Deaconess SPECIALTY PHARMACY

Evaluating the Impact of Multi Step Order Transmittal on Preventing Specialty Medication Prescription Errors

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Background

Specialty medication prescriptions are associated with complex dosing regimens which can lead to prescribing errors. Multi Step Order Transmittal (MSOT) is a workflow in the electronic health record that intercepts prescriptions into a work queue for review by specialty pharmacists before they are released to their destination pharmacy.

Objectives

Evaluate the impact of the MSOT workflow on preventing specialty medication prescribing errors.

Primary Endpoint: Quantity of prescribing error interventions made broken down by problem category.

Secondary Endpoints: Total number of incorrect destination pharmacy interventions, top 5 drugs requiring prescribing error interventions and prescribing error interventions made on prescriptions released to an external pharmacy.

Methods

Design
Retrospective observational study conducted after MSOT implementation

Population
Patients with a prescription for a specialty medication routed through MSOT from 1/13/2025-12/14/2025

Interventions
Pharmacists identified prescribing errors and incorrect dispensing pharmacy errors

Figure 1. Multi Step Order Transmittal Workflow

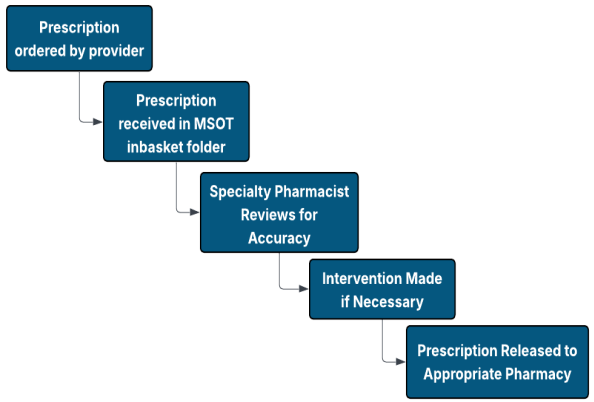


Table 1. Prescription Characteristics

Originating Clinic (Total Count of Interventions)

56% Dermatology (n= 585)
17% Rheumatology (n = 176)
12% Gastroenterology (n=126)
14% Oncology (n = 144)
1% Other (n= 13)

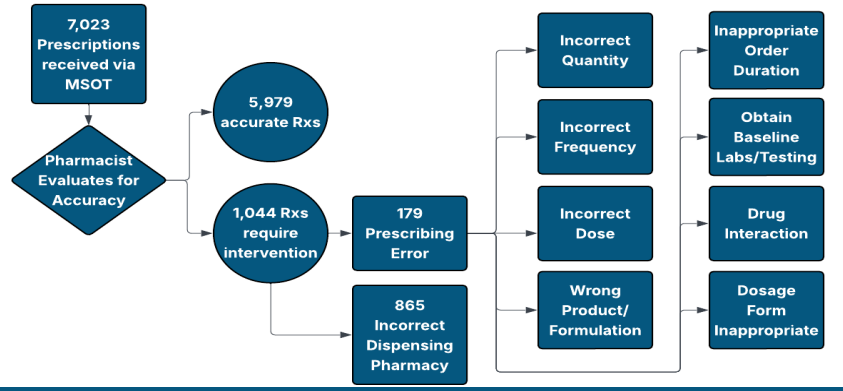
Route of Administration (Prescribing Error Interventions)

82% SQ Injectable n=147
18% Oral Therapy n=32

Conclusion

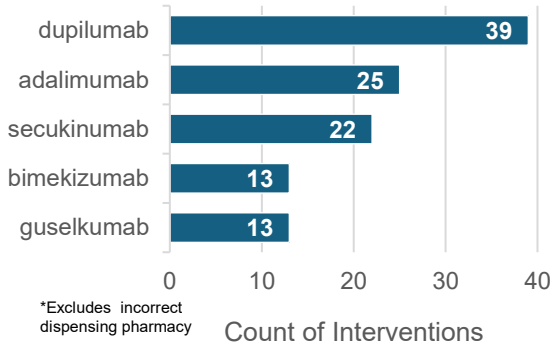
The use of MSOT prevented prescribing errors and prevented prescriptions from being sent to the incorrect pharmacy. MSOT offers an improved workflow for specialty medication prescribing while promoting a more streamlined patient-focused approach. Prescriptions requiring a prescribing error intervention and released to an external pharmacy may or may not have been caught by the dispensing pharmacy. Identifying the top 5 commonly mis-prescribed medications can assist in implementation of order panels in the electronic health record to assist ordering users and reduce errors.

Figure 2. Study Attrition



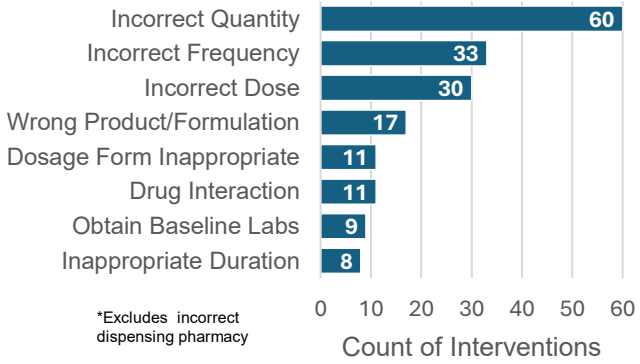
Results

Figure 3. Top 5 Drugs Requiring Intervention



*Excludes incorrect dispensing pharmacy

Figure 4. Prescribing Error Interventions



*Excludes incorrect dispensing pharmacy

Of the 179 prescribing errors, 39% were for prescriptions released to an outside pharmacy where the error may or may not have been caught.

A total of 865 prescriptions required a change in destination pharmacy based on payer mandates, limited distribution status, or patient preference.