LETTERS TO THE EDITOR

Abrupt Discontinuation of Long-Term Opioid Therapies Among Privately Insured or Medicare Advantage Adults, 2011–2017

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Dear Editor,

The past decade has seen a rapid decline in opioid prescribing at the population level [1]. Although this trend reflects a reversal from the tripling of opioid sales in the previous decade [2], there is mounting concern that the current decline may have negatively affected some patients receiving long-term opioid therapies (LTOTs). Specifically, abrupt discontinuation of LTOTs without proper tapering can lead to opioid withdrawal, uncontrolled pain, and opioid seeking from nonmedical and illegal sources [3]. Such unintended consequences, if found, would be particularly concerning among patients with active cancer treatment, as opioids remain first-line pain management strategies for these patients and because many guidelines and policies addressing opioid prescribing do not apply to this population [4]. We report on recent trends in abrupt discontinuation of LTOTs among the general, noncancer adult population and among adult patients with active cancer diagnoses.

We used the 2011–2017 Health Care Cost Institute claims database containing all claims from three large national insurers—Aetna, Humana, and UnitedHealthcare—and accounting collectively for approximately 30% of all privately insured adults and close to 50% of Medicare Advantage enrollees nationwide. Prescription opioid episodes were determined by grouping opioid prescriptions (filled and covered by insurance);

an episode was considered “discontinued” if there was a gap of 30 days or more. As our measures are based on filled prescriptions, the discontinuation defined in our study should not be interpreted to reflect intended discontinuation by providers. Episodes lasting 90 days or more were considered LTOT episodes [5]. Episodes with an active cancer diagnosis were determined when a patient had at least one diagnosis of malignancy during the calendar month prior to the start of the episode, the month of the start, or the month after. Thus, patients without an active cancer diagnosis (but possibly with cancer-related pain) were grouped with the “noncancer” groups. Abrupt discontinuation of LTOTs was assessed by two alternative scenarios. First, we determined whether the daily morphine milligram equivalents (DMMEs) over the last 30 days of the episode were 60 or higher. Patients receiving DMMEs of 60 or higher for a week or longer are considered opioid tolerant and thus are at a high risk of developing withdrawal when opioid therapy is discontinued [6]. Although guidelines on opioid tapering do not specify a “safe dose” before LTOTs can be safely discontinued and typically recommend tapering after the lowest possible dose is reached, DMMEs of 60 or greater are likely much higher than the lowest possible dose [4, 7]. Discontinuing LTOT with a DMME of 60 or higher thus strongly suggests abrupt discontinuation without adequate tapering. Second, we assessed direct evidence for opioid tapering prior to

Figure 1. Quarterly trends in proportion of long-term episodes with a DMME of 60 or more over the last 30 days of the episode by patient age and presence of an active cancer diagnosis. Source: Authors' analysis of the Health Care Cost Institute claims database. DMME = daily morphine milligram equivalent. Note: Long-term opioid episodes were indexed to a calendar quarter based on the starting date of the episode. DMME in the last 30 days of an episode was determined by first allocating morphine milligram equivalents to each day of the episode based on starting and ending dates of prescriptions, determining the total MMEs over the last 30 days, and dividing by 30. An active cancer diagnosis was determined if the patient had at least one diagnosis of malignant cancer during the calendar month prior to the start of the episode, the month of the start, or the month after.

discontinuation, where tapering was determined if the DMME over the last 30 days of the LTOT was at least 10% lower than the DMME in the previous 30 days. Guidelines recommend slower tapers for patients with LTOT at a rate as slow as 10% every month [4]. Lack of dose reduction by at least 10% over the last 2 months of the LTOT thus strongly suggests lack of tapering prior to discontinuation. We plotted trends in these two measures for LTOT episodes that started between the second quarter of 2011 and the second quarter of 2017 by active cancer diagnosis and by age (<65 vs ≥65).

During the 24 quarters from the second quarter of 2011 to the second quarter of 2017, the total number of LTOT episodes increased from 765,382 to 1,002,074 in the noncancer group and from 71,520 to 123,837 in the active cancer diagnosis group. Among the noncancer episodes, the proportion receiving a high daily dose prior to discontinuation ($\text{DMME} \geq 60$) increased slightly over time. This proportion was more than 50% higher among younger (0.19 in the second quarter of 2017) vs older (0.12) patients (Figure 1). The proportion of episodes without tapering prior to discontinuation was as high as 79% in early 2011 and increased during the study period (Figure 2). Compared with younger patients, older patients were more likely to experience discontinuation of LTOT without tapering. Episodes in the active cancer diagnosis group followed similar trends and differences by age. However, cancer episodes were almost twice as likely (for younger patients) and approximately 50% more likely (for older patients) than noncancer episodes to have ended with a DMME of 60 or higher. Furthermore, there was an accelerated increase in this

outcome for cancer episodes starting in the third quarter of 2014.

We found an alarmingly high proportion (80–90%) of LTOT episodes (both with and without active cancer diagnoses) that, when discontinued, showed little or no sign of tapering. Episodes with a shorter duration (90–179 days) had slightly lower no-taper rates (70–80%) compared with episodes that lasted for at least 180 days (data available upon request). Although older patients were less likely to have LTOT episodes discontinued at a high dose (probably because of their overall lower dose of opioid therapies), they were even more likely to experience discontinuation without tapering. It is possible that clinicians may view discontinuation as being more warranted for older patients (to mitigate opioid-related adverse outcomes such as falls and constipation that disproportionately affect older patients) and as being at a lower risk of withdrawal (because of the lower dose taken by older patients) [8]. Whether older patients are especially vulnerable to abrupt discontinuation of LTOTs should be more closely examined in future studies.

LTOT episodes with an active cancer diagnosis were 50–100% more likely, compared with noncancer episodes, to have ended at a DMME of 60 or higher, subjecting patients to substantial risk of opioid withdrawal and related harm. This proportion has continued to increase in recent years. Anecdotal evidence suggests declining access to opioid therapies by patients with active cancer treatment despite explicit exclusion of these patients from clinical guidelines targeting noncancer chronic pain. Our data provide early evidence that access to LTOTs by patients with an active cancer diagnosis

Figure 2. Quarterly trends in proportion of long-term episodes with no sign of tapering by patient age and presence of an active cancer diagnosis. Source: Authors' analysis of the Health Care Cost Institute claims database. Note: Long-term opioid episodes were indexed to a calendar quarter based on the starting date of the episode. No tapering at discontinuation of a long-term episode was determined if the daily morphine milligram equivalents (DMMEs) over the last 30 days were not at least 10% lower than the DMMEs in the previous 30 days. An active cancer diagnosis was determined if the patient had at least one diagnosis of malignant cancer during the calendar month prior to the start of the episode, the month of the start, or the month after.

may have been increasingly compromised in recent years. Patients without an active cancer diagnosis but with cancer-related chronic pain, which we do not study specifically, are an increasing population and should be a focus of future research.

Our analysis revealed a high prevalence of abrupt discontinuation of LTOTs at the population level and calls for special attention to mitigate this risk, particularly for patients with an active cancer diagnosis and older patients. Future studies should specifically assess the implications of LTOT discontinuation for patient populations for whom comparative risks and benefits are expected to vary.

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