

Clinical telemedicine utilization in Ontario over the Ontario Telemedicine Network: geographical patterns

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Background

- Many areas of Ontario are medically underserved.
 - Varying health status, disease prevalence, medical care access & use [1-3]
- Telemedicine may help improve access & use of medical services to these areas.
 - Northern Ontario
 - Rural & Remote communities

Context

- Our previous research examined the location of Ontario Telemedicine Network (OTN) sites as a measure of maximum potential access to medical care.

In this study, we ask...

- **How does clinical telemedicine utilization differ between Northern and Southern Ontario and between rural and urban areas?**

Ontario Telemedicine Network (OTN)



- Not-for-profit organization funded by the Ontario Ministry of Health and Long Term Care
- Enables access to medical care services by using technology to connect patients to physicians throughout Ontario.
- OTN is the largest telemedicine service provider in Canada and one of the largest in the world [4-6].



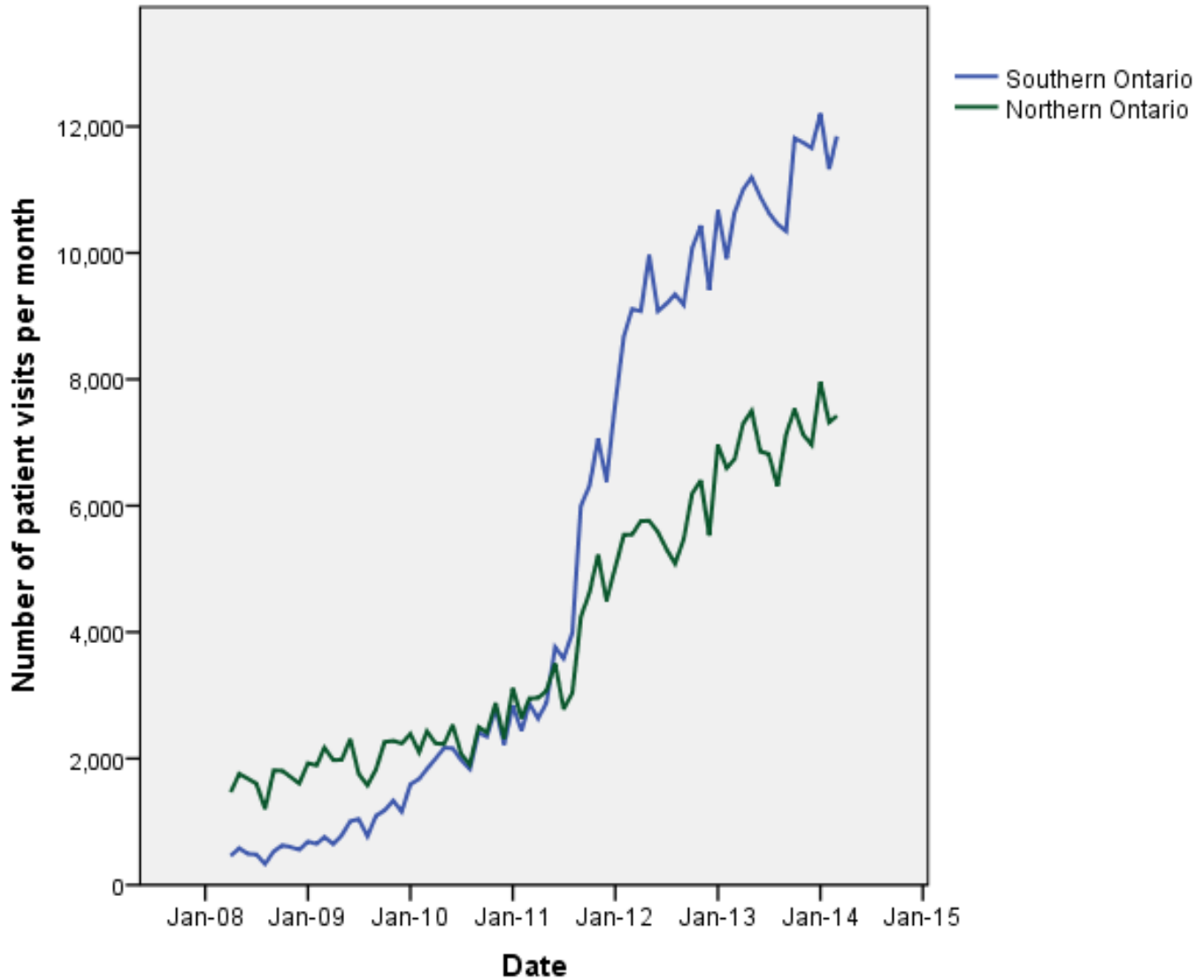
Methods

- OHIP data with OTN-flags
 - data provided by MOHLTC under a data sharing agreement
- Data included:
 - Patient and Physician location
 - Month & year of visit – FY08/09 to FY13/14
 - Telemedicine premium code (1 per visit)
 - Medical service code (1 or more per visit)

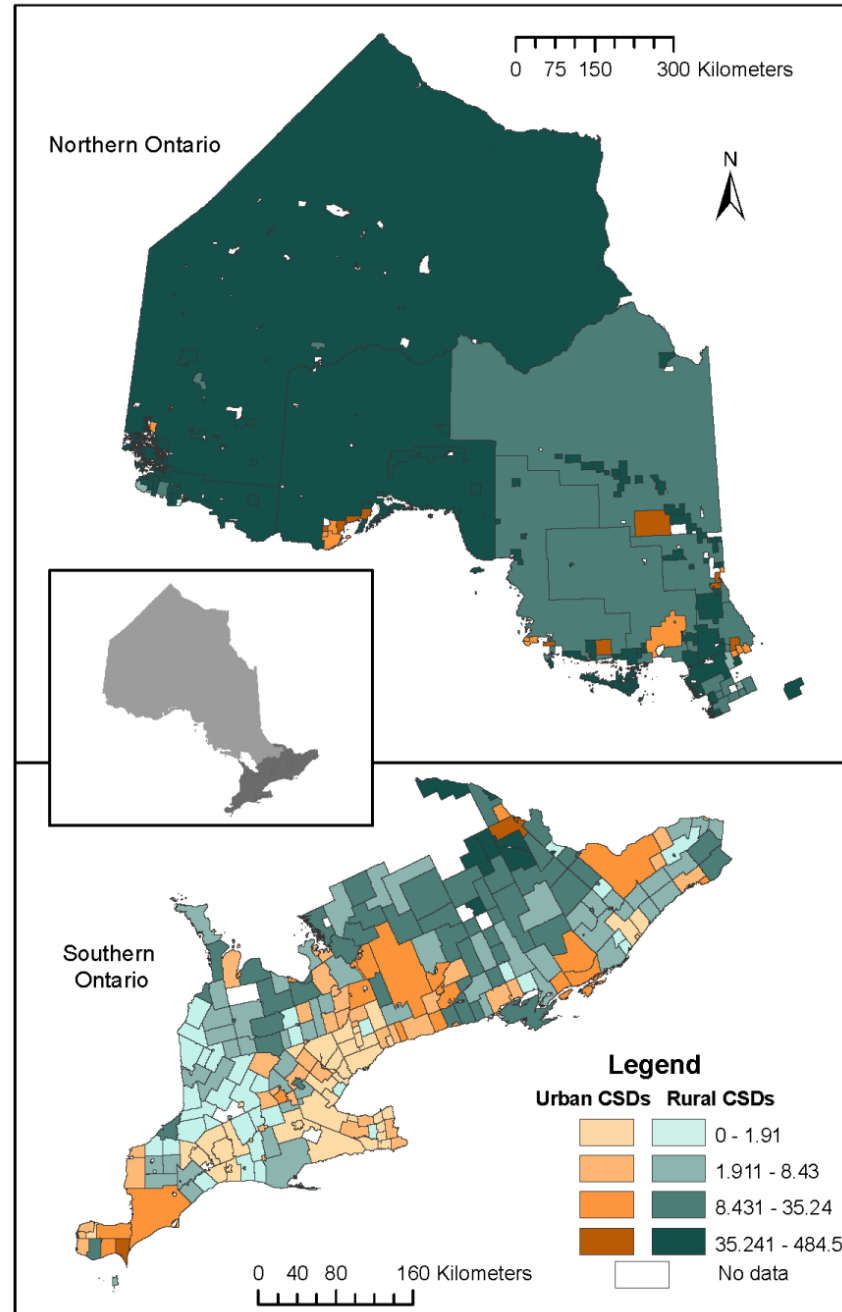
Methods

- Categorized OHIP billing codes into OTN's therapeutic areas of care.
- Descriptive statistics and maps
 - Absolute and per capita use
 - Region (northern vs southern Ontario)
 - N. Ont. = NE or NW LHINs
 - Population size and density (urban vs. rural)
 - Urban = Census Metropolitan Areas or Census Agglomerations [7]

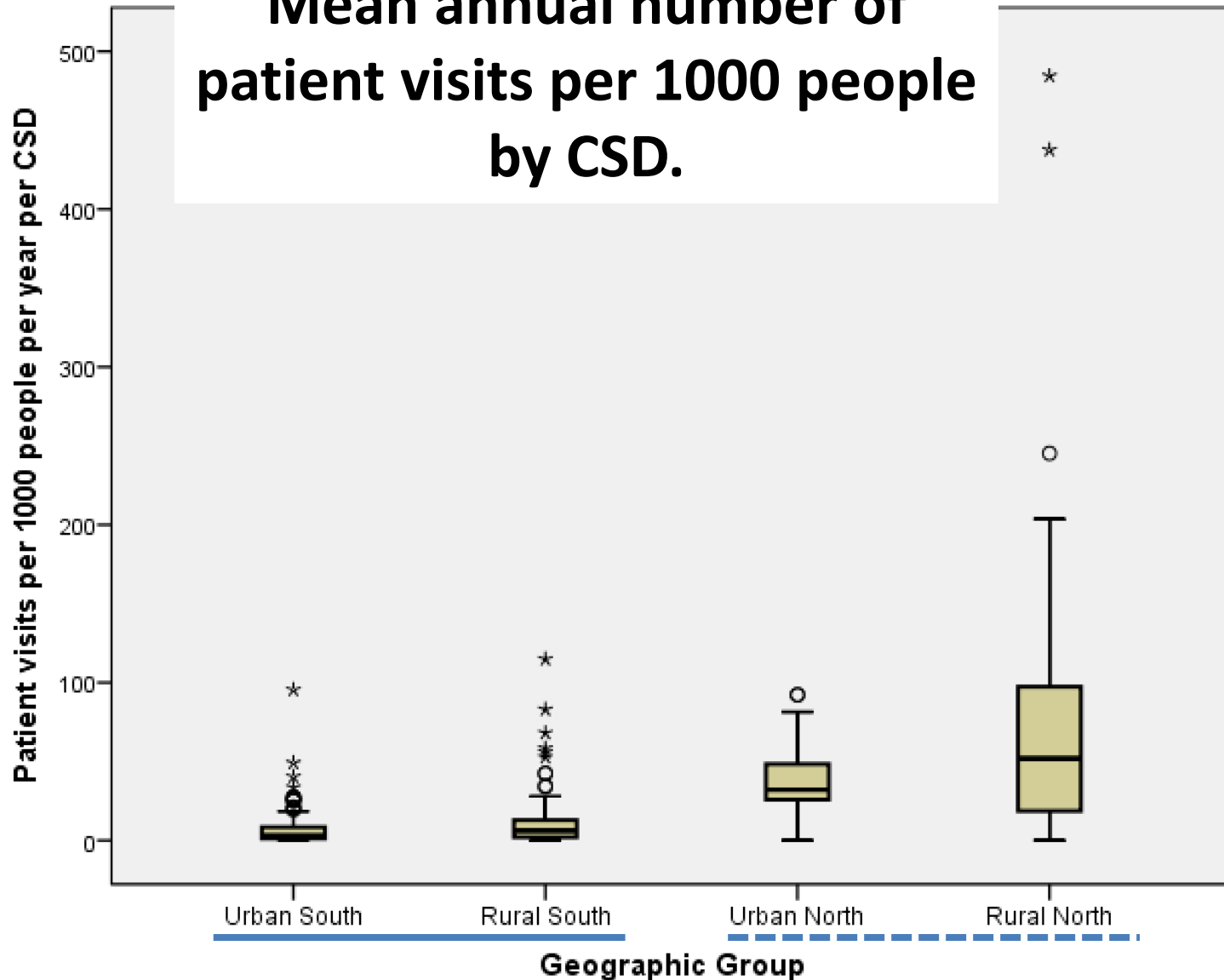
Patient-visits per month



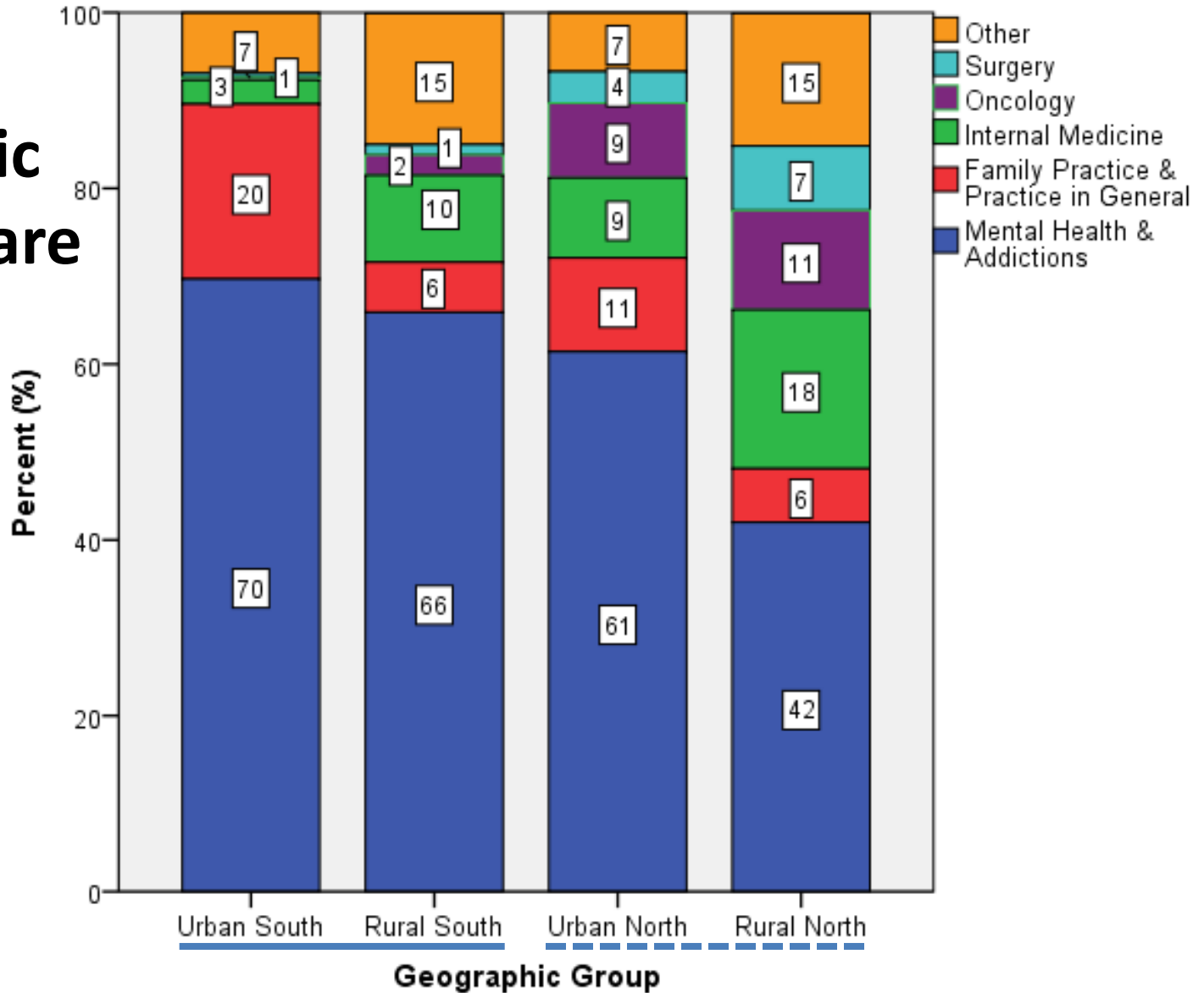
Mean annual number of patient visits per 1000 people by CSD (rural / urban)



Mean annual number of patient visits per 1000 people by CSD.



Therapeutic areas of care



Discussion

- Clear increase in clinical OTN use from 08/09 to 13/14
 - Greatest absolute increase in S. Ont.
 - Mental health and addictions makes up the majority of use in S. Ont.
 - Use is a little more diverse in the rural vs urban south
 - Per capita use is highest in N. Ont., particularly in rural areas.
 - Use is more diverse than in S. Ont.

Limitations

Administrative data...

- OHIP may not capture all telemedicine use in Ontario, some clinical use by Indigenous people or salaried MDs may be missed.
- The 5 therapeutic areas are quite broad.
- Restricted to physician clinical visits.

Next Steps

- Latest Fiscal Year
- Analyze by sex and age of patient
 - Sex/gender differences in use, uptake
 - Older adults' telemedicine
- Examine disease-specific services
 - Chronic diseases (e.g., diabetes)

On Hold

Conclusions

- OTN clinical per capita use:
 - rural > urban areas
 - Northern > Southern Ontario.
- Diversity of use is greater in rural and northern areas, suggesting that OTN may be providing services not otherwise available.
- However, it not known if telemedicine is replacing or augmenting face-to-face use and so the net impact is unknown.

Acknowledgements

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- *The views expressed in this presentation are those of the authors and do not necessarily reflect that of the MOHLTC nor the OTN.*

References

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Thank you

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