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Rifaximin (Xifaxan) therapy initiation during hospitalization and access facilitation at discharge

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Background

- Hepatic encephalopathy (HE) describes a spectrum of potentially reversible neuropsychiatric abnormalities in patients with liver dysfunctions or portal systemic shunt. Patients with overt HE (OHE) often present with impaired cognition, confusion, personality changes, impaired memory, or coma.
- The 2014 American Association for Study of Liver Diseases/European Association for Study of Liver Diseases guidelines for OHE management recommend rifaximin as an add-on therapy to lactulose for recurrent OHE. However, previous data have shown many patients, who were admitted with OHE-related problems, did not receive rifaximin as maintenance outpatient therapy at time of discharge. One major barrier to this is cost. Prescription benefits frequently require prior authorization for coverage of rifaximin or produce large copays. This leads to hesitancy with both rifaximin therapy initiation during inpatient admission and/or outpatient continuation upon discharge due to assumed unaffordability and prior authorization barriers, despite appropriate indication.
- Recently, a transition-of-care program, Discharge Medication Access Services (DMAS), was developed and implemented by Health System integrated Outpatient Pharmacies (HSOPs) at two tertiary hospitals to minimize this interruption and encourage appropriate guideline-based prescribing. This service proactively identifies and resolves coverage and affordability barriers for patients initiated on high-cost medications, such as rifaximin, during their admission.

Purpose

- To evaluate the impact of the DMAS implementation on rifaximin access at discharge in patients with OHE

Outcomes

- Primary outcomes
 - Percentage of patients with indication for rifaximin continuation at discharge who successfully accessed rifaximin pre- and post-implementation of DMAS
- Secondary outcomes
 - Percentage of patients with interventions pre- and post- DMAS
 - Percentage of patients with rifaximin prescribed at discharge
 - Patient retention rate after discharge (defined as patients with at least one refill dispensed at HSOPs)

Methods

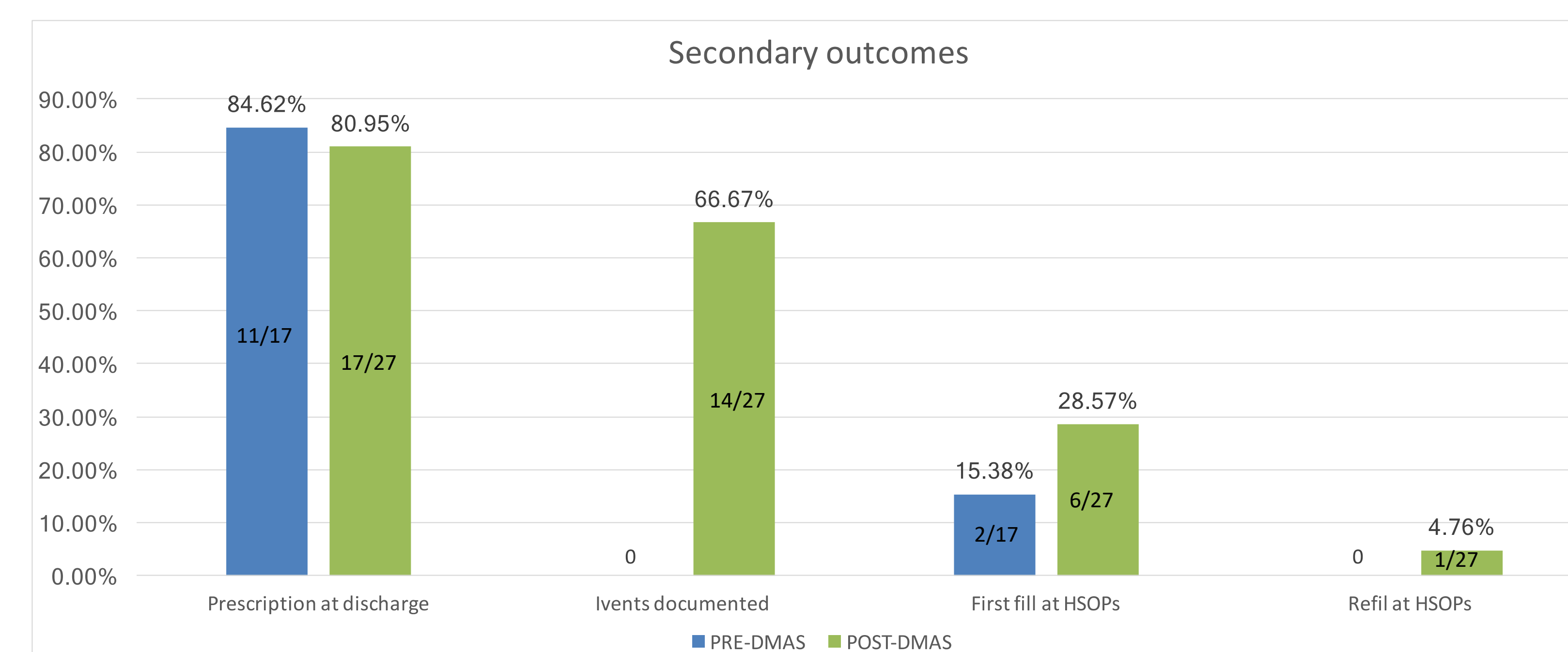
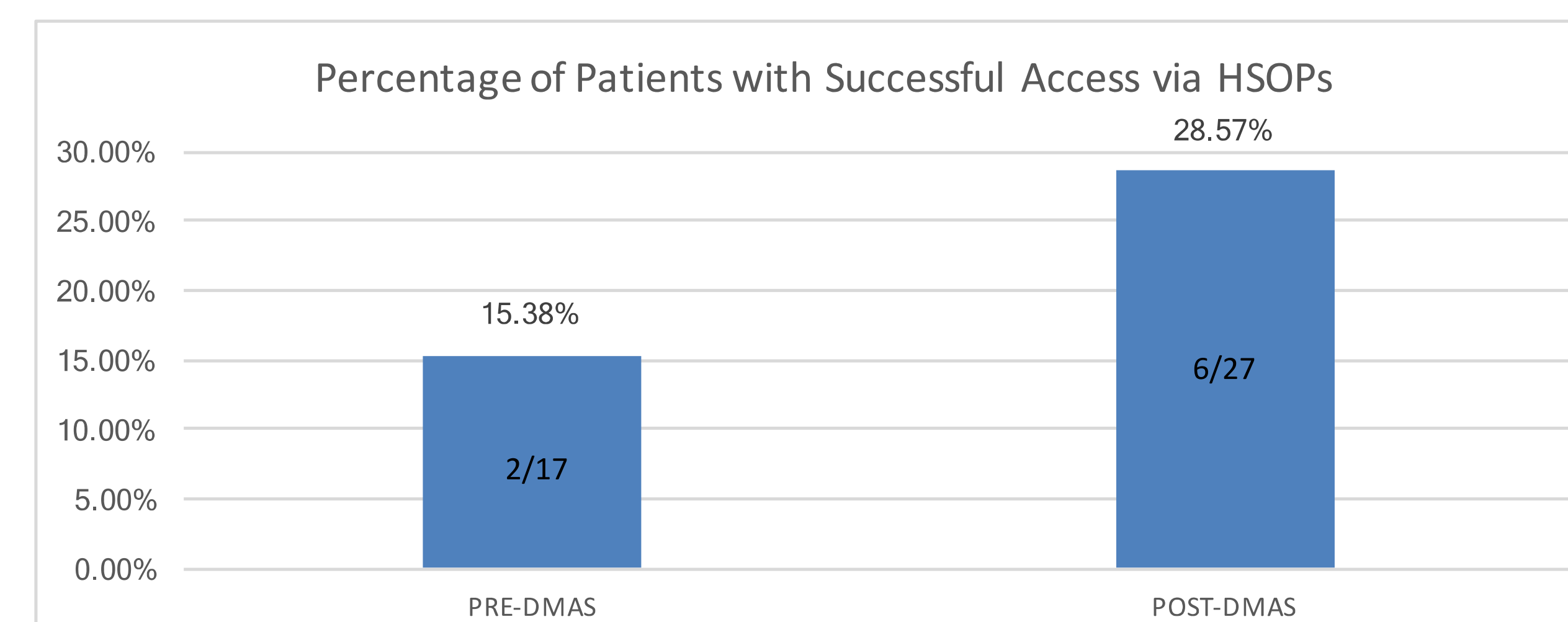
- Study design
 - Retrospective chart review
 - Study period: Oct 1st, 2020 – Oct 31st, 2021
 - Pre-DMAS: Oct 1st, 2020-Mar 29th, 2021
 - Post-DMAS: Mar 29th, 2021 – Oct 31st, 2021
- Inclusion criteria
 - Adults (≥18 years) with history of OHE admitted to two tertiary hospitals during the defined time periods
 - Active lactulose orders and initiated on rifaximin during admission
- Exclusion criteria
 - Pediatric patients (age <18 years)
 - Had an active order of rifaximin prior to admission
 - Expired during hospital admission
- DMAS intervention
 - Defined as obtaining a prescription override or attempting a prior authorization by pharmacy technicians at HSOPs and documented in patients' electronic health records

Baseline Characteristics

	TOTAL (N = 44)	PRE-DMAS (n = 17)	POST-DMAS (n = 27)	P value
Mean age (SD)	60.09 (10.91)	60.24 (10.15)	60 (11.55)	0.945
Female (n, %)	20 (45.45)	6 (35.29)	14 (51.85)	0.345
Patients indicated for rifaximin continuation upon discharge (n, %)	34 (77.27)	13 (76.47)	21 (77.78)	1

Outcome Summary

	TOTAL (N = 44)	PRE-DMAS (n = 17)	POST-DMAS (n = 27)	P value
Primary outcome				
Successful first fill at HSOPs (n, %)	8 (23.53)	2 (15.38)	6 (28.57)	0.449
Secondary outcomes				
Intervention documented (n, %)	14 (41.18)	0	14 (66.67)	<0.001
Prescription at discharge (n, %)	28 (82.35)	11 (84.62)	17 (80.95)	1
Refill at HSOPs (n, %)	1 (2.94)	0	1 (4.76)	1



Discussion

Results

- Patient baseline characteristics were similar between groups
 - Total of 44 patients were included
 - Mean age 60 years old
 - 77% of patients indicated for rifaximin continuation upon discharge
- Primary outcomes
 - No significant difference before and after DMAS implementation when assessing the rate of successful access to the first fill of rifaximin via HSOPs at discharge (15% pre-DMAS vs. 28% post-DMAS)
- Secondary outcomes
 - In the post-implementation phase, among 21 patients indicated to continue rifaximin at discharge, 14 patients (67%) had pharmacy interventions to facilitate access at discharge. This could be because some patients opted not to use HSOP service or loss to follow up.
 - No significant difference in the percentage of rifaximin prescriptions at discharge before and after DMAS implementation or patient retention rate. In the pre-DMAS period, no patients were identified to return for prescription refills. In the post-DMAS period, among 6 patients with first fill at HSOPs, one patient returned for refills. Possible reasons for low retention rate include long geographic distance between patient's home and HSOPs compared to other local pharmacies, patient non-adherence and high co-pay.

Limitations

- Retrospective study with small sample size. As a result, the study was underpowered for assessing primary and secondary outcomes
- This data is limited to patients who opted to use HSOP services only; thus, patients who successfully filled their rifaximin prescriptions at other pharmacies were not represented
- Prescribing hesitancy due to high cost of rifaximin appears to be present, however, insufficient documented information limited the ability to thoroughly assess this aspect from chart review only

Going Forward

- Developing a survey to identify any prescribing hesitancy among inpatient providers due to high cost
- If prescribing hesitancy confirmed, consider providing education to providers regarding DMAS service and how the program can proactively facilitate access prior to discharge to ensure patients will be able to timely fill prescriptions at time of discharge
- Larger study size is needed to assess the significance of the primary and secondary outcomes
- Another area to evaluate in the future is cost analysis and cost savings before and after DMAS implementation

References

1. Ferenci P, Runyon BA, Robson KM. Hepatic encephalopathy in adults: clinical manifestations and diagnosis. UpToDate [internet database]. Waltham, MA: Wolters Kluwer Health. Updated September 22nd 2020. Accessed October 10th 2021.
2. Vilstrup H, Amodio P, Bajaj J et al. Hepatic Encephalopathy in Chronic Liver Disease: 2014 Practice Guideline by AASLD and EASL. 2014;1-74.
3. Bajaj JS, O'Leary JG, Tandon P, Wong F, Kamath PS, Biggins SW, et al. Targets to improve quality of care for patients with hepatic encephalopathy: Data from a multicentre cohort. *Aliment Pharmacol Ther.* 2019;49:1518-1527.
4. Neff Guy W, Frederick RT. Assessing treatment patterns in patients with overt hepatic encephalopathy [Abstract]. *Hepatology.* 2012;56:945A
5. Caraceni P, Vargas V, Sola E et al. The use of rifaximin in patients with cirrhosis. *Hepatology.* 2021;71(1):1-14.