



# PREDICTING TIME TO MEDICATION ACCESS FOR HEMATOLOGIC MALIGNANCIES: THE IMPACT OF AN INTEGRATED SPECIALTY PHARMACY AND LIMITED DISTRIBUTION DRUG NETWORKS

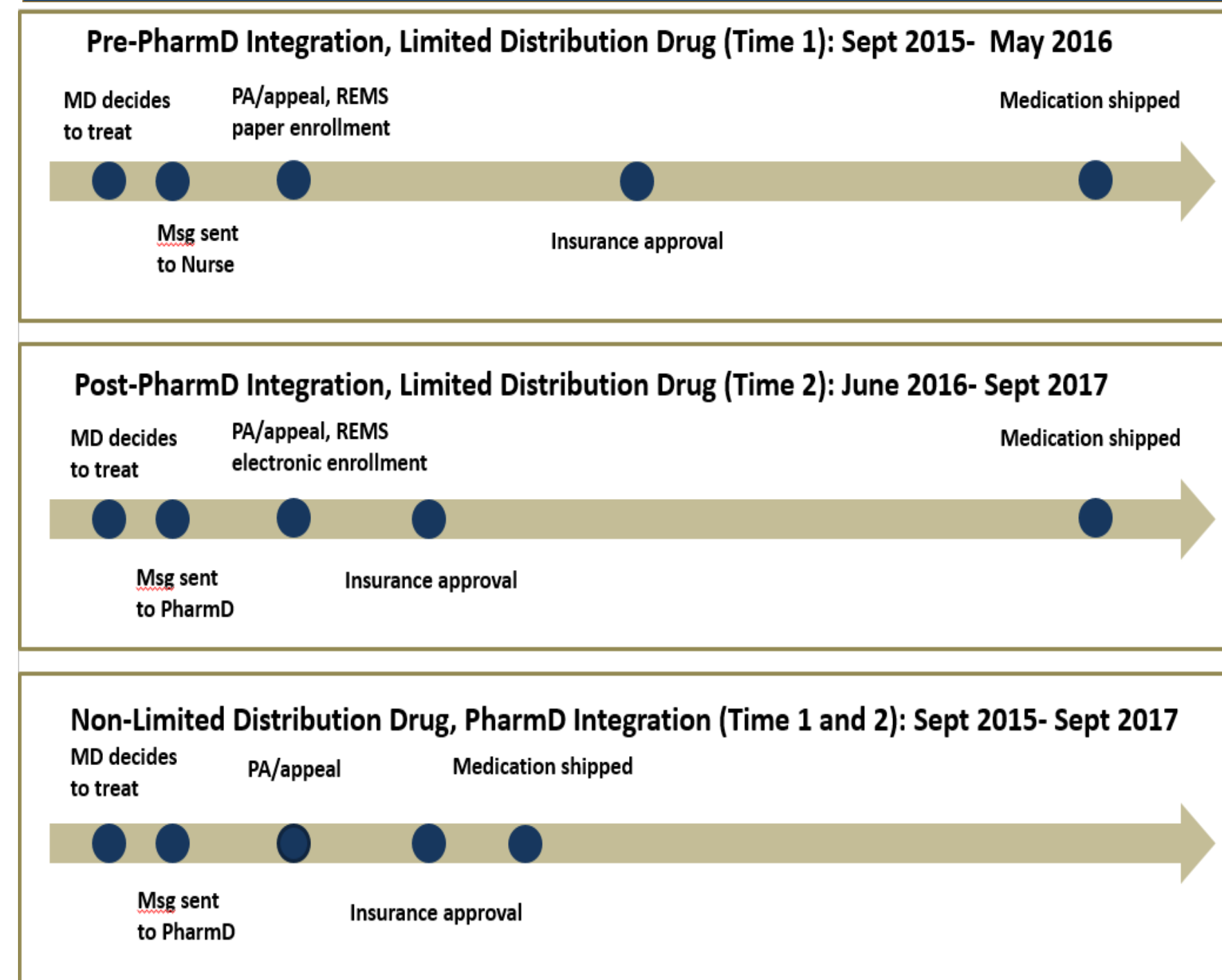
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## BACKGROUND

- Oral anti-neoplastic therapy can be difficult to access due to insurance authorization, out of pocket costs, and limited distribution drugs (LDDs).<sup>1</sup>
- In September 2015, a clinical pharmacist joined the Hematology Clinic at Vanderbilt-Ingram Cancer Center to facilitate timeliness of medications dispensed by Vanderbilt Specialty Pharmacy (non-LDDs).
- The pharmacist's scope expanded to manage LDDs in June 2016 (Workflow shown in Figure 1).

Figure 1. Clinic Workflow by Time Period and Drug Type



## OBJECTIVES

- Compare access time for LDD vs. non-LDD prescriptions
- Assess whether integrating a clinical pharmacist into clinic decreased access time to LDD medications

## METHODS

### Inclusion criteria:

- Oral anti-neoplastic therapy prescribed by a hematology provider to an adult patient between Sept 2015-Sept 2017, excluding uninsured patients or free drug sample recipients.

### Primary outcome:

- Time (in days) from treatment decision to medication shipment

### Statistical analysis:

- Proportional odds logistic regression to test whether access time was associated with drug type (LDD vs. non-LDD), Time Period (Time 1: 9/2015-5/2016; Time 2: 6/2016-9/2017), and Drug Type\* Time Period, controlling for off-label use and insurance type.

## RESULTS

Table 1. Characteristics of Prescriptions (n=410)

	Time 1 (n=119) n (%)	Time 2 (n=291) n (%)
<b>Insurance</b>		
Commercial	70 (59%)	143 (49%)
Government	49 (41%)	148 (51%)
<b>Combination Therapy</b>		
Yes	9 (8%)	31 (11%)
No	110 (92%)	260 (89%)
<b>Off Label</b>		
Yes	10 (8%)	36 (12%)
No	109 (92%)	255 (88%)
<b>Drug Type</b>		
Non-LDD	89 (75%)	196 (67%)
LDD	30 (25%)	95 (33%)
<b>Common Medications</b>		
<b>LDD:</b>		
Revlimid®	23 (19%)	60 (21%)
Pomalyst®	7 (6%)	35 (12%)
<b>Non-LDD:</b>		
Imbruvica®	30 (25%)	41 (14%)
Ninlaro®	16 (13%)	39 (13%)
Jakafi®	17 (14%)	36 (12%)

### Primary Outcome

Median time from treatment decision to shipment:

- 6 days (IQR: 3-9) for LDD
- 3 days (IQR: 1-6) for non-LDD

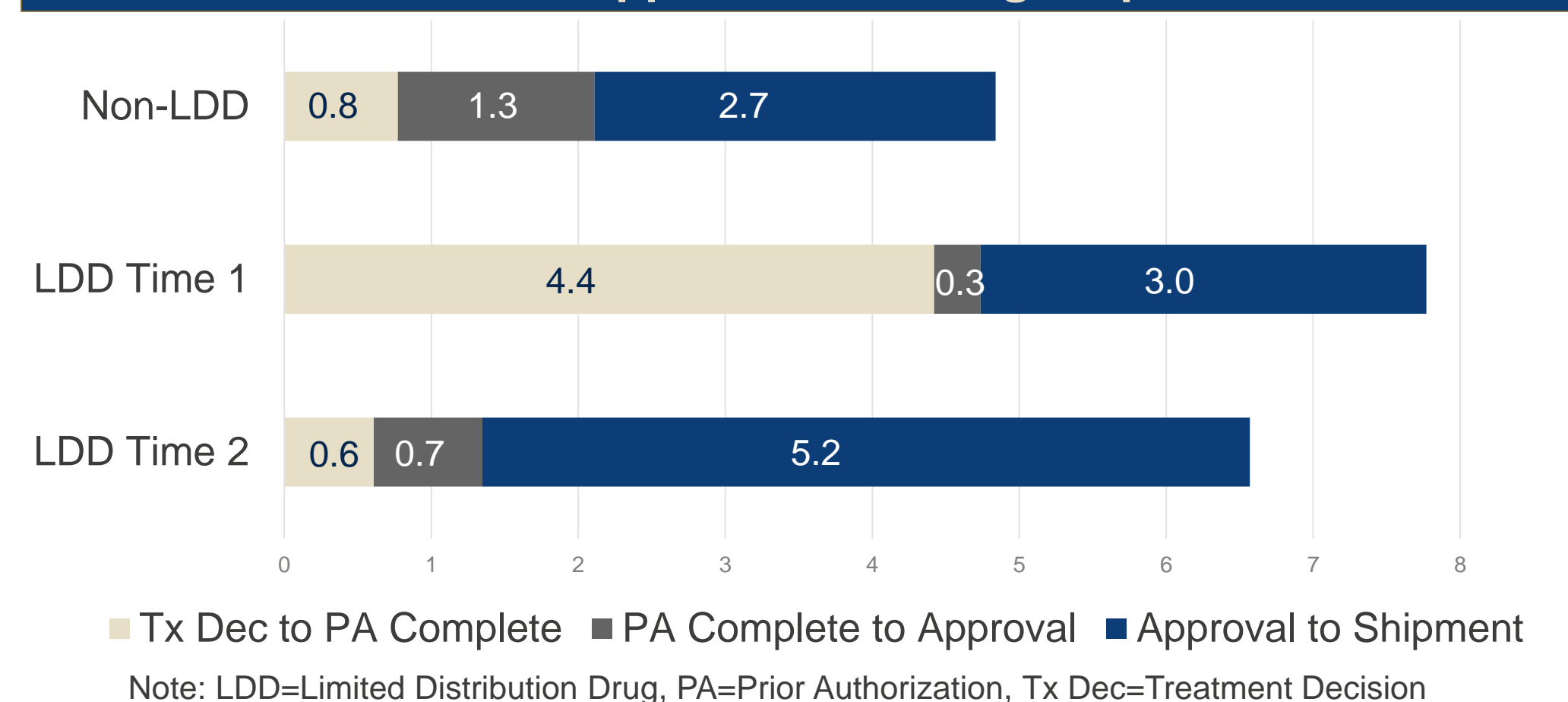
Predictors of Medication Access Time (Table 2)

- Longer access time for off-label than on-label indications
- In Time 1, time from treatment decision to shipment was significantly longer for LDD than non-LDD drugs
- For LDD drugs, access time reduced from Time 1 to Time 2

Table 2. Proportional Odds Logistic Regression testing predictors of Medication Access Time

Predictor	Odds Ratio	Lower CI	Upper CI	p-value
Time 2 vs. Time 1	1.34	0.86	2.09	0.191
LDD vs. Non-LDD	6.56	3.07	14.04	<0.001
Off-label vs. on-label	2.59	1.47	4.55	0.001
Government vs. Commercial Insurance	1.02	0.72	1.44	0.905
Time 2 * LDD	0.41	0.17	0.96	0.040

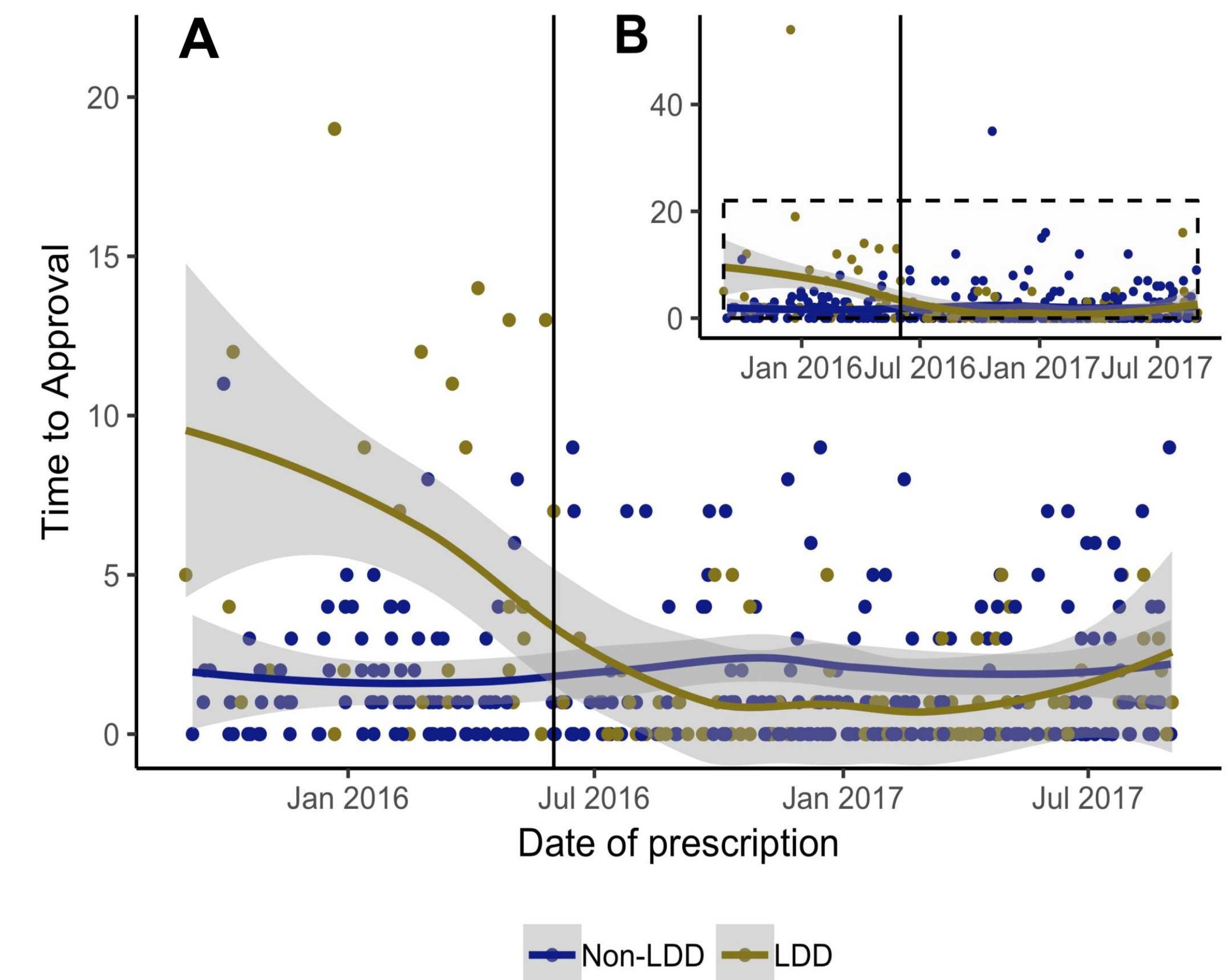
Figure 2. Mean Days between Treatment Decision, PA Completion, Insurance Approval, and Drug Shipment



100% of insurance appeals were approved (5 in Time 1, 23 in Time 2)

## RESULTS

Figure 3. Time from Treatment Decision to Insurance Approval: Time 1 {A} vs. Time 2 {B}



## CONCLUSION

- Integrating a pharmacist into clinic significantly shortened time from treatment decision to shipment for LDD drugs, partially overcoming access barriers.
- Access to these drugs is still slower than non-LDD medications as they cannot be fully integrated into clinic workflow. The integrated specialty pharmacy program at VSP adds value to patient access and outperforms LDD medications, challenging the value of LDD networks beyond medical economics.

References:

1. Schwartz RN, Eng KJ, Frieze DA, et. al. NCCN Task Force Report: Specialty Pharmacy: J Natl Compr Canc Netw.2010 v. 8, p. S-1-S-12.