having statistically significant changes in aggression (-1.57, p=0.012) and depression (-2.36, p<0.001), but not in anxiety. Patients with Depression had significant changes in depression (-2.08, p<0.001) and anxiety (-1.96, p<0.001) but not in aggression/agitation, while patients with a Schizophrenia spectrum illness had changes in depression alone (-2.33, p=0.008). Sociodemographic variables had no significant impact.
**Conclusions.** The findings in this study indicate that a short-term progressive muscle relaxation intervention can lead to statistically and clinically significant changes across various symptom domains and in patients with a variety of psychiatric diagnoses, and support the implementation of this non-invasive and budget-friendly exercise.
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# Pooled Analysis of EPS-Like Symptoms in the EMERGENT Program of KarXT in Schizophrenia

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**Introduction.** Although atypical antipsychotics have lowered the prevalence and severity of extrapyramidal symptoms (EPS), they still contribute to the overall side-effect burden of approved antipsychotics. Drugs with novel mechanisms without $D_2$ dopamine receptor blocking activity have shown promise in treating schizophrenia without the side effects of currently available treatments. KarXT (xanomeline–trospium chloride) represents a possible alternative that targets muscarinic receptors. KarXT demonstrated efficacy compared with placebo in 3 out of 3 short-term acute studies and has not been associated with many of the side effects of $D_2$ dopamine receptor antagonists. Here, we further characterize EPS rates with KarXT in these trials.
**Methods.** EMERGENT-1 (NCT03697252), EMERGENT-2 (NCT04659161), and EMERGENT-3 (NCT04738123) were 5-week, randomized, double-blind, placebo-controlled, inpatient trials in people with schizophrenia experiencing acute psychosis. Data from the safety populations, defined as all participants who received ³1 dose of trial medication, were pooled. For this analysis, we used a broader definition of EPS-related adverse events (AEs) to encompass any new onset of dystonia, dyskinesia, akathisia, or extrapyramidal disorder reported any time after the first dose of medication. Additionally, EPS were assessed by examining change from baseline to week 5 on the Simpson-Angus Scale (SAS), Barnes Akathisia Rating Scale (BARS), and Abnormal Involuntary Movement Scale (AIMS).
**Results.** A total of 683 participants (KarXT, n=340; placebo, n=343) were included in the analyses. The rate of treatment-emergent AEs (TEAEs) associated with EPS was 3.2% in the KarXT group vs 0.9% in the placebo group. The most commonly reported TEAE was akathisia (KarXT, 2.4%; placebo 0.9%); half of possible akathisia cases in the KarXT group (4/8 TEAEs) were from a single US site, considered by the investigator to be unrelated to trial drug, and resolved without treatment. Overall rates of akathisia TEAEs deemed related to trial drug were low (KarXT, 0.6%; placebo 0.3%). Dystonia, dyskinesia, and extrapyramidal disorder TEAEs were reported by only a single subject each (0.3%) in the KarXT arm. All reported TEAEs were mild to moderate in severity. KarXT was associated with no clinically meaningful mean±SD changes from baseline to week 5 on the SAS (-0.1 ±0.6), BARS (-0.1±0.9), or AIMS (0.0±0.7).
**Conclusions.** The incidence of EPS-related TEAEs with KarXT was low in comparison to those observed in similar trials of antipsychotics ($D_2$ dopamine receptor antagonists), although head-to-head studies have not been completed. Moreover, KarXT was not associated with increased scores on EPS scales (SAS, BARS, AIMS) across 5 weeks of treatment. These results, combined with the robust efficacy of KarXT in trials to date, suggest that KarXT's novel mechanism of action may provide therapeutic benefit in the absence of EPS frequently associated with currently available antipsychotics.
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# Assessment of Underdiagnosis of Tardive Dyskinesia by Geographic Region, Social Determinants, and Other Patient Characteristics

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**Introduction.** Tardive dyskinesia (TD) is a hyperkinetic movement disorder associated with antipsychotics (APs).
**Objective.** To estimate TD diagnosis rates across geographic regions of the United States (US) among adults who use APs.
**Methods.** In this retrospective cohort study, patients with ≥1 AP claim (≥30-day supply) followed by TD diagnosis (index date) aged ≥18 years at index date with ≥12 months of continuous insurance eligibility after index date and geographic location information were identified in the IBM MarketScan© commercial insurance database (2012– 2019). Additional information was collected from the US census, the Internal Revenue Service, and the Centers for Medicare & Medicaid Services. . Observed TD diagnosis rates were estimated by metropolitan statistical area (MSA; ie, a major city and surrounding geographic areas linked by socioeconomic factors with ≥50,000 individuals). A weighted multivariable linear regression model was used to calculate

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