Planned Deprescribing to Protect Health Systems in Pandemics and Other Disasters: A Scoping Review

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Abstract

Background. How can psychiatrists best provide care in complex, sometimes overwhelming disasters? COVID-19 strained every aspect of health care to the breaking point, from finances to pharmaceutical supply lines. We can expect more challenges to prescribing in the future, as shown by recent hurricanes in Puerto Rico, fires in California, and ice storms in Texas. When medications become scarce or inaccessible, then clinicians need to make difficult prescribing decisions. We suggest that a culture of deprescribing, a systematic approach to reducing or simplifying medications, could be applied to a wide variety of crises. Deprescribing is defined as the planned reduction of medications to improve patient health or to reduce side effects (see deprescribing.org). It has been used to reduce polypharmacy in geriatric and other complex populations. It provides evidence-based guidance for phasing out many classes of medications. It is part of the larger program to reduce waste in health care and to make pharmacy more rational. Disasters and resource scarcity, however, require a different approach. In contrast to routine care focused on individual patients, crisis standards of care (CSC) shift the clinical focus to the community. Instead of deprescribing guidelines for individual clinicians, CSC deprescribing would be national policies addressing shortages of important medications. We did a scoping review looking for studies of deprescribing in a crisis.

Methods/Results. We extracted 1340 references in Google Scholar 2016 to 2021 using (deprescribing) AND (disaster OR crisis OR climate OR pandemic OR supply lines). A scan of texts found 160 references matching our criteria, and only 19 of them addressed deprescribing as a strategy to strengthen health systems or providers in an emergency. Most of those were related to scarce supplies during COVID, and a few addressed the carbon impact of medications. We also reviewed related literatures on medication supply chain vulnerabilities, WHO Essential Medicines, and healthcare rationing.

Implications. Deprescribing gained attention during the COVID pandemic, responding to both disrupted supply lines and improving patient safety. Writers concerned with climate change support deprescribing to reduce the carbon impact of medications. Deprescribing as crisis policy could help streamline national stockpiles, supply chains, and manufacturing. Education could make deprescribing second nature for clinicians, potentially decreasing stress and increasing flexibility in future emergencies. Barriers to deprescribing generally include cultural inertia, industry lobbyists, education, and malpractice fears. In a crisis, deprescribing guidelines could provide clinicians with confidence and flexibility while conserving scarce resources. Research is needed to evaluate deprescribing guidelines for crises, especially ensuring equity in how they reduce polypharmacy and save money.

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Dose Patterns for Long-Term Deutetrabenazine Treatment in Patients With Tardive Dyskinesia by Baseline AIMS Item 8 Score

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Abstract

Introduction. The mechanism of tardive dyskinesia (TD) is complex and not well understood. Dopamine-receptor blockade in the nigrostriatal pathway may lead to a hyperdopaminergic state that can interfere with mechanisms of movement control, leading to TD. Medications for the treatment of movement disorders, including TD, typically require fine-tuning of doses to optimize control of abnormal movements; however, doses are often not titrated sufficiently. The vesicular monoamine transporter 2 inhibitor deutetrabenazine is an FDA-approved treatment for TD in adults. This post hoc analysis examined dosing patterns in patients with TD according to baseline Abnormal Involuntary Movement Scale (AIMS) item 8 score, a clinician-rated global judgment of the overall severity of abnormal movements.

Methods. Patients who completed the pivotal 12-week studies, ARM-TD and AIM-TD, were eligible to enroll in the 3-year, open-label extension study. Deutetrabenazine was initiated at 12 mg/day and titrated in a response-driven manner on a weekly basis in intervals of 6 mg/day for 6 weeks, up to a maximum dose of 48 mg/day, based on dyskinesia control and tolerability. Further dose adjustments during the long-term maintenance period were permitted on a weekly basis. Subgroups were defined by AIMS item 8 scores of either 0/1/2 or 3/4 at baseline. Total daily dose categories and treatment exposure over time were evaluated in each subgroup.

Results. A total of 336 patients were included in the analysis (baseline AIMS item 8 scores 0/1/2, n = 117; scores 3/4, n = 219). At week 15, the proportions of patients by deutetrabenazine total daily dose (mg) for scores 0/1/2 and 3/4, respectively, were: <24, 10% and 3%; ≥24 to ≤36, 41% and 48%; >36 to ≤48, 49% and 49%. At week 54, proportions by total daily dose (mg) for scores 0/1/2 and 3/4, respectively, were: <24, 11% and 4%; ≥24 to ≤36, 42% and 41%; >36 to ≤48, 46% and 55%; >48, 1% and 0. Similar patterns were observed at weeks 106 and 145 across total daily dose categories. For scores 0/1/2, mean ± SE total daily dose (mg) at weeks 15, 54, 106, and 145, respectively, was 36.9 ± 1.04 (n = 108), 37.1 ± 1.22 (n = 90), 37.7 ± 1.32 (n = 76), and 37.9 ± 1.44 (n = 64). For scores 3/4, mean ± SE total daily dose (mg) at weeks 15, 54, 106, and 145, respectively, was 39.2 ± 0.65 (n = 186), 39.8 ± 0.75 (n = 150), 40.3 ± 0.88 (n = 112), and 40.5 ± 0.99 (n = 97).

Conclusion. Dosing decisions in the treatment of TD are individualized, as treatment response is likely driven by complex factors. Findings from this analysis suggest that in order to

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achieve adequate control of TD symptoms, patients benefit from response-driven titration of deutetrabenazine to doses >24 mg/day, regardless of the baseline severity of abnormal movements assessed by AIMS item 8. These results highlight the importance of patient-driven titration of deutetrabenazine until adequate movement control is achieved, while maintaining safety/tolerability in the treatment of TD.
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Weight Gain and Comorbidities Associated with Oral Second-Generation Antipsychotics: Analysis of Patients with Bipolar I Disorder or Schizophrenia

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Abstract

Objective. Clinically significant weight gain (CSWG) is associated with increased morbidity and mortality. This study describes CSWG and comorbidities observed in patients with bipolar I disorder (BD-I) and schizophrenia (SZ) after initiating select second-generation antipsychotics (SGAs).
Methods. Percent change in weight, CSWG (=7% weight increase), and incident comorbidities within 12 months of treatment were assessed among patients initiating oral SGAs of moderate-to-high weight gain risk using medical records/claims (OM1 Real-World Data Cloud; January 2013-February 2020). Oral SGAs included clozapine (SZ), iloperidone (SZ), paliperidone (SZ), olanzapine, olanzapine/fluoxetine (BD-I), quetiapine, and risperidone. Outcomes were stratified by baseline body mass index and reported descriptively.
Results. Among patients with BD-I (N = 9142) and SZ (N = 8174), approximately three-quarters were overweight/obese at baseline. During treatment (mean duration = 30 weeks), average percent weight increase was 3.7% (BD-I) and 3.3% (SZ). Average percent weight increase was highest for underweight/normal weight patients (BD-I = 5.5%; SZ = 4.8%), followed by overweight (BD-I = 3.8%; SZ = 3.4%) and obese patients (BD-I = 2.7%; SZ = 2.3%). Within 3 months of treatment, 12% of all patients experienced CSWG. A total of 11.3% (BD-I) and 14.7% (SZ) of patients developed coronary artery disease, hypertension, dyslipidemia, or type 2 diabetes within 12 months of treatment; development of comorbidities was highest among overweight/obese patients and those with CSWG.
Conclusions. Patients who were underweight/normal weight at baseline had the greatest percent change in weight during treatment. Increased comorbidities were observed within 12 months of treatment, specifically among overweight/obese patients and those with CSWG. The magnitude of weight gain and development of comorbidities were similar for patients with BD-I and SZ.
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Timely Depression, Suicide Screening, and Transition of Care Coordination in an Addiction Treatment Setting

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Abstract

Background. People with substance use disorders (SUDs) experience higher rates of depression and suicide and lack primary care providers (PCP).
Local Problem. Twenty chart audits at the St. Lawrence Addiction Treatment Center (SLATC) showed 65% (n = 11) of SUD patients lacked a PCP. Standardized screening tools and timely appointments were lacking. The aim was to increase timely scheduled psychiatric appointments for SUD patients at discharge by 80% within 90 days.
Methods. A 90-day rapid cycle improvement project with plan-do-study-act was the process for improvement. Data were collected with four interventions from screening, checklist, patient, and team engagement concurrently. Run charts, spreadsheets, and aggregate data were interpreted for timely care. Interventions: Screening tools evaluated risks for depression and suicide. If patients screened positive, a decision aid was used for patient education. Discharge Care Coordination Checklist was used as a quality tool tracking all patients. The Project Briefing Tool and team engagement activities were used to improve participation.
Results. Screening tools were spread with 125 screenings showing 53 positives for depression and four positives for suicide. After using the decision aid, 24 (45.2%) chose depression medications, 29 (52.8%) chose complementary alternative medicine, and one patient chose neither. Of the 125 patients on the Discharge Care Coordination Checklist, 43.2% (n = 54) were scheduled with appointments, The Project Briefing Tool improved participation.
Conclusion. Standardized screening tools, CAM, and co-creation activities improved timeliness of care. A further study for the impact of mental health services for relapse prevention was recommended.
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