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