space separate from the ordering department
- Creation of procedural narrators to improve medication administration workflows for in-clinic procedures

NAVIGATING TRAINING AND METHODS

Training:

Training resources were created with an interdisciplinary team collaboration approach:

- Online training education module
- Scenarios to use in the practice environment
- Practice barcode samples
- Tool Kits for end users, front desk, and leaders
- Reporting dashboard resources and training
- Virtual competency check-off processes
- Specialty cohort topic educational meetings

Lessons Learned

- Ambulatory clinics are not standardized and are not the same as inpatient areas
- Physical clinic spaces are not standardized
- Must coordinate with operational leaders
- There will be medication workflow challenges
- Partner with hardware teams early
- Need communication with front desk leaders
- MD leadership buy-in is critical
- Need readiness meetings with managers

Support:

- Developed a hybrid support model
 - Utilized virtual and on-site support
 - Allowed for big bang implementation of clinics
- At the Elbow support was focused on high-risk clinics

CONCLUSIONS AND IMPLICATIONS

- BCMA Medication administration process reduced clicks by **31%** for administering staff in addition to improving patient safety.
- Evaluations will be completed at six months post-implementation to show: ROI metrics, including scan rates, and leveraging 340 B pricing, Provider order entry accommodations, linking of therapy to wound and healing process, nurse satisfaction, compliance, and increased reimbursement.
- Reduction of nurse burden with the expanded role of CMA.
- Partnered with a local college to train more Certified Medical Assistants and empower current VUMC MAs to climb the professional ladder.
- 232,833 Flu and Covid Vaccines were given Fall 2021 – Fall 2022:
- 1,099 work hours saved with BCMA

BCMA Keystroke Level Modeling

Flu and Covid Vaccine Administration

	Interaction Steps
Pre-BCMA	78
Post BCMA	54
Steps Reduced	24
% Decrease with BCMA	31%
Seconds saved per medication administration	17
Immunizations given Fall 2021 - Fall 2022	232,833
Total hours saved with BCMA	1,099

SCAN FOR REFERENCES



SCAN FOR CONTACT INFO

