

Introduction

Opioid medications are often prescribed as part of the management of pain, both acute and chronic. (1). The same medications used to treat pain are often implicated in drug abuse (2). Studies of geographic variation in opioid prescribing have focused on misuse and adverse events associated with the use of these medications (3). Gender differences in prescribing of opioids have been described in the Emergency room setting (4).

The Nova Scotia Prescription Monitoring Program (NSPMP) collects information from all prescriptions for controlled substances written in Nova Scotia independent of third party drug coverage. This program has had legislative authority since 2004. The impact of monitoring of prescriptions on the prescribing patterns of physicians and dentists in Nova Scotia is not yet clear. However, monitoring will allow insight into the effectiveness of education and practice modification programs. The comprehensive nature of the data may provide insight into the provision of pain and addiction care in Nova Scotia.

Geographic patterns of change may reflect local changes in prescribing, patient populations or both. Previous data (5) demonstrated considerable heterogeneity of prescribing patterns across the province of Nova Scotia. This study reviews five years of prescribing. The goal of the study was to determine the variation by region and population of gender specific opioid prescribing. A clear understanding of patterns of prescribing will facilitate targeted improvement in services for patients and prescribers.

Methods

This is a retrospective review of all prescriptions for opiate prescriptions written in Nova Scotia from 2004-2008, collected by the NSPMP as this was the most recent completed data set. Prescriptions are entered into the NS PMP database as they are filled by the patient. All pharmacies are now online, thus data is complete to December 31, 2008.

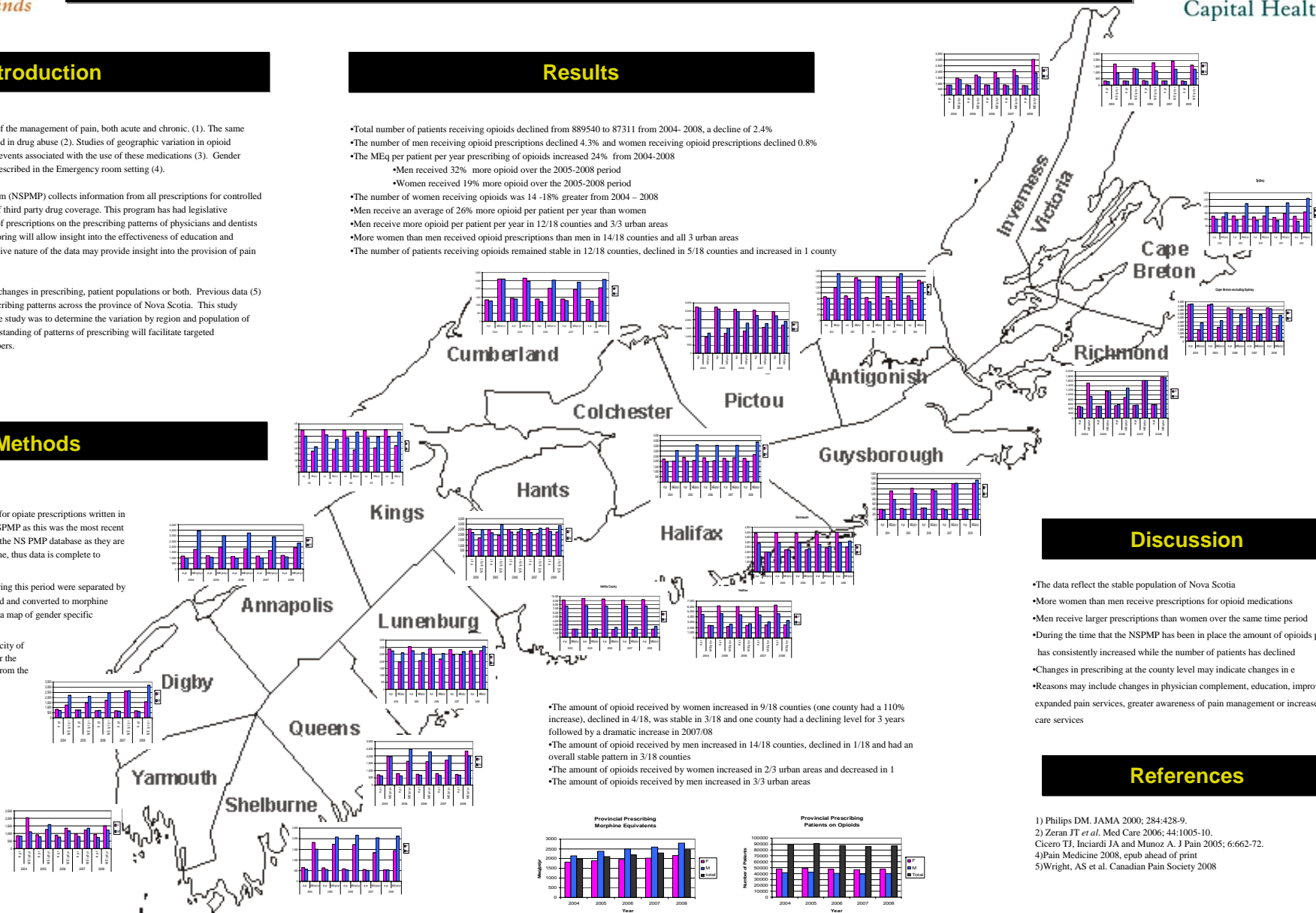
All prescriptions for opioid medications filled during this period were separated by gender. Aggregate prescribing data were collected and converted to morphine equivalents (ME). The data was then merged and a map of gender specific prescribing patterns was created.

Home addresses were used to identify the county/city of residence of the prescription recipient. Results for the three urban areas of Nova Scotia were separated from the county in which the city resides

Morphine equivalents per patient per year were calculated and plotted for each county and for the three urban areas of Nova Scotia.

Results

- Total number of patients receiving opioids declined from 889540 to 87311 from 2004-2008, a decline of 2.4%
- The number of men receiving opioid prescriptions declined 4.3% and women receiving opioid prescriptions declined 0.8%
- The MEq per patient per year prescribing of opioids increased 24% from 2004-2008
 - Men received 32% more opioid over the 2005-2008 period
 - Women received 19% more opioid over the 2005-2008 period
- The number of women receiving opioids was 14 - 18% greater from 2004 - 2008
- Men receive an average of 26% more opioid per patient per year than women
- Men receive more opioid per patient per year in 12/18 counties and 3/3 urban areas
- More women than men received opioid prescriptions than men in 14/18 counties and all 3 urban areas
- The number of patients receiving opioids remained stable in 12/18 counties, declined in 5/18 counties and increased in 1 county



Discussion

- The data reflect the stable population of Nova Scotia
- More women than men receive prescriptions for opioid medications
- Men receive larger prescriptions than women over the same time period
- During the time that the NSPMP has been in place the amount of opioids prescribed has consistently increased while the number of patients has declined
- Changes in prescribing at the county level may indicate changes in e
- Reasons may include changes in physician complement, education, improved or expanded pain services, greater awareness of pain management or increased palliative care services

References

- 1) Philips DM. JAMA 2000; 284:428-9.
- 2) Zeran JT et al. Med Care 2006; 44:1005-10.
- 3) Cicero TJ, Inciardi JA and Munoz A. J Pain 2005; 6:662-72.
- 4) Pain Medicine 2008, epub ahead of print
- 5) Wright, AS et al. Canadian Pain Society 2008