VARIATION IN REGIONAL OPIOID PRESCRIBING IN NOVA SCOTIA – 2004 TO 2006

A Stuart Wright PhD MD, Department of Anesthesia, Dalhousie University, QEII Health Sciences Centre; Peter MacDougall PhD MD FRCPC, Department of Anesthesia, Dalhousie University, QEII Health Sciences Centre; Ann Foran BA MEd, Manager, Nova Scotia Prescripton Monitoring Program, Halifax, Nova Scotia

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Abstract

AIM: Opioid medications are often prescribed as part of the management of pain, both acute and chronic. (1). However, the same medications used to treat pain are often implicated in drug abuse (2). Previous studies of geographic variation in opioid prescribing have focused on misuse and adverse events associated with the use of these medications (3) The Nova Scotia Prescription Monitoring Program (NSPMP) collects information from all prescriptions for controlled substances written in Nova Scotia. Information collected is independent of third party drug coverage. The comprehensive nature of the data may provide insight into the provision of pain care and addiction care in Nova Scotia that is otherwise not available.

METHODS: All prescriptions for opiate prescriptions written in Nova Scotia from 2004-2006 were collected by the NSPMP. Data were converted to morphine equivalents. This data was then arranged by county and postal code forward sorting station (FSS, the first 3 characters of the postal code).

RESULTS: We report the regional distribution of all opioid prescriptions written from 2004 to 2006 in Nova Scotia. Addtionally, we report the annual trends of opioid prescribing in Nova Scotia over this time period. This is the first report of regional distribution of opioid prescribing not linked to third party funding.

CONCLUSIONS: Regional distribution of opioid prescribing can provide insight into regional disparity in medical services such as chronic pain management and addiction management. This information can also be used to track potential regional distribution of inappropriate prescribing.

FOOTNOTES/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, Munoz A. J Pain 2005;6:662-72..

Methods

The Nova Scotia Prescription Monitoring Program collects information electronically from all prescriptions for controlled substances (Opioids, Stimulants, etc.) written in Nova Scotia. It is a government-funded program administered by Medavie Blue Cross. The information collected is independent of third party drug coverage.

All prescriptions for opiate prescriptions written in Nova Scotia from 2004-2006 were collected by the NSPMP. Data were converted to morphine equivalents. This data was then arranged by county.

Nova Scotia is a mix of mostly rural with a few urban centers. There are 17 counties in this province with a stable population of 913,000 people (2006 Census).

The population per county was derived from the 2006 Census. The number of physicians and family physicians per county was derived from database maintained by the College of Physicians and Surgeons of Nova Scotia.

Results

In order to show graphical representation, the results were described as a percentage of provincial mean for their respective years, 2004-6:

1. Percentage of the county population prescribed opioids
2. Morphine equivalents per patient per year

Physician load is also depicted by the number of patients prescribed opioids in each county diveded by the number of family physicians in that county. Family physician figures for each year were not available but the physician and general population levels in Nova Scotia are stable, and thus current physician levels were used.

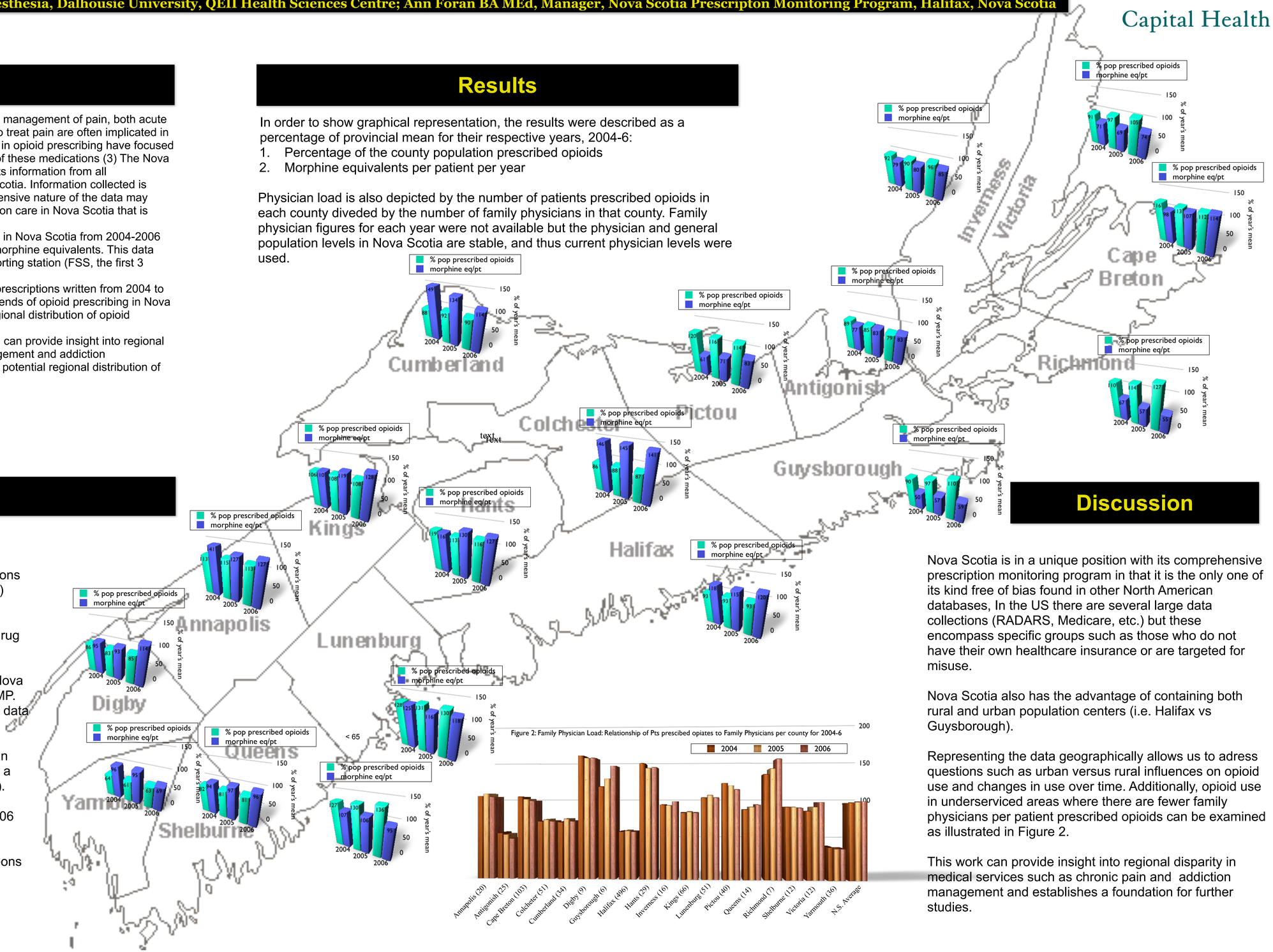

Figure 2: Family Physician Load: Relationship of Pts prescibed opiates to Family Physicians per county for 2004-6

Discussion

Nova Scotia is in a unique position with its comprehensive prescription monitoring program in that it is the only one of its kind free of bias found in other North American databases, In the US there are several large data collections (RADARS, Medicare, etc.) but these encompass specific groups such as those who do not have their own healthcare insurance or are targeted for misuse.

Nova Scotia also has the advantage of containing both rural and urban population centers (i.e. Halifax vs Guysborough).

Representing the data geographically allows us to adress questions such as urban versus rural influences on opioid use and changes in use over time. Additionally, opioid use in underserviced areas where there are fewer family physicians per patient prescribed opioids can be examined as illustrated in Figure 2.

This work can provide insight into regional disparity in medical services such as chronic pain and addiction management and establishes a foundation for further studies.