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Follow-up and reasons for extended-release naltrexone discontinuation for alcohol use disorder after hospital initiation

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ABSTRACT

Only 1.9% of the individuals in the USA with alcohol use disorder (AUD) receive medication for AUD. Hospitalisation presents an opportunity to identify patients with AUD and offer treatment. Extended-release naltrexone (XR-NTX) is a Food and Drug Administration-approved medication for AUD that reduces drinking days and heavy drinking days. XR-NTX can reduce healthcare costs, decrease acute care utilisation and increase retention in treatment. We offered and initiated XR-NTX during hospitalisation to patients with moderate-to-severe AUD. We describe the follow-up rates for XR-NTX after hospital initiation and the reasons for XR-NTX discontinuation in the outpatient setting after hospital initiation. We performed a retrospective chart review of 62 hospitalised patients with moderate-to-severe AUD who received XR-NTX between 1 November 2019 and 31 December 2020. Twenty-two patients (35.5%) received ≥1 dose of XR-NTX within the first 3 months of discharge, 22 (35.5%) stopped XR-NTX and 18 (29.0%) did not follow-up. Overall, 44 (71.0%) patients followed up after discharge. Among those that discontinued XR-NTX, the most common reasons were: (1) a preference for oral NTX; (2) clinicians switching patients to oral NTX after patients missed an XR-NTX dose; (3) clinician challenges in prescribing XR-NTX; and (4) patient obstacles to accessing outpatient care. Our study highlights several opportunities to address modifiable reasons to improve access to and retention in XR-NTX treatment.

INTRODUCTION

Only 1.9% of the 28.9 million individuals in the USA with alcohol use disorder (AUD) received AUD pharmacotherapy in the past year.[1] This is a large treatment gap given the 178 307 individuals who die yearly of complications from unhealthy alcohol use.[2] With the increasing prevalence and morbidity related to AUD, hospitalisations for AUD have also increased.[3–5] Thus, hospitalisation presents an opportunity to identify patients with AUD and offer treatment.[6]

Extended-release naltrexone (XR-NTX) is a Food and Drug Administration-approved medication for AUD that reduces drinking days and heavy drinking days.[7] XR-NTX decreases healthcare costs and acute care utilisation, and increases retention in treatment.[8] Compared with oral naltrexone (NTX), XR-NTX adherence may be higher.[9 10] It may not face some of the challenges of oral NTX including: a high attrition rate within the first few months of starting treatment, polypharmacy making it difficult to adhere to daily medications and patients preferring a non-daily AUD medication.[11–13] We offered XR-NTX to hospitalised patients with moderate-to-severe AUD and describe the follow-up rates for XR-NTX after hospital initiation and reasons for XR-NTX discontinuation in the outpatient setting after hospital discharge.

METHODS

This is a retrospective chart review of adults ≥18 years with moderate-to-severe AUD initiated on XR-NTX in an urban, academic safety-net hospital in Northern California with an electronic health record (EHR) between 1 November 2019 and 31 December 2020. We excluded patients who received follow-up care outside our healthcare network due to the inability to access follow-up records. We extracted AUD severity, date of XR-NTX administration and location of XR-NTX follow-up of individuals who received XR-NTX during hospitalisation from the EHR.

Among those assigned to follow-up within our healthcare network, we reviewed the EHR and medication administration record to identify who received ≥1 dose of XR-NTX within the first 3 months of discharge, discontinued XR-NTX or did not follow-up. Among those who discontinued XR-NTX during the first 3 months after initial administration, we abstracted the documented discontinuation reason from the EHR. The author group then reviewed and categorised these by majority consensus.

RESULTS

During the study period, 62 patients received XR-NTX during hospitalisation and had

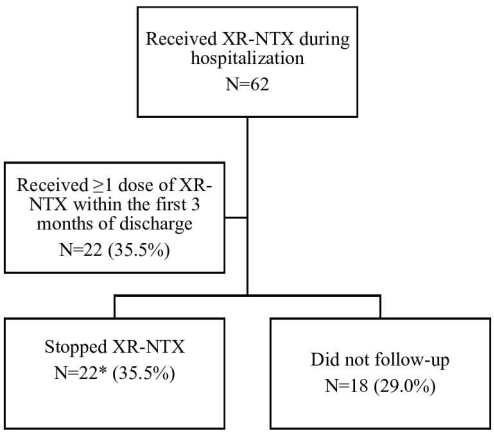

Figure 1 Patients who received extended-release naltrexone (XR-NTX) during hospitalisation and postdischarge XR-NTX course. *Some patients switched to oral NTX.

follow-up care within our healthcare network. Among these, 22 (35.5%) received ≥1 dose of XR-NTX within the first 3 months of discharge, 22 (35.5%) stopped XR-NTX and 18 (29.0%) did not follow-up (figure 1). Overall, 44 (71.0%) patients followed up after discharge. Among the 22 that discontinued XR-NTX, the most common documented reasons included a preference for oral NTX (n=21), clinicians switching patients to oral NTX after a missed XR-NTX dose (n=9), clinician challenges in prescribing XR-NTX (n=8) and barriers to patients accessing outpatient care (n=8) (table 1).

DISCUSSION

We found that about one in three individuals continued XR-NTX for ≥1 dose within 3 months of hospital discharge. In addition, clinicians switched at least nine patients to oral NTX, and 21 patients expressed a preference for oral NTX, although these categories were not mutually exclusive. Thus, the overall rate of either oral NTX or XR-NTX continuation after hospital discharge may be higher.

This paper adds to the literature on inpatient initiation of AUD medications and care transitions from hospital to outpatient settings. There are a limited number of studies on XR-NTX for AUD among hospitalised patients and few that share follow-up rates after hospital initation.[8 14 15] In our study, 71.0% of patients followed up after hospital discharge, with 35.5% continuing XR-NTX. One study showed a follow-up rate of 66.2% among patients who received XR-NTX for AUD.[16] However, the setting was a substance use disorder treatment facility. In a study that implemented XR-NTX in an emergency department, the follow-up rate within 30 days was 27.8%, comparable to our finding and in a similar setting.[17]

Although XR-NTX may not face the same adherence challenges as oral NTX, it requires at least monthly follow-up. One study showed that AUD is associated with lower rates of postdischarge follow-up, which may affect medication

Table 1 Scenarios for XR-NTX discontinuation after hospital initiation

Reason for XR-NTX discontinuation*	Number of individuals identifying this scenario*	Clinical scenario examples
Preferred oral NTX	21	▶ Avoid adverse effects with XR-NTX injections (eg, injection site reactions, pain, fear of needles) ▶ Patient perceived better efficacy in reducing cravings with oral NTX more than XR-NTX
Clinician switched patients to oral NTX from XR-NTX†	9	▶ Clinicians prescribed oral NTX after a patient missed XR-NTX doses ▶ Patient did not remember when the last dose was
Clinician challenges prescribing XR-NTX†	8	▶ Clinician difficulty ordering XR-NTX from the pharmacy to the clinic for administration ▶ XR-NTX not delivered to the clinic by the patient's appointment ▶ XR-NTX administrator was not available during the clinic appointment ▶ Misinformation regarding XR-NTX insurance coverage
Obstacles to accessing outpatient care†	8	▶ Transportation to clinic ▶ Language barriers in communicating with clinicians ▶ No telephone to initiate, reschedule, or cancel appointment ▶ Lack of or loss of health insurance ▶ COVID-19 shelter in place deterred patients from going to the clinic in person
XR-NTX ineffective	6	▶ XR-NTX did not reduce drinking
XR-NTX effective	5	▶ Patients reported reduced to no alcohol cravings, which led to treatment cessation
Non-NTX treatments preferred	4	▶ Patient preferred non-NTX pharmacotherapy for AUD, such as gabapentin ▶ Patient preference for non-pharmacological approaches
Death	4	▶ Patient death due to any reason
XR-NTX contraindicated	3	▶ Decompensated liver disease ▶ Opioid requirements for pain management
Prioritising non-AUD treatment	2	▶ Patient preference to address other illness prior to focusing on AUD treatment

*Scenarios not mutually exclusive.
†Addressable.
AUD, alcohol use disorder; XR-NTX, extended-release naltrexone.

adherence.[18] Understanding the reasons for XR-NTX discontinuation is important when initiating treatment and connecting patients for follow-up care, as some of these reasons may be addressed during or after hospitalisation.

Our study highlights several addressable reasons for XR-NTX discontinuation. First, missing an XR-NTX dose could be addressed by exploring potential difficulties before discharge, including both outpatient clinic and patient difficulties. Clinics could also develop workflows and appoint clinical champions to implement workflows for XR-NTX, as clinicians identified challenges in prescribing XR-NTX and reinitiating it after missed doses. These could also help address the most common challenges to prescribing XR-NTX including understanding insurance coverage, guaranteeing the timely delivery of XR-NTX to the clinic and having someone administer XR-NTX in the clinic. Hospitals and clinics could help address potential transportation and language barriers before the medication is due and have drop-in hours for those without telephones. These efforts could improve the care transition process and result in increased rates of XR-NTX adherence after hospitalisation. They could also improve patient outcomes given the high morbidity among patients with AUD, as evidenced by four patients dying during the study period.

Our study is limited by its small sample size, limiting generalisability. It is a retrospective review and reports observational data, limiting causality. We were unable to assess reasons for XR-NTX discontinuation among the 18 patients who did not follow-up and this could add additional reasons for XR-NTX discontinuation. Finally, not all hospitals have XR-NTX on formulary. However, hospital champions can advocate for XR-NTX through pharmacy and therapeutics committees and other pathways.

Future studies should consider a prospective design to better understand the reasons for XR-NTX discontinuation and directly compare oral and XR-NTX initiation during hospitalisation. Our study shows an opportunity to engage individuals with AUD during hospitalisation, link them to follow-up care, and address modifiable factors in accessing XR-NTX after hospitalisation.

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Contributors All authors have reviewed and approved this submission and meaningfully contributed to this manuscript. MM co-developed study, interpreted data, co-drafted and edited manuscript, and supervised the study. MS co-developed study, interpreted data and co-drafted the manuscript. JG interpreted data and edited manuscript. TDeF interpreted data and co-drafted the manuscript. MM is the guarantor.

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Patient consent for publication Not applicable.

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