Opioid Stewardship: Implementing Pharmacist Led Assessments for Patients Co-Prescribed Opioids and Benzodiazepines at an Academic Family Health Team

T. Tilli PharmD[1,2], T. Kiran MD MSc[3,4,5], N. Dewhurst PharmD[1,2], J. Hunchuck PharmD[1,2,3,4]

[1]St. Michael's Hospital, [2]Leslie Dan Faculty of Pharmacy, University of Toronto, [3]Department of Family and Community Medicine, St. Michael's Hospital
[4]Department of Family and Community Medicine, University of Toronto, [5]Centre for Urban Health Solutions, Li Ka Shing Knowledge Institute

Background

- In 2017, there were 3,987 opioid-related deaths in Canada.[1] In Ontario, half of these deaths involved a benzodiazepine.[2]
- Pharmacists, as opioid stewards, could help address the opioid crisis, although feasibility and implementation of such a role has not been characterized.

Objective

- To implement proactive, population-based pharmacist review of patients with chronic non-cancer pain co-prescribed an opioid and benzodiazepine.

Methods

- **Design**: Quality Improvement using Plan-Do-Study-Act (PDSA) methodology from Nov. 1, 2017 to May 31, 2018.
- **Setting**: Two of six sites of an academic family health team (FHT) associated with a university-affiliated, tertiary care medical centre in Toronto, Canada.
- **Intervention:** Patients were proactively identified and tailored pain management plans were developed. To implement plans, the pharmacist met with prescribers and patients. With each PDSA cycle, interventions were adapted according to feedback from prescriber and patient interviews.
- **Patients:** Identified through electronic medical record queries and chart reviews.
  - Inclusion criteria:
    - Prescribed ≥ 1 opioid within 12 months
    - Prescribed ≥ 1 benzodiazepine within 12 months
    - Concurrent opioid and benzodiazepine prescriptions
  - Exclusion criteria:
    - Less than daily opioid or benzodiazepine use
    - Opioid or benzodiazepine use for < 3 months
    - Receiving opioid substitution therapy (i.e. methadone, buprenorphine/naloxone)
    - Cancer pain or palliative status
- **Data Collection:** Outcome, process, and balancing measures from charts. Field notes during prescriber and patient interviews.
- **Data Analysis:** Data collected in each PDSA cycle informed subsequent cycles.
- Research Ethics Board approval was waived per formal institutional authority review.

Methods

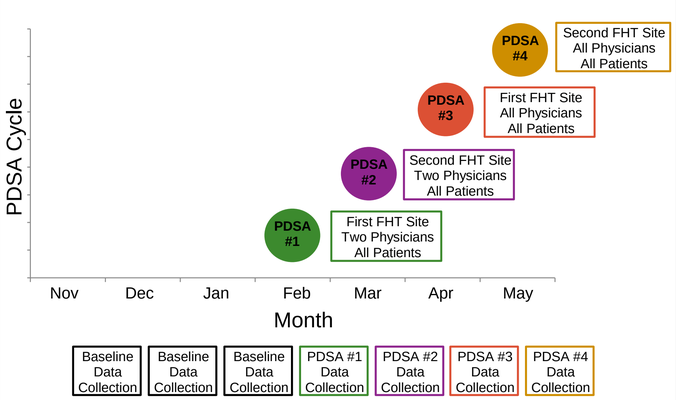

Figure 1. Graphical representation of four Plan-Do-Study-Act (PDSA) cycles performed over the study period.

Results

Table 1. Baseline characteristics of all patients co-prescribed an opioid and benzodiazepine at the two FHT sites.

Patient Characteristic	Proportion of Patients* (n = 35)
Sex, Female	24 (68.6)
Age (mean), Years (SD)	57.0 (±12.3)
Psychiatric Comorbidity	29 (82.9)
Depression	17 (48.6)
Anxiety	15 (42.9)
Substance Use Disorder	12 (34.3)
Post Traumatic Stress Disorder or History of Trauma	9 (25.7)
Bipolar Disorder or Schizophrenia	8 (22.9)
Current Smoker	17 (48.6)
Illicit Drug Use	13 (37.1)
Ontario Disability Support Program (ODSP) Client	13 (37.1)
History of Overdose	11 (31.4)

*Results are numbers (percentages) of patients except where indicated otherwise.

Results

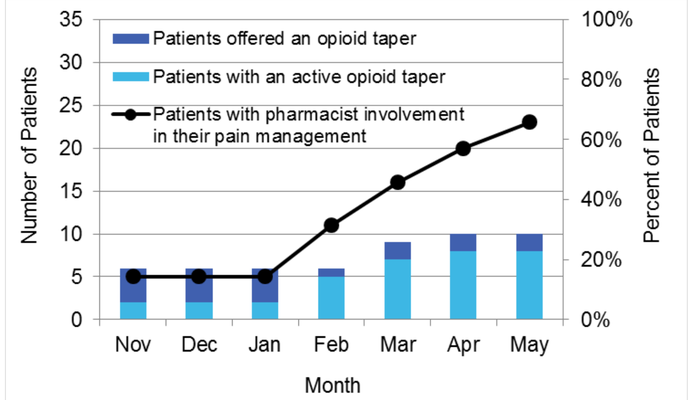

Figure 2. Process measures over time for all patients co-prescribed an opioid and benzodiazepine at the two FHT sites.

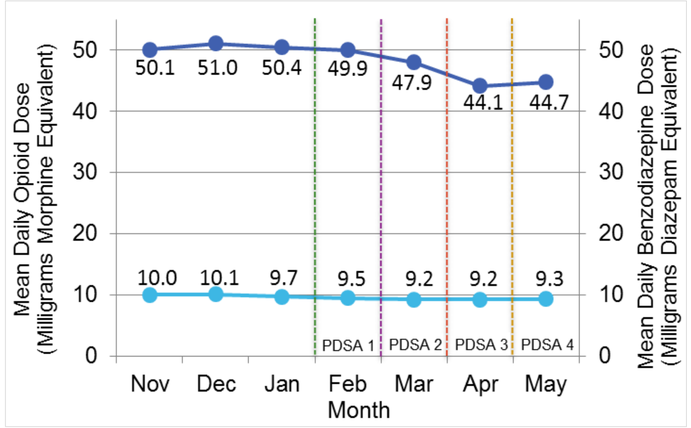

Figure 3. Outcome measures over time for all patients co-prescribed an opioid and benzodiazepine at the two FHT sites. Dark blue represents mean daily opioid dose in milligrams morphine equivalent. Light blue represents mean daily benzodiazepine dose in milligrams diazepam equivalent.

Discussion

- As pharmacist involvement increased, opioid taper acceptance improved, which may reflect the pharmacist's provision of education and individualized plans.
- The proactive identification of patients by a pharmacist differed from the historical referral-based approach, but was accepted by prescribers.
- Patients' opioid and benzodiazepine doses were reduced. Compared to opioids, benzodiazepine tapers occurred less often. Further dose reductions may require longer follow-up and pharmacist re-assessment.
- Pharmacist involvement increased alignment with Health Quality Ontario's opioid prescribing standards.
- Limitations include: single centre, interventions made by a single pharmacist, and daily doses calculated according to prescribing records.
- This initiative is being expanded to the remaining four FHT practice sites with associated evaluations.

Conclusion

- Pharmacist proactive, population-based review reduced patients' mean daily opioid and benzodiazepine doses.
- An additional role for FHT pharmacists as opioid stewards exists.

Disclosures

- All authors have nothing to disclose.

Acknowledgement

- S. Davie for assistance with statistics.

References

1. Special Advisory Committee on the Epidemic of Opioid Overdoses. National report: Apparent opioid-related deaths in Canada (January 2016 to December 2017) Web-based Report. Ottawa: Public Health Agency of Canada; June 2018.
2. Gomes T, Greaves S, Martins D, Bandola D, Tadrous M, Singh S, et al. Latest trends in opioid-related deaths in Ontario: 1991 to 2015. Ontario Drug Policy Research Network. Final report. 2017:1-12.