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The Impact of Opioid Risk Reduction Initiatives on High-Dose Opioid Prescribing for Patients on Chronic Opioid Therapy

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Abstract: **Avoiding high opioid doses may reduce chronic opioid therapy (COT) risks, but the feasibility of reducing opioid doses in community practice is unknown. Washington State and a health plan's group practice implemented initiatives to reduce high-dose COT prescribing. The group practice physicians were exposed to both initiatives, whereas contracted physicians were exposed only to statewide changes. Using interrupted time series analyses, we assessed whether these initiatives reduced opioid doses among COT patients in group practice (n = 16,653) and contracted care settings (n = 5,552). From 2006 to June 2014, the percentage of COT patients receiving ≥120 mg morphine equivalent dose declined from 16.8% to 6.3% in the group practice versus 20.6 to 13.6% among COT patients of contracted physicians. The proportion receiving excess opioid days supplied declined from 24.0 to 10.4% among group practice COT patients and from 20.1 to 14.7% among COT patients of contracted physicians. Reductions in prescribing of high opioid dose and excess opioid days supplied followed state and health plan initiatives to change opioid prescribing. Reductions were substantially greater in the group practice setting that implemented additional initiatives to alter shared physician expectations regarding appropriate COT prescribing, compared with the contracted physicians' patients.**

Perspective: ***Washington State and a health plan's group practice implemented initiatives to reduce high-dose COT prescribing. Group practice physicians were exposed to both initiatives, whereas the health plan's contracted physicians were exposed to only the statewide changes. Reductions in prescribing of high opioid dose, average daily dose, and excess opioid days supplied followed state and health plan initiatives to change opioid prescribing. Reductions were substantially greater in the group practice setting that implemented additional initiatives to alter shared physician expectations regarding appropriate COT prescribing, compared with the contracted physicians' patients.***

Key words: *Opioids, chronic pain, practice change.*

Increased prescribing of opioids for chronic pain has been accompanied by large increases in drug overdose and addiction involving prescription opioids.[3,4,14,18] In 2011, the federal government called for action to decrease prescription drug misuse.[13] There is growing evidence that the risks of opioid overdose and addiction among patients on chronic opioid therapy (COT) increase with opioid dose.[2] Avoiding COT at higher doses might reduce the risks of COT.

A Washington State guideline, initially published in 2007 and enacted into state law in 2010, recommended caution in prescribing COT at higher doses, defined as a daily morphine equivalent dose (MED) of 120 mg or greater.[24] Under this guideline, fewer recipients of worker's disability compensation received high doses of opioids and there was a subsequent decline in the number of opioid-related deaths in this patient population.[7,9] However, it is not known whether statewide guidance produced widespread changes in opioid dose levels among COT patients in community practice.

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After Washington State published its COT guideline, Group Health Cooperative (a Washington State insurance plan and health care delivery system) implemented additional initiatives in its group practice to alter physician expectations regarding COT prescribing. In contrast, Group Health's contracted physicians, who provide care outside of the group practice setting, were exposed to statewide COT guideline changes, but not to these additional group practice initiatives.

Davidoff[5] observes that, "Once established, clinical practices can be extraordinarily hard to abandon if subsequent evidence and experience find them to be ineffective, disruptive, or the cause of net-harm". Biller-Andorno and Lee[1] propose that the shared purpose arising from focusing attention on goals broadly accepted within a health care organization can change physician practices. Relative to adoption of medical innovations, changing clinical practices deemed ineffective or unsafe have rarely been studied.[5,10] This article compares the rates of high opioid doses among COT patients after changes in guidance regarding COT, undertaken statewide and within a health plan. We compare opioid prescribing trends in a group practice setting that sought to alter shared physician expectations and practices for COT patients with trends among the same health plan's contracted physicians, who were exposed to the new statewide guideline but not the added group practice initiatives. We assess whether these changes reduced the average daily opioid dose received by COT patients, and whether the changes reduced the percentage of COT patients receiving high-dose COT or excess days supplied of opioids.

We hypothesized that starting in 2008, after efforts to alter prescribing expectations of primary care physicians, the rate of reduction in average daily opioid dose and in the percentage of COT patients receiving high opioid doses would be greater in the group practice setting relative to trends among contracted physicians who were exposed only to the Washington State guideline and legislation. We also hypothesized that any observed reduction in opioid dose would be accompanied by a reduction in the percentage of COT patients receiving excess opioid days supplied. Our evaluation also assessed whether a multi-faceted opioid risk reduction initiative implemented later in 2010 in the group practice further influenced prescribing of higher opioid doses beyond any prescribing changes achieved through efforts to alter shared expectations of physicians regarding appropriate opioid prescribing.

Methods

Setting

Group Health Cooperative[16] is a large insurance plan and care delivery system in Washington State with both group practice and contracted care settings. Providers in the group practice deliver care at Group Health's own facilities to about two-thirds of the plan's enrollees. The remaining enrollees make up Group Health's contracted care setting. They receive care from community physicians in diverse clinical settings not operated by Group Health. There was a substantially greater potential for Group Health Cooperative to change COT prescribing expectations and practices in the group practice than in the contracted care setting.

Opioid Risk Reduction Initiatives in the Group Practice

The state first published its COT guideline in April 2007. In 2010, Washington State enacted legislation mandating use of the guideline for long-term opioid prescribing for chronic non-cancer pain, explicitly excluding hospice care, end of life and palliative care, and management of acute pain after injury or surgery. In conformity with the guideline, prescribers were required to conduct a physical examination and check medical records to assess the appropriateness of pain treatment, and to screen for risk of drug abuse and diversion. For high-risk patients, the guideline recommended developing a treatment plan and advised use of a written agreement outlining patient responsibilities including urine drug screening. The guideline called for periodic patient monitoring at least every 6 months, unless the patient was on a stable dose of less than 40 mg MED in which case annual review was sufficient. Periodic review was intended to assess compliance with the treatment plan and assess the patient's condition. Physicians prescribing long-acting opioids or methadone were required to complete at least 4 hours of relevant continuing medical education. Of particular relevance to this research, physicians prescribing an average daily dose of 120 mg or greater MED were asked to consult with a pain specialist (through a patient visit, remote evaluation of the patient by the specialist, or a telephone consultation between the prescriber and the specialist) unless the patient was on a stable dose and the patient's pain and functional status were also stable. Situations in which there was a short-term increase in dose to manage an exacerbation were exempted.

In the second half of 2006 and thereafter, Group Health's group practice sought to change shared expectations regarding COT prescribing in primary care. Primary care leadership, together with consulting rehabilitation medicine specialists, encouraged greater caution in prescribing opioids for chronic pain and discouraged dose escalation and use of higher opioid doses with COT patients.[17] Over several years, the medical director of rehabilitation medicine delivered occasional voluntary educational presentations about managing chronic pain and opioid prescribing. Typically about one-fourth of group practice primary care physicians (PCPs) attended these presentations. Group Health established a clinical policy making PCPs responsible for overall opioid management of their COT patients. PCPs and clinic medical directors received lists of their COT patients, which flagged those receiving high opioid doses, defined by the Washington State guideline as 120 mg or greater MED. Physicians with unusually large numbers of COT patients taking high opioid doses received feedback and supervisory guidance from clinic medical directors.