Analyzing 211 Rural Unmet Service Needs

Rural Ontario Institute
Ontario 211 Services
Dillon Consulting Limited

OMSSA Policy Conference
December 4, 2018

Agenda

Part 1: Introductions and Project Overview

Part 2: The Data

Part 3: Exploratory Analysis and Results

Part 4: Implications and Recommendations

Part 5: Discussion

Part 1
Introductions and Project Overview

Project Origin/Timeline

- Imagine Canada workshop on improving use of data in the NFP sector (2014)
- 211 engages stakeholders in consultation on development of dashboards (2015)
- ROI/211 identify opportunity for rural unmet needs analysis (2016)
- ROI secures prov. funding - partners with Ontario 211 (2017)
- *Dillon contracted/project begins* *(Winter 2018)*
- *Advisory group formed* *(Spring 2018)*
- *Data prep./initial analysis/on-line platform/workshop* *(Summer 2018)*
- *Further analysis/write-up/project completed* *(Fall 2018)*
- Publication/knowledge transfer (Current)
- Ongoing community of practice surrounding access/use of 211 info. (????)

Project Purpose

To explore the potential utility of Ontario 211 data for improving understanding of human service delivery gaps and unmet needs and how these differ over Ontario's rural and urban geographies. To assess if the data is helpful for service delivery agencies and partners so they might better address needs through program design and service planning.

(Not expected to definitively capture volume/intensity of need or recommend which gaps ought to be addressed)

Project Partners

- **Rural Ontario Institute** and **Ontario 211 Services**: collaborating partners and managed the project
- **Advisory group members**: posed questions, reviewed preliminary analysis, participated in workshop to assess utility, suggested ways to distribute and communicate results
- **Dillon Consulting Limited**: worked with 211 to prepare data, geocoding/nomenclature etc…, created online GIS based platforms, generated tables/maps/graphics, facilitated workshop, prepared report
- **Provincial funding:** MMAH grant funding, arms length, not responsible for any errors/omissions, findings

Project Process

1. Prepare the data/geo-coding, data clean-up
2. Use of remoteness index and rural/urban categories
3. Preliminary data analysis - creation of dashboard for graphic visualization and mapping
4. Stakeholder engagement through workshop/questions/use of ESRI tools (dashboard and Insights)
5. Further analysis/report preparation/review

Part 2
The Data

What is 211?

- Easy point of access to help navigate human service resources - 211 is free, confidential, available 24/7 in more than 150 languages
- Two ways to access service
  - Three-digit phone number: 2-1-1
  - Online service: www.211ontario.ca
  - Chat, Text and Email service coming soon early 2019

Types of Data

There are 3 types of 211 data:

- Contact data
- Resource data
- Online search data

Business Intelligence

- Used for internal and external reporting
- Data brought in from inContact, iCarol and other sources
- Public report available on 211ontario.ca

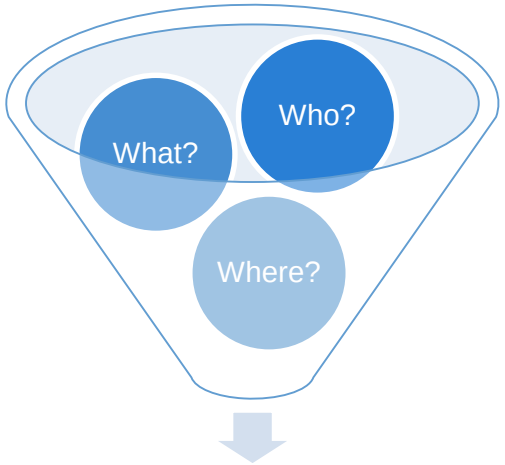
AIRS

- Establishes standards for Information and Referral organizations across North America
- Accredits I&R organizations and certifies individual staff

Part 3
Exploratory Analysis and Results

Study Objectives

- How does 211 Ontario unmet needs data illuminate:
  - Who needs services?
  - What services are needed?
  - Where are services needed?
- Can we use the findings to improve service delivery?



211 Ontario Call Database

- Each record = 1 recorded “need” for service
- Single call could result in multiple “needs” record
- 488,991 records between January 2016 – March 2018
  - 222k in 2016
  - 215k in 2017
  - 51k in 2018

211 Ontario Call Database

- Information available for each record
  - Where is the call originating from?
  - What was the “need”?
  - Was the “need” met or unmet?
  - Why wasn’t an unmet need met?
  - Who called?
  - Caller characteristics
  - Why was the call placed?

Approach to Spatial Analysis

- Meaningful spatial analysis required concordance with Statistics Canada geographies
- After cleanup:
  - 100% of records associated with census division
  - 88% of records associated with census subdivision
- What is rural?
  - Index of remoteness for census subdivisions
  - 3 categories of census divisions
- Use of cloud-based analysis platforms
  - ArcGIS Online
  - Insights for ArcGIS

Who is calling 211?

- Age
  - Adults (25-59) account for 74% of all records
  - Older adults (60+) account for 11% of all records
  - No age information: 15% of all records
- Gender
  - Female: 69%
  - Male: 29%
  - Other/unknown: 2%

- Language
  - English as primary language: 98% of all records
  - French: 2% of all records
  - All other languages: <1% of all records

What services are needed?

- Level 1 AIRS categories
  - Health: 13% of all records
  - Other Government/Economic Services: 11% of all records
  - Housing: 10% of all records
  - Individual/Family Services: 9% of all records
  - Legal/Public Safety: 9% of all records
  - All other categories: 48% of all records

Reasons for Unmet Needs?

- Almost all records result in caller need being met
  - 98.5% of all records

- Why do needs go unmet?
  - No resource found to meet need: 34%
  - Ineligible for service: 21%
  - Inquirer refused service: 14%
  - Full/waiting list: 6%
  - Agency/program resources depleted: 6%

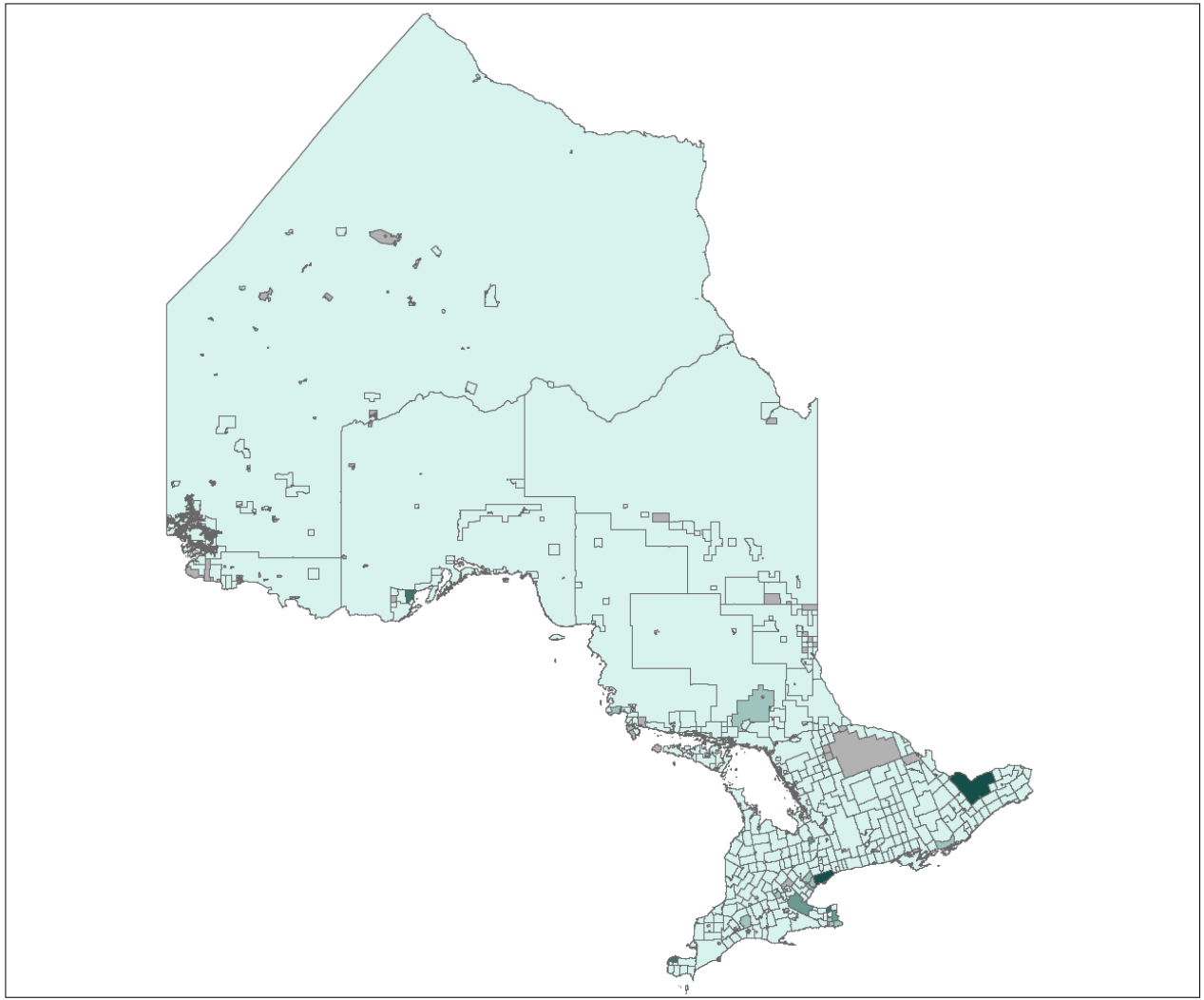
Where do calls come from?

Most records associated with urban communities

1. Toronto: 20% of records
2. Ottawa: 13%
3. Windsor: 10%
4. Thunder Bay: 6%
5. St. Catharines: 5%

Less-urban communities rank higher on a per-capita basis

1. Collingwood: 156 per 1,000 pop.
2. Thunder Bay: 153 per 1,000 pop.
3. Opasatika: 128 per 1,000 pop.
4. Owen Sound: 127 per 1,000 pop.
5. Windsor: 107 per 1,000 pop.



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Needs by Census Subdivision, 2016-2018

Appendix B

Number of Records

- 1 - 2,000
- 2,001 - 7,000
- 7,001 - 2,0000
- 20,001 - 50,000
- 50,001 - 99,128
- Unknown/No Data

0 50 100 200 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY 211 ONTARIO AND STATISTICS CANADA

MAP CREATED BY: PFM
MAP CHECKED BY: MB
MAP PROJECTION: WGS 1984 WEB MERCATOR AUXILIARY SPHERE

FILE LOCATION:
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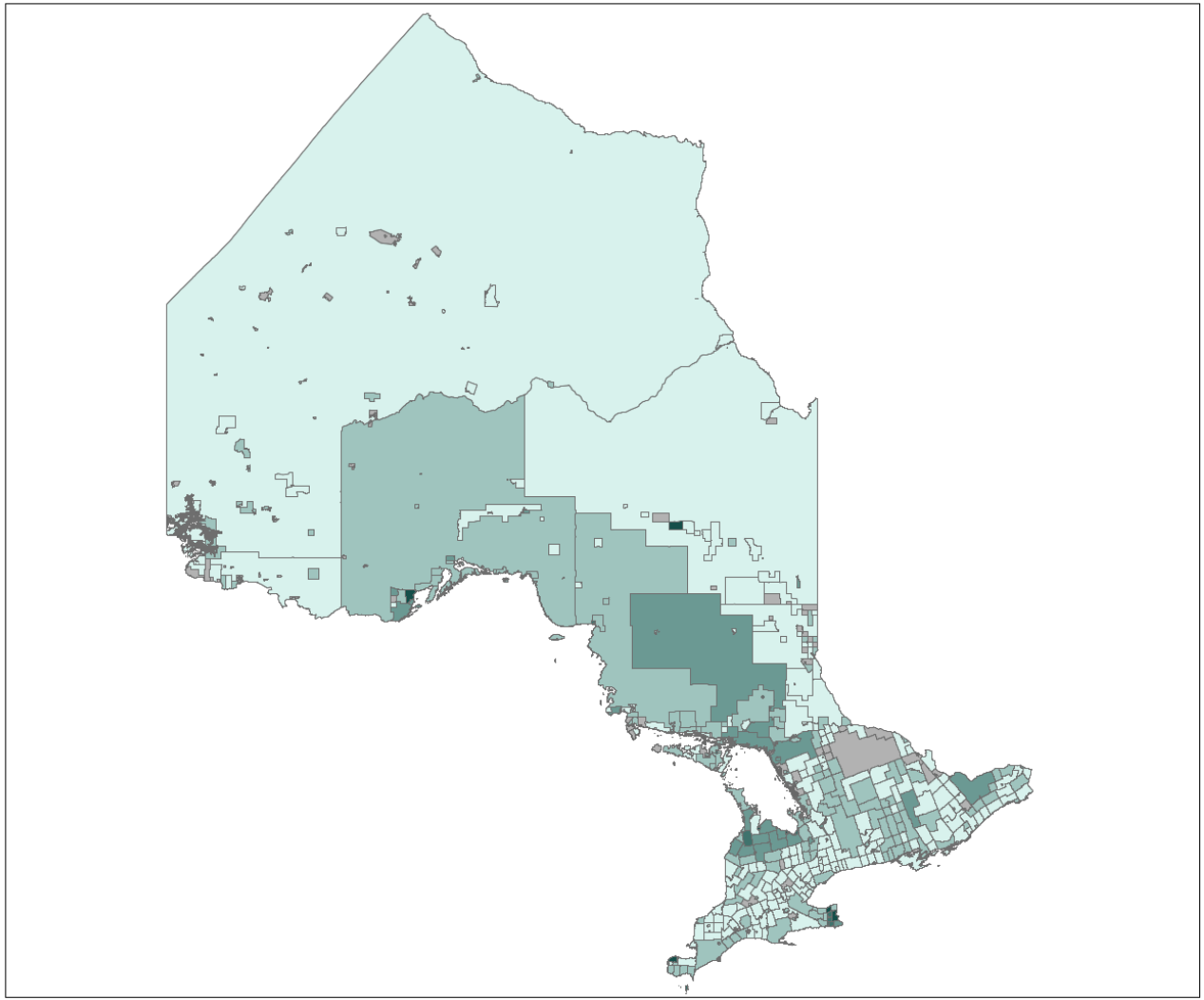
DILLON CONSULTING

PROJECT: 187544

STATUS: FINAL

DATE: 2018-10-12



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Needs per Capita by Census Subdivision, 2016

Appendix D

Number of Records per 1,000 Population

- 0 - 5
- 6 - 20
- 21 - 40
- 41 - 70
- 71 - 156
- Unknown/No Data

0 50 100 200 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY 211 ONTARIO AND STATISTICS CANADA

MAP CREATED BY: PFM
MAP CHECKED BY: MB
MAP PROJECTION: WGS 1984 WEB MERCATOR AUXILIARY SPHERE

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DILLON CONSULTING

PROJECT: 187544

STATUS: FINAL

DATE: 2018-10-12

Specific needs associated with smaller communities

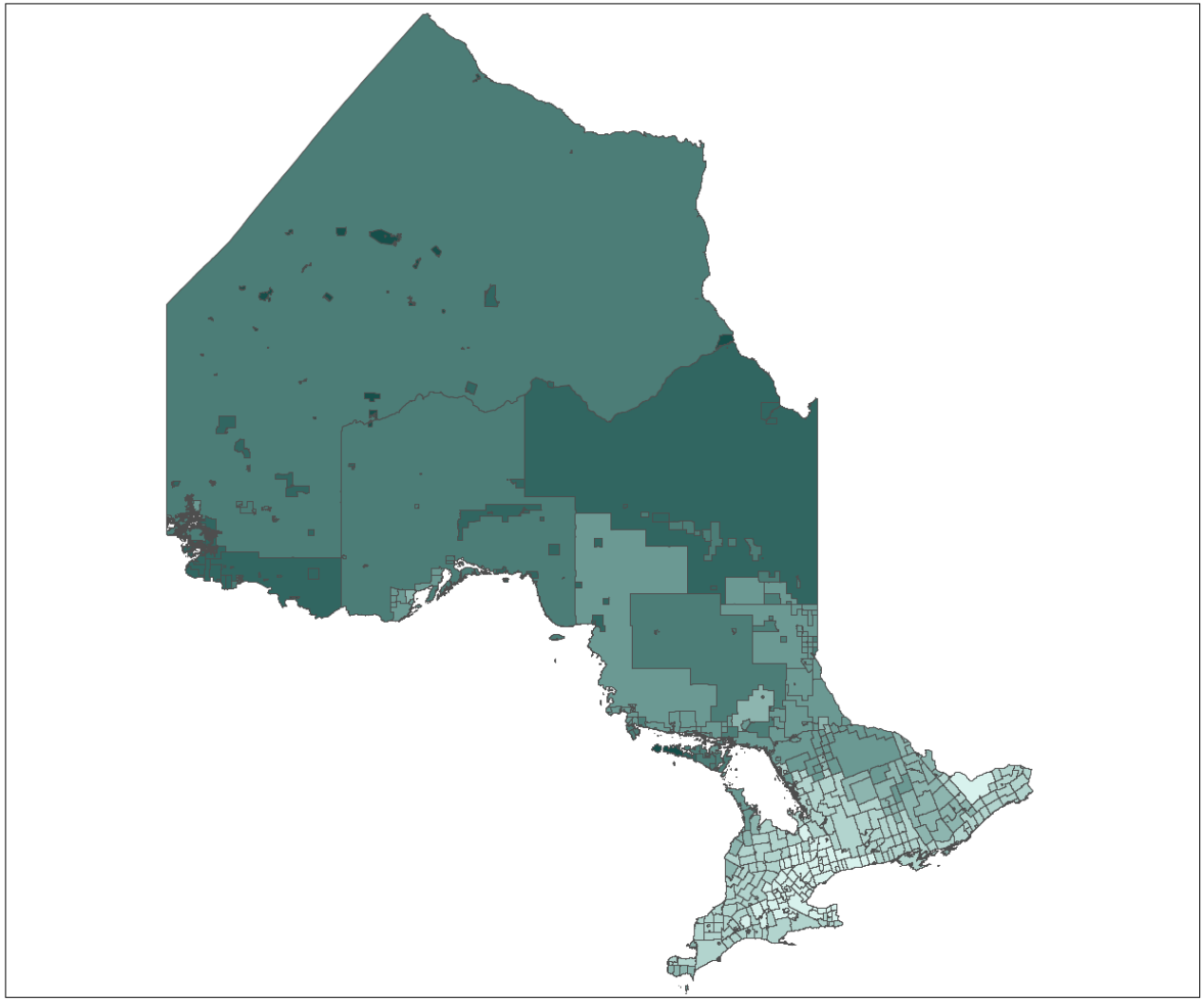
Health:	Opasatika	44 records/1000 pop.
Other Gov't/Econ. Services:	Thunder Bay	27 records/1000 pop
Individual/Family Services:	Collingwood	24 records/1000 pop
Housing:	Northwest Angle 33B	21 records/1000 pop
Legal/Public Safety:	Opasatika	13 records/1000 pop

Approaches to Defining Rurality

- Method 1: Index of remoteness (Alasia et al., 2017)
  - Uses financial cost of travel to/from a community as proxy for degree of functional remoteness
  - Index value of 1.0 = as remote as possible (e.g. Attawapiskat)
  - Index value of zero = as non-remote as possible (e.g. Toronto, Ottawa)
  - Values computed for almost all CSDs in Canada

Index of Remoteness

Index of Remoteness value	Example Communities
Zero to 0.1	Toronto, Ottawa, Mississauga
0.1 to 0.2	Windsor, Kingston, Chatham-Kent
0.2 to 0.3	Greater Sudbury / Grand Sudbury, Thunder Bay, North Bay
0.3 to 0.4	Sault Ste. Marie, Timmins, Kenora
0.4 to 0.5	Kapuskasing, Dryden, Fort Frances
0.5 to 0.6	Sioux Lookout (Kenora), Greenstone (Thunder Bay), Red Lake (Kenora)
0.6 to 0.7	Moosonee (Cochrane), Hornepayne (Algoma), Dubreuilville (Algoma)
0.7 to 0.8	Cat Lake 63C (Kenora), Osnaburgh 63A (Thunder Bay), Slate Falls (Kenora)
0.8 to 0.9	Pikangikum 14 (Kenora), Sandy Lake 88 (Kenora), Kasabonika Lake (Kenora)
0.9 to 1	Attawapiskat 91A (Kenora), Fort Albany Part 67 (Kenora), Peawanuck (Kenora)



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Relative Remoteness by Census Subdivision, 2016

Appendix I

Index of Remoteness Value

- 0.00 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50- 0.70
- 0.70 - 1.0

0 50 100 200 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY 211 ONTARIO AND STATISTICS CANADA

MAP CREATED BY: PFM
MAP CHECKED BY: MB
MAP PROJECTION: WGS 1984 WEB MERCATOR AUXILIARY SPHERE

FILE LOCATION:
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DILLON CONSULTING

PROJECT: 187544

STATUS: FINAL

DATE: 2018-10-12

Index of Remoteness

- Urban centres account for majority of records
  - Index value of 0 to 0.1: 62% of all records with CSDs
  - Index value of 0.1 to 0.2: 25% of all records with CSDs
  - Index value of 0.2 to 0.3: 11% of all records with CSDs
  - Index value of >0.3: 2% of all records with CSDs
- Per-capita distribution different but still weighted to urban communities

Index of Remoteness

Per capita data shows higher 211 use in near urban locales

Index of Remoteness value	Count of records associated with CSDs, 2016	Share of all records associated with CSDs, 2016	Pop., 2016	Count of records per 1,000 people, 2016
Zero to 0.1	116,330	59.4%	9,869,213	11.8
0.1 to 0.2	50,536	25.8%	2,403,343	21.0
0.2 to 0.3	24,208	12.4%	678,468	35.7
0.3 to 0.4	3,906	2.0%	284,069	13.8
0.4 to 0.5	627	0.3%	76,820	8.2
0.5 to 0.6	257	0.1%	45,503	5.6
0.6 to 0.7	34	0.0%	4,082	8.3
0.7 to 0.8	8	0.0%	1,122	7.1
0.8 to 0.9	17	0.0%	4,164	4.1
0.9 to 1	7	0.0%	3,664	1.9
Total	195,930	100.0%	13,370,448	14.7

Index of Remoteness

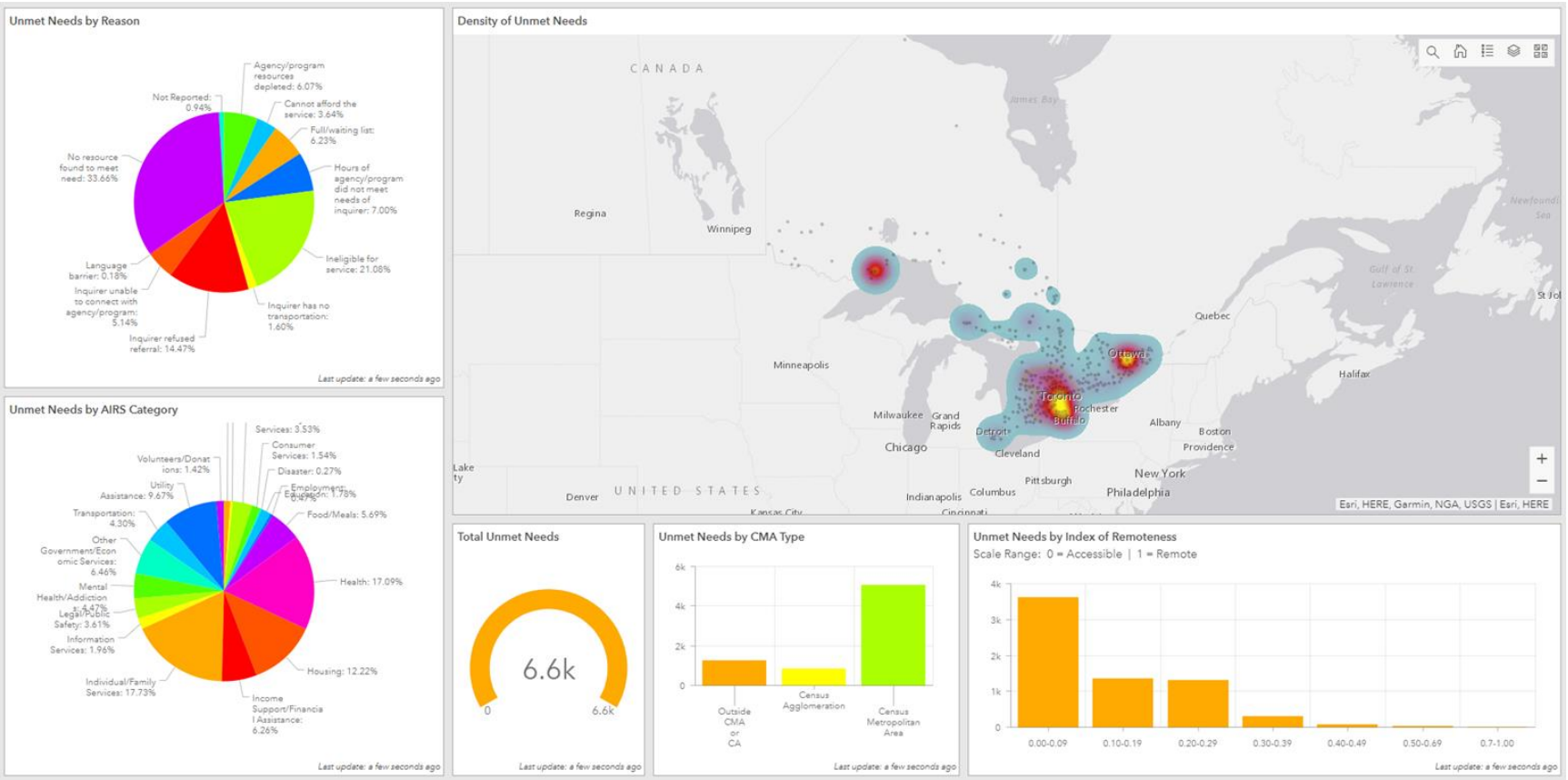
Index of Remoteness Value	Most cited needs category (level 3)	Count of records	Share of all records in census subdivision category
Zero to 0.1	Holiday Programs	15,193	3.5%
0.1 to 0.2	Records/Licenses/Permits	5,850	5.4%
0.2 to 0.3	Utility Assistance	2,933	6.4%
0.3 to 0.4	Utility Assistance	589	7.1%
0.4 to 0.5	Utility Assistance	138	8.8%
0.5 to 0.6	Utility Assistance	85	15.8%
0.6 to 0.7	Utility Assistance	9	19.1%
0.7 to 0.8	Records/Licenses/Permits	3	15.8%
0.8 to 0.9	Records/Licenses/Permits	2	6.1%
0.9 to 1	In Home Assistance	7	18.9%

Approaches to Rurality

- Method 2: Categories of census division (Bollman, 2017)
  - Metro = all CSDs within a census metropolitan area (CMA)
  - Partially non-metro = some CSDs in a CMA, some not in a CMA
  - Non-metro = no CSDs in a CMA
- Records associated with more urban communities
  - Metro census divisions: 49% of all records
  - Partially non-metro census divisions: 43% of all records
  - Non-metro census divisions: 8% of all records

Categories of rural/urban areas

- Most frequently-cited needs by rurality of census division
  - Metro: Information lines
  - Partially Non-metro: Tax preparation assistance
  - Non-metro: Utility assistance



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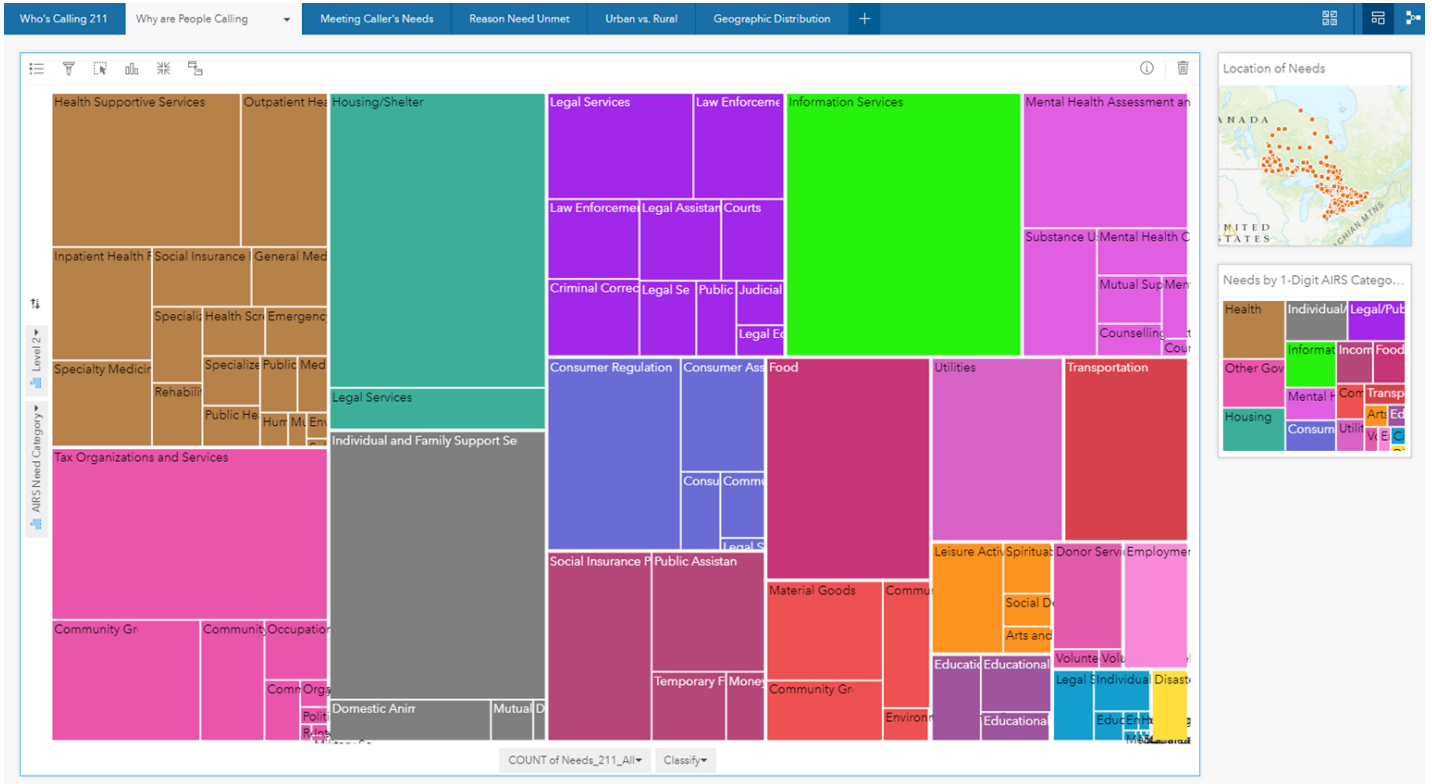
Insights


Who's Calling 211
Why are People Calling
Meeting Caller's Needs
Reason Need Unmet
Urban vs. Rural
Geographic Distribution
Location of Needs
Needs by 1-Digit AIRS Catego...
Health Supportive Services
Outpatient Hea
Housing/Shelter
Legal Services
Law Enforceme
Information Services
Mental Health Assessment an
Inpatient Health F
Social Insurance
General Med
Law Enforceme
Legal Assistan
Courts
Substance U
Mental Health C
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Consumer Ass
Food
Utilities
Transportation
Legal Services
Tax Organizations and Services
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Part 4
Implications and Recommendations

Findings

- Location does matter
  - Greater number of service requests per capita in less urban communities
- 211 data helpful when looked at with other information
  - Potentially fruitful lines of further inquiry identified
  - Needs vs. available services?
- Opportunities for better data sharing/careful interpretation
  - Concordance with Statistics Canada geographies important
  - Web-based spatial analytics tools powerful – need community of practice

Use of Ontario 211 Data

- 211 data inquiries, contact Laura Smith, Data Analyst, Ontario 211 Services, lsmith@211ontario.ca

- Join a community of practice discussion forum on using the data: https://share.otf.ca/c/open-data

  Hosted by the Trillium Foundation

Accessing the report

- Download report and analysis:

  www.ruralontarioinstitute.ca/knowledge-centre

  https://211ontario.ca/about-211-ontario/news/rural-ontario-institute-and-ontario-211-services-release-report-on-needs-and-unmet-needs-in-rural-communities

- ArcGIS Online dashboard

  http://maps-dillon.maps.arcgis.com/apps/MapSeries/index.html?appid=8370c99982b7422693f7c556e350f817

Part 5
Discussion

Discussion Questions

1. How might service managers and their local partners use this kind of information?

2. What local knowledge or supplementary data sets would you want to use to interpret the 211 call data/needs data?

Thank You

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