Improving Post-Hospital Medication Reconciliation in a Rural Primary Care Clinic Through a Nurse Led Workflow

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Problem and AIM Statements

Problem Statements

- Inaccurate and incomplete medication lists for patients recently discharged from the hospital pose a significant patient safety risk
- Directly contributes to preventable adverse drug events (ADEs), increased emergency department (ED) visits, and hospital readmissions
- Baseline: No standardized workflow or documentation for post-discharge medication reconciliation at One Community Health (OCH)

AIM Statements

- Improve the process of post-hospital follow-up (HFU) medication reconciliation to decrease medication errors
- Goal 1: RN-documented telephone medication reconciliation completed for 80% of hospital follow-up patients
- Goal 2: In-person RN medication reconciliation completed for 50% of patients identified as high risk (risk score ≥6 on OCHIN Epic Adult General Risk Score or ≥6 medications)
- Timeline: June 1, 2025 – April 20, 2026

Background

- ~1 in 5 patients experience a safety event after hospital discharge[2,3]
- 39% of post-discharge safety events are adverse drug events (ADE)[1]; 26% of those are preventable[1,2]
- **40% of medication errors** result from inadequate medication reconciliation at care transitions[1,4]
- Risk factors: Limited inpatient-outpatient communication, inconsistent reconciliation workflows
- OCH-specific problem: RNs were informally conducting outreach calls for transition of care, but medication reconciliation was not systematically documented, tracked, or communicated to providers

Plan-Do-Study-Act (PDSA) Cycles

PDSA 1 — Problem Identification
(June – August 2025)
Plan | Identify gaps in post-discharge medication reconciliation through stakeholder interviews with nursing, pharmacy, and administration.
Do | Interviewed RN leadership, care managers, and pharmacists. Reviewed existing data tracking dashboard.
Study | No standardized workflow or documentation existed. Data dashboard tracked phone outreach for HFU but not medication reconciliation. RNs relied entirely on clinical judgment to trigger pharmacist involvement for a formal medication reconciliation.
Act | Engage PharmD and RN leadership to co-design a structured, trackable workflow.

PDSA 2 — Workflow & Dotphrase Development
(August – September 2025)
Plan | Develop a pharmacist-led workflow anchored by a standardized Epic dotphrase to document reconciliation and enable tracking.
Do | Established routing of hospital/ED discharges to a centralized RN follow-up pool, with pharmacist referral triggered by RN judgment.
Study | Dotphrase used by pharmacists created a documentable, billable intervention point. However, referral to pharmacist remained inconsistent — no validated risk stratification tool was in use.
Act | Implement dotphrase and explore OCHIN's built-in risk score to standardize high-risk patient identification.

Plan-Do-Study-Act (PDSA) Cycles

PDSA 3 — Change from Pharmacist-Led to RN-Led Workflow with Updated Dotphrase
(September – November 2025)
Plan | Three dotphrases created: one to standardize all hospital follow-up encounters (ONECHHOSPITALFU) and then two for specific medication reconciliations (ONECHHOSPITALMEDREC [telephone] + ONECHMEDREC [in-person])
Do | RNs completed chart review and 48-hour outreach calls after discharge; medication reconciliation documented in ONECHHOSPITALFU dotphrase when performed.
Study | Hospital follow-up dotphrase utilization increased from 1% in September to 6.5% in November. Documentation remained inconsistent, driven by individual RN initiative. OCHIN problem lists often lagged behind inpatient diagnoses, limiting risk score accuracy.
Act | Proceed to formal RN training and integrate OCHIN Adult General Risk Score (≥6 risk points or ≥6 medications) to standardize high-risk patient identification.

PDSA 4 — RN Training & Workflow Integration
(December 2025 – April 2026)
Plan | Train RNs on standardized workflow; use risk score to trigger pre-visit in-person reconciliation for high-risk patients. Targets: 80% telephone reconciliation documentation; 50% in-person reconciliation for high-risk patients.
Do | RN training completed December 11, 2025. Workflow updated: Chart scrub → risk score → schedule pre-provider RN visit for high risk patients OR complete telephone medication reconciliation if not high risk.
Study | Key barriers: Patients declining in-person visits, RN availability before provider appointments, and ED visits not consistently routing to the follow-up pool.
Act | SmartList creation to capture why patients are declining reconcilliations as well as triggering reconciliation smartphrase use automatically to decrease need for RN to remember to initiate. Exploring low utilization of follow-up dotphrase in HFU encounters. Updating HFU dotphrase to include tracking for telephone medication reconciliation (ONECHHOSPITALMEDREC).

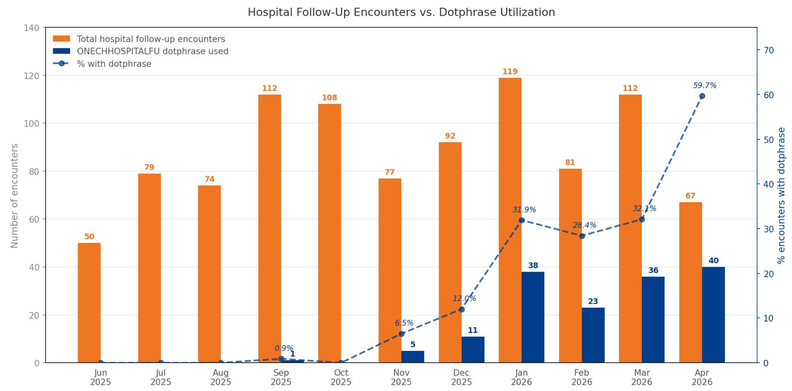

Figure 1: Hospital follow-up encounters compared to HFU dotphrase utilization by nursing staff.

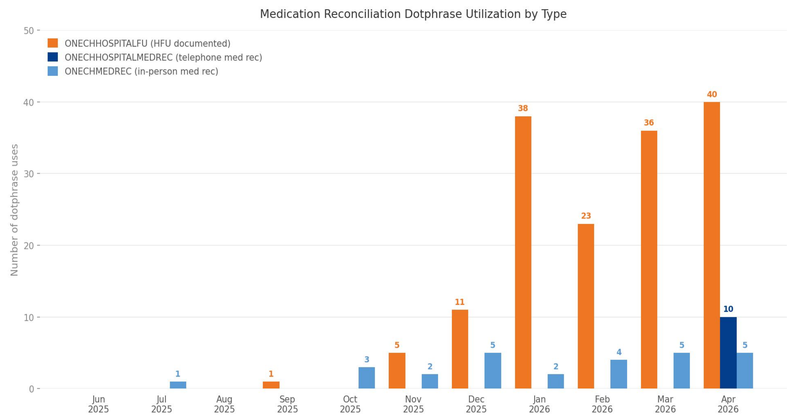

Figure 2: Hospital follow-up smartphrase use compared to completed medication reconciliation.

Results

OCHIN Epic Adult General Risk Score:

- Score derived from evidence-based research on hospital readmission risk factors (Baker 2002, Billings 2012, Hasan 2009, others) in partnership between Epic's clinical team and the Epic community
- Score inputs: Age (1–2 pts), Medicaid status (1 pt), CHF/COPD/diabetes/liver disease (1 pt each), depression (1 pt), recent acute admissions in the last year (up to 3 pts), recent ED visits in the last year (up to 3 pts), no PCP (1 pt)
- Risk stratification: 0–3 = low, 4–5 = medium, ≥6 = high risk (threshold used at OCH to trigger RN med rec)
- It is a validated, computationally simple score with AUC 0.63–0.67, performing comparably to LACE and MELD models

Hospital Follow-up Encounters vs Dotphrase Use:

- September 2025 to April 20, 2026: 756 HFU encounters with 154 ONECHHOSPITALFU dotphrase use
- Rate of 20.4% from start of dotphrase rollout to current
- Since training in December 2025, 28% to ~60% of encounters have the dotphrase utilized.

Medication Reconciliation Dothprase Use:

- Zero telephone reconciliations until April 2026 - HFU dotphrase was not tracking telephone reconciliations.
- Ratio of in-person reconciliation to HFU documented encounters: 17.5%
- Combined reconciliation rate against HFU documented encounters: 24%
- Combined reconciliation against total HFU encounters: 4.9%

Reflections and Future Direction

- You cannot change what you cannot track and tracking (reconciliations, high risk patients, dotphrase utilization) became a pain point in almost every PDSA.
- Improvements in utilization were noted specifically after a training in December and an RN meeting in March. Emphasizing reasoning behind dotphrase versus simply instructing to use led to better uptake.
- Key for project buy-in was to link CMS standards for transition of care visits to capture funding for the clinic.
- Pivoting to team members with more bandwidth allowed for project movement where previously there was little.
- In-person pre-visit RN reconciliations have low uptake: Patients declining, scheduling constraints, limited RN availability
- OCHIN risk score does not always reflect current hospital admission diagnoses (problem list lag)
- Consider pharmacy involvement for all high-risk patients (risk score ≥6 or ≥6 medications) as next PDSA
- SmartList created to track if patient was high risk and then can crossreference use of medication reconciliation dotphrase - data is pending.

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References

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