

You can't get there from here: Mapping access to Canada's teacher education programs

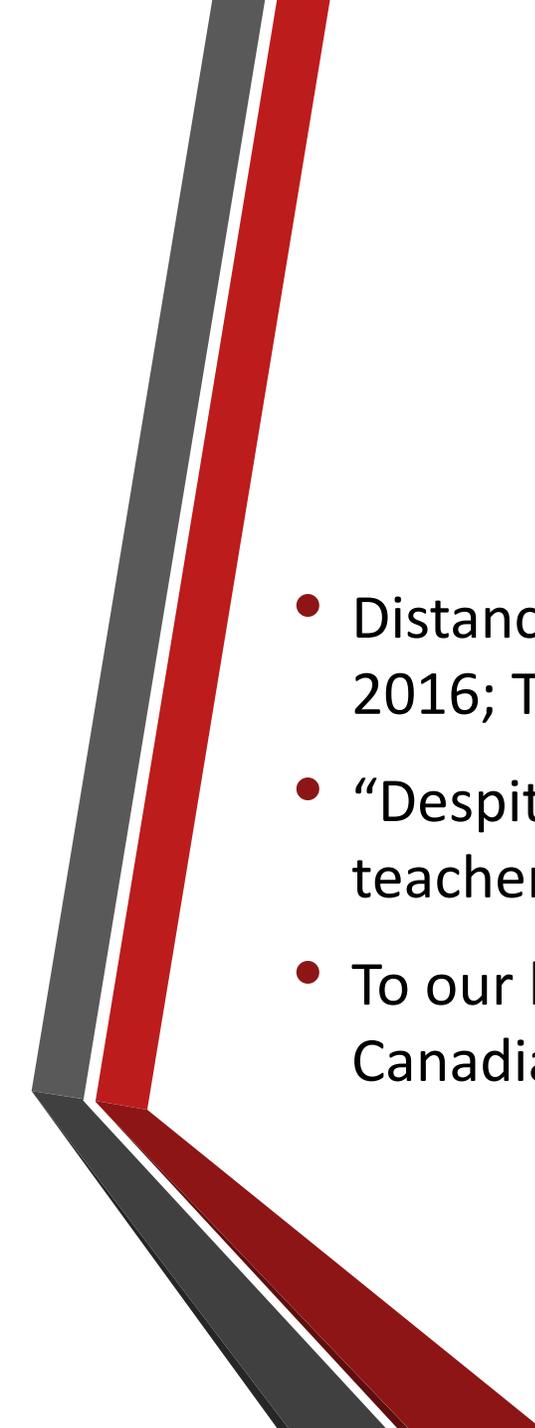
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Context/Process

Initial, exploratory study within a larger research project on rural access and equity through a blended program

1. Locate Canada's Initial Teacher Education Programs (ITEPs)
2. Determine the geographic areas that fall within commuting distance of these ITEPs
3. Calculate:
 - a) The number of people living within those geographic areas
 - b) Rural or urban percentages



Problem

- Distance is a key factor in shaping access to post-secondary education (Hillman, 2016; Turley, 2009)
- “Despite the wide-held belief, there are very few studies that quantify the rural teacher recruitment problem” (Miller, 2012, p. 1)
- To our knowledge, there is currently no study examining geographic access to Canadian teacher education

Literature Review

- Distance matters – a significant deterrent, compounding financial, social, health, and emotional burdens (Turley, 2009; Hillman, 2016)
- University campuses are usually found in major urban centres (Thompson & Gereluk, 2017)
- Rural areas also struggle to “attract and retain qualified teachers and administrators” (Barter, 2008, p. 475) both from urban and rural settings
- “professional isolation, measured by the distance to the nearest teacher education program, is associated with a lower likelihood of becoming a rural teacher” (Miller, 2012, p. 32)



Research Questions:

Goal: Explore geographic access to Canadian Initial Teacher Education Programs (ITEPs)

- How many Canadians live within commuting distance of an ITEP?
- How are urban and rural populations represented in these zones?

Methodology

1. Locate Canada's Initial Teacher Education Programs (ITEPs)
 - Post-secondary institution offering a foundational PD program
 - Usually a B.Ed, lead to teaching certification, and publicly-funded
 - Included all programs we were aware of (ACDE, 2017; Universities Canada, 2017; Thompson & Gereluk, 2017)
 - Included privately-funded, faith-based, and MT programs

Methodology cont.

2. Determine the geographic areas that fall within commuting distance of these ITEPs
 - Using ArcMap; Business Analyst Tool
 - Geocoded the address of each ITEP site
 - Calculated 30- and 60-minute Drive Time Areas (DTAs) on road network
 - Monday at 8:00 a.m.

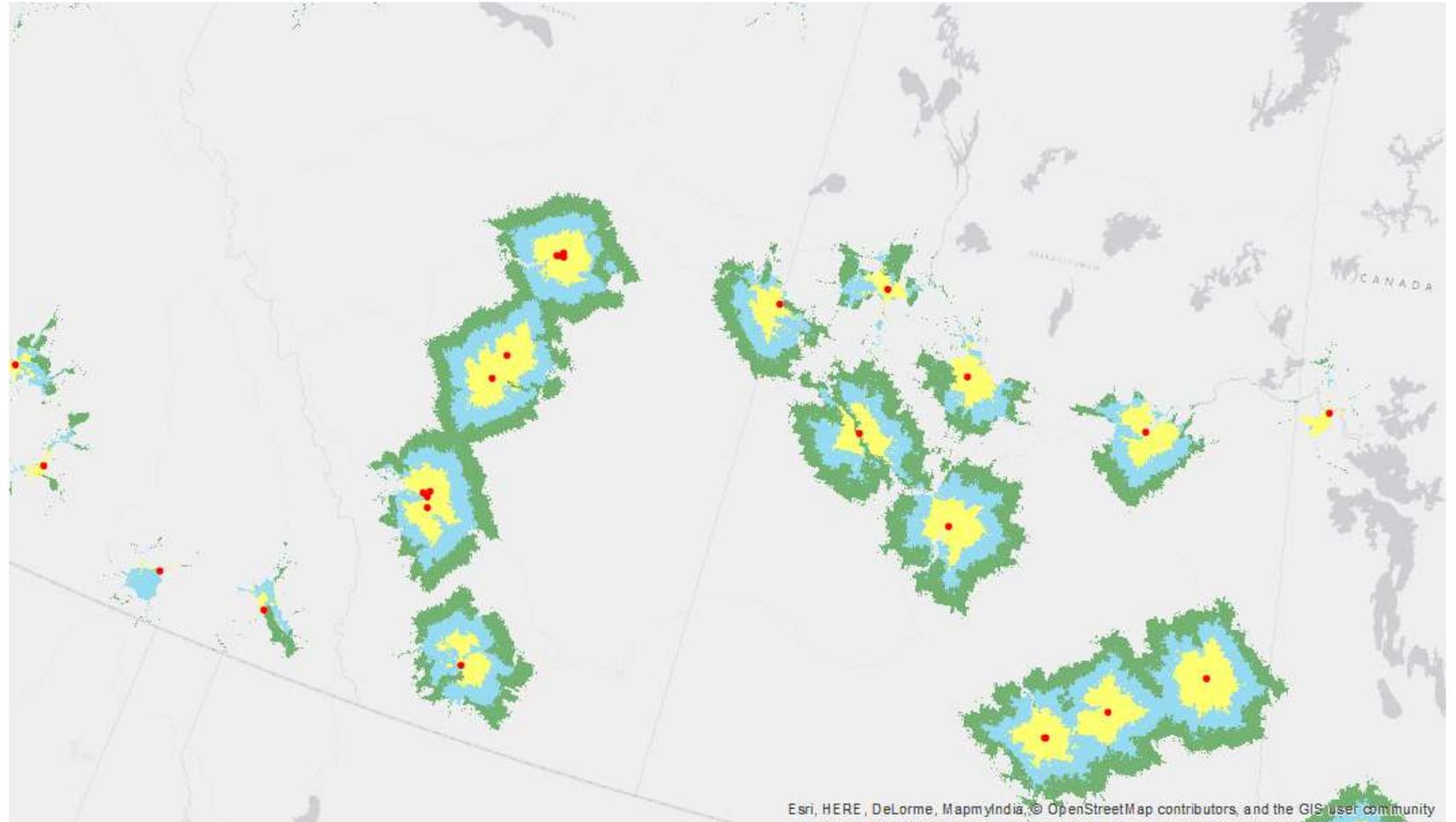
Locating ITEPs

The street address of the 85 ITEP sites are geocoded by their street address



Generating Drive Time Areas (DTAs)

30- and 60-minute DTAs are generated from each site



Methodology cont.

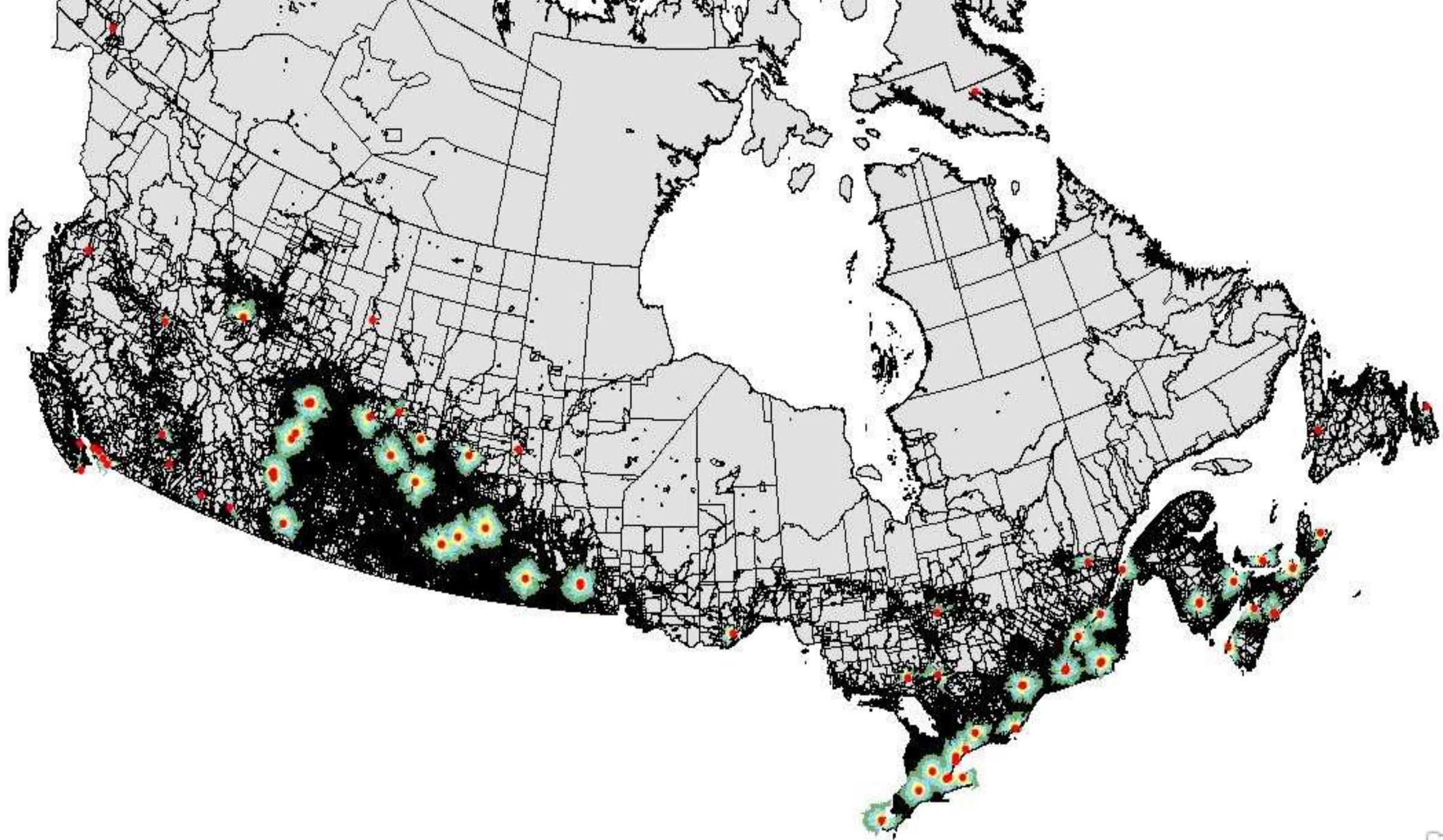
3. Calculate

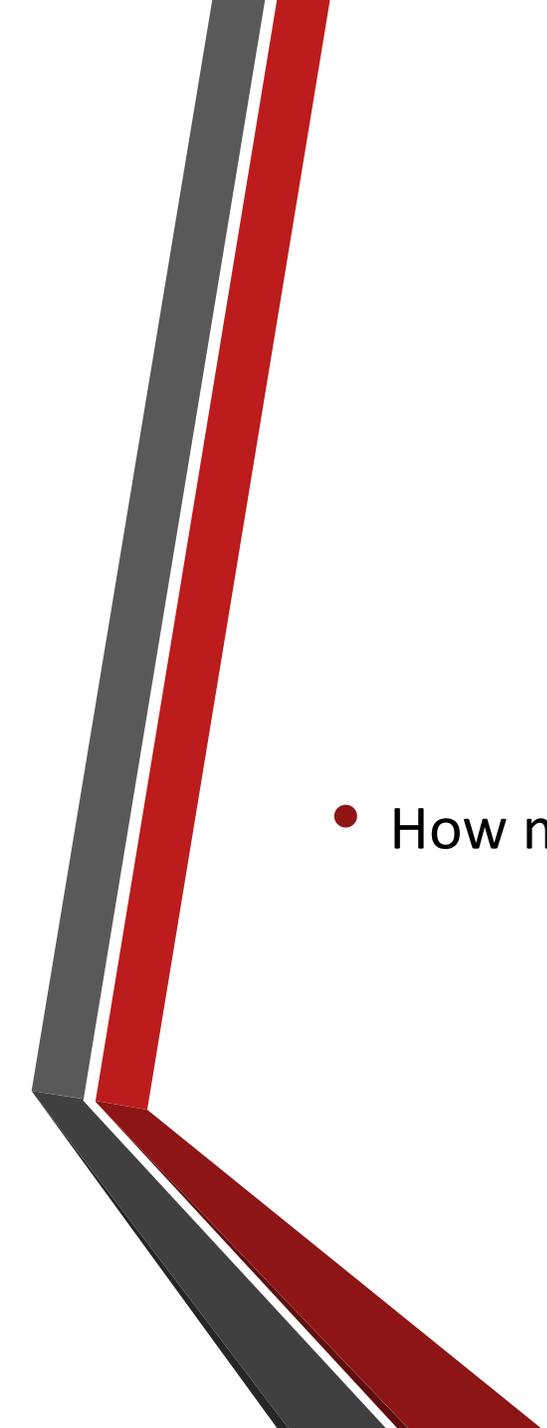
- a) The number of people living within those geographic areas
 - Population data from the StatsCan Geosuite database
 - Population and Dwelling Count tables downloaded at the Dissemination Block (DB); >489,000 DBs
- b) DBs are also entirely urban or rural, thus used to delineate the two groups
 - Statistics Canada defines rural areas as “all territory lying outside population centres” (2016, para. 1). <1,000 population.
 - Intersected the DTAs with census data

Locating Populations

Census population
data is joined at the
Dissemination Block
(DB)







Results

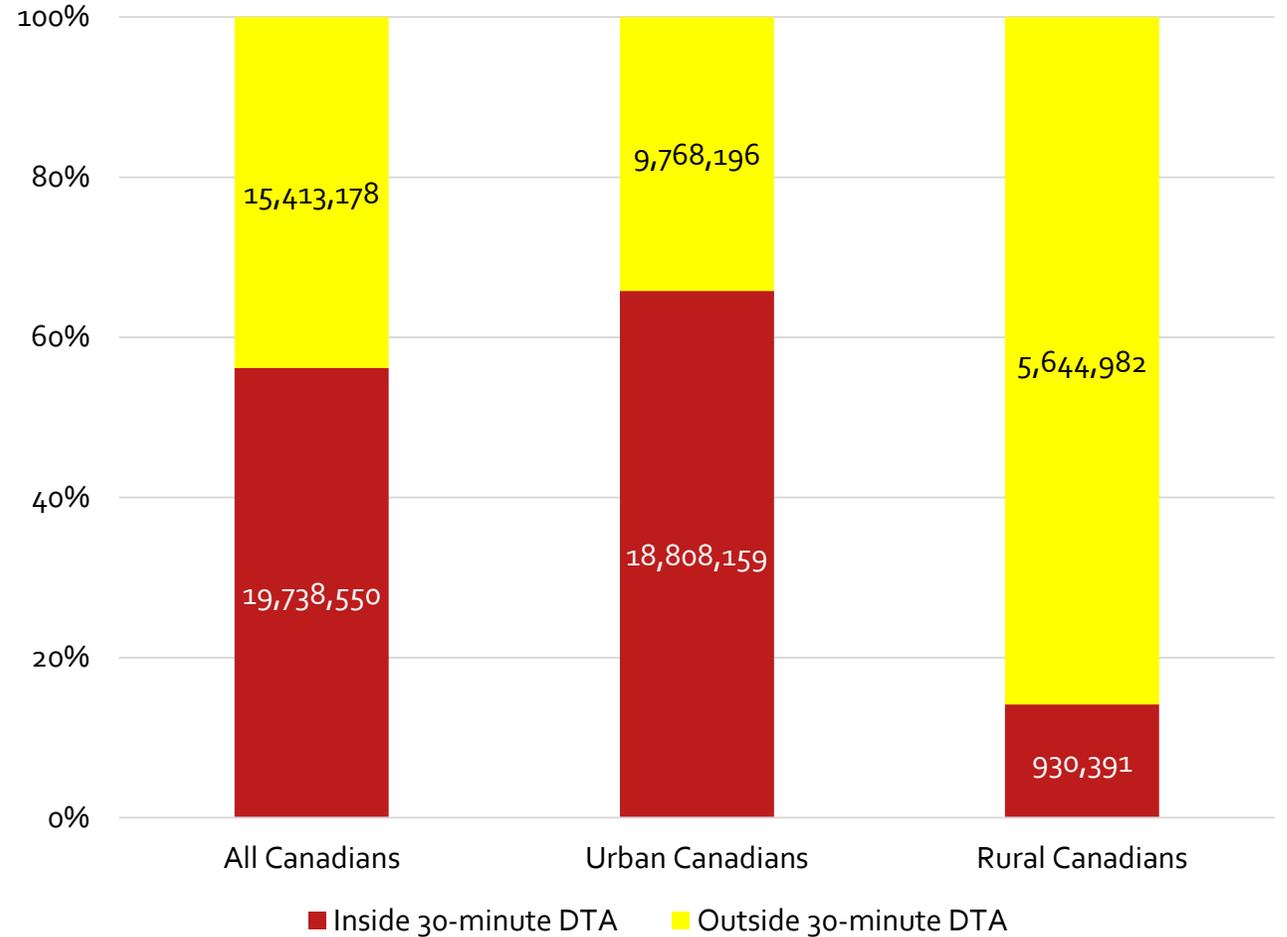
- How many Canadians live within commuting distance of an ITEP?

Results – 30 Minute

Just over **56%** of all Canadians live within a 30-minute drive of at least one ITEP

65.8% of urban population and **14.1%** of rural populations included

Canadians In/Outside 30DTA

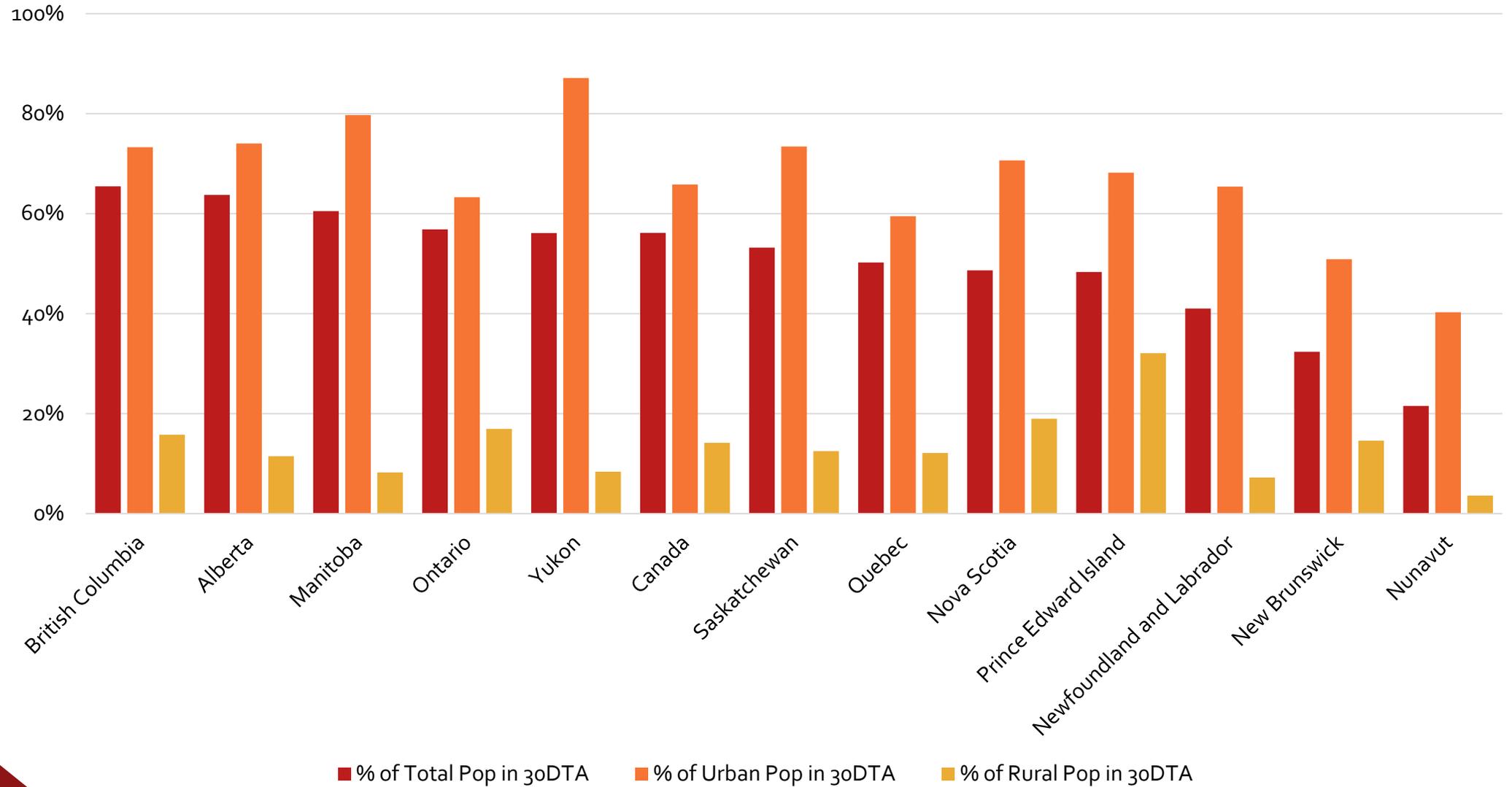




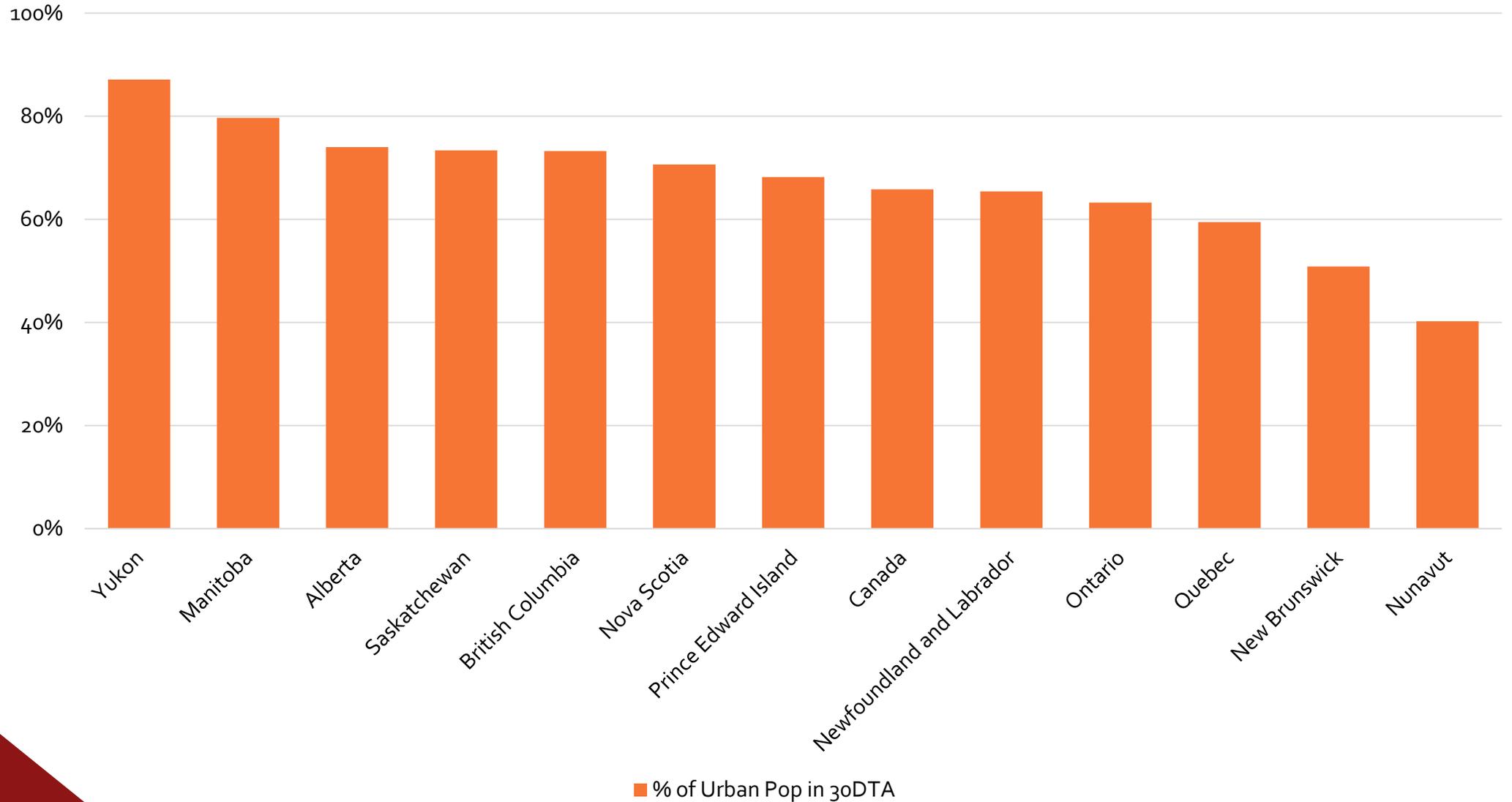
Results

- How are urban and rural populations represented in these zones?

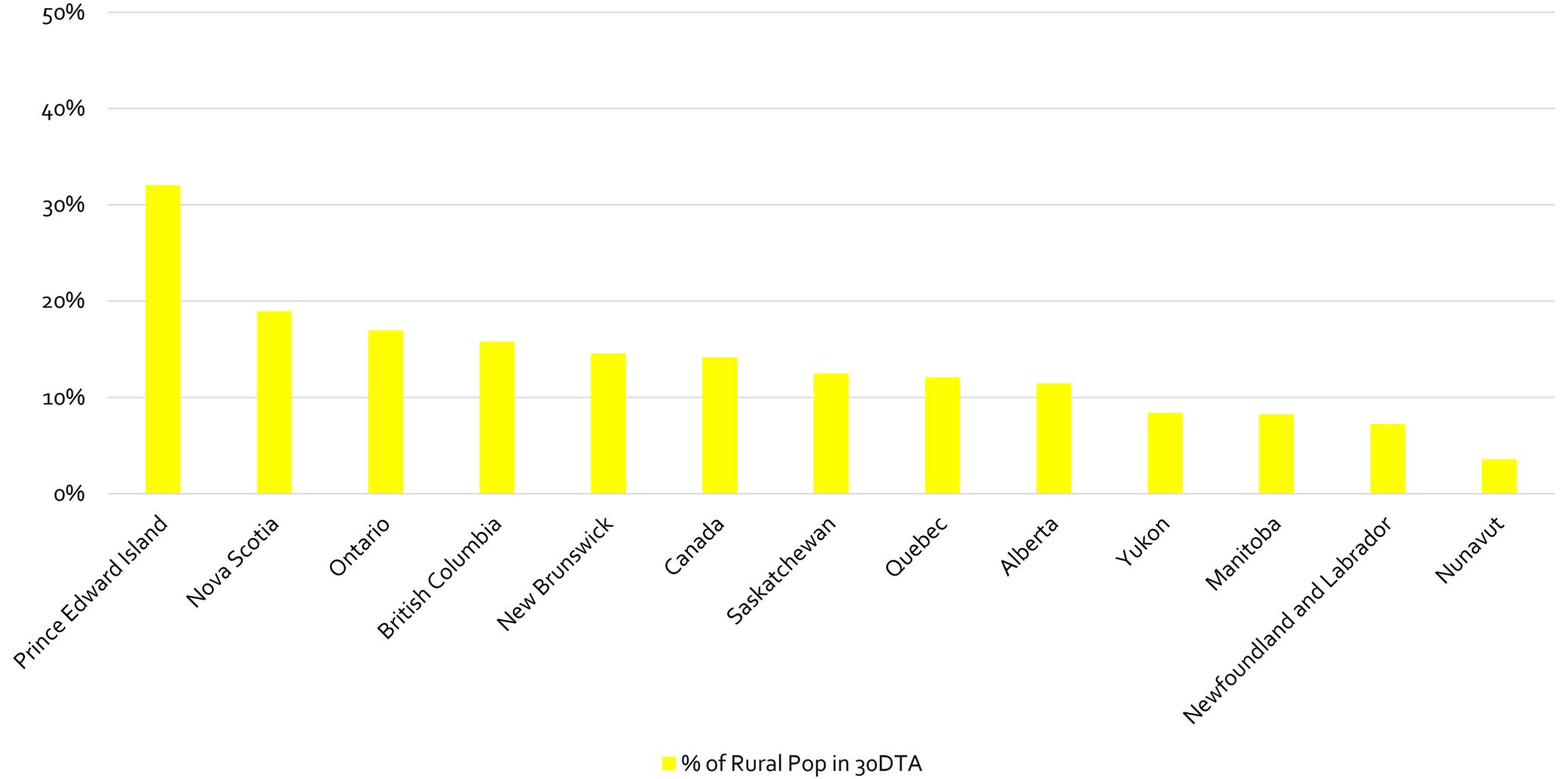
30-Minute DTA Population Breakdown



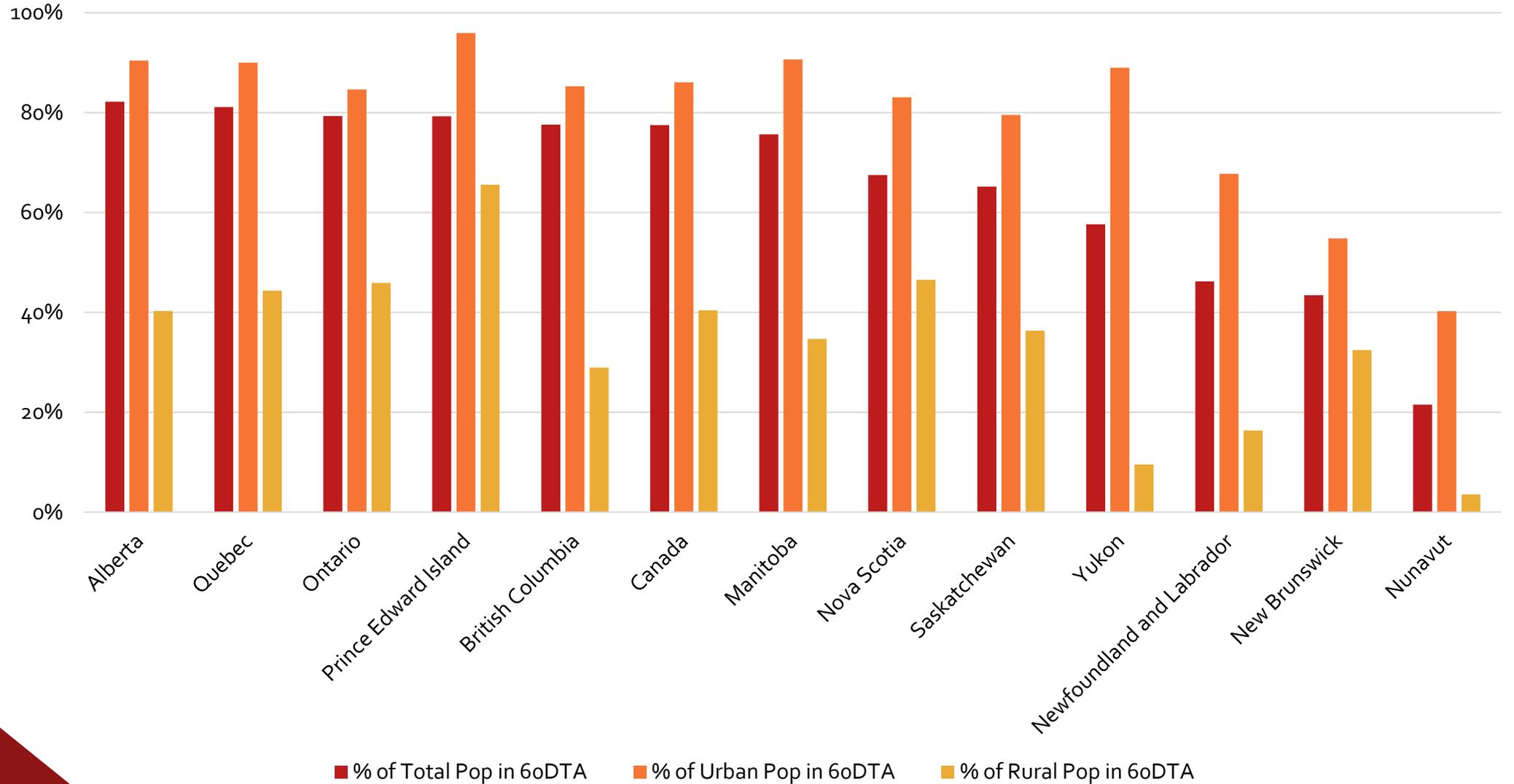
% of Urban Pop in 30DTA



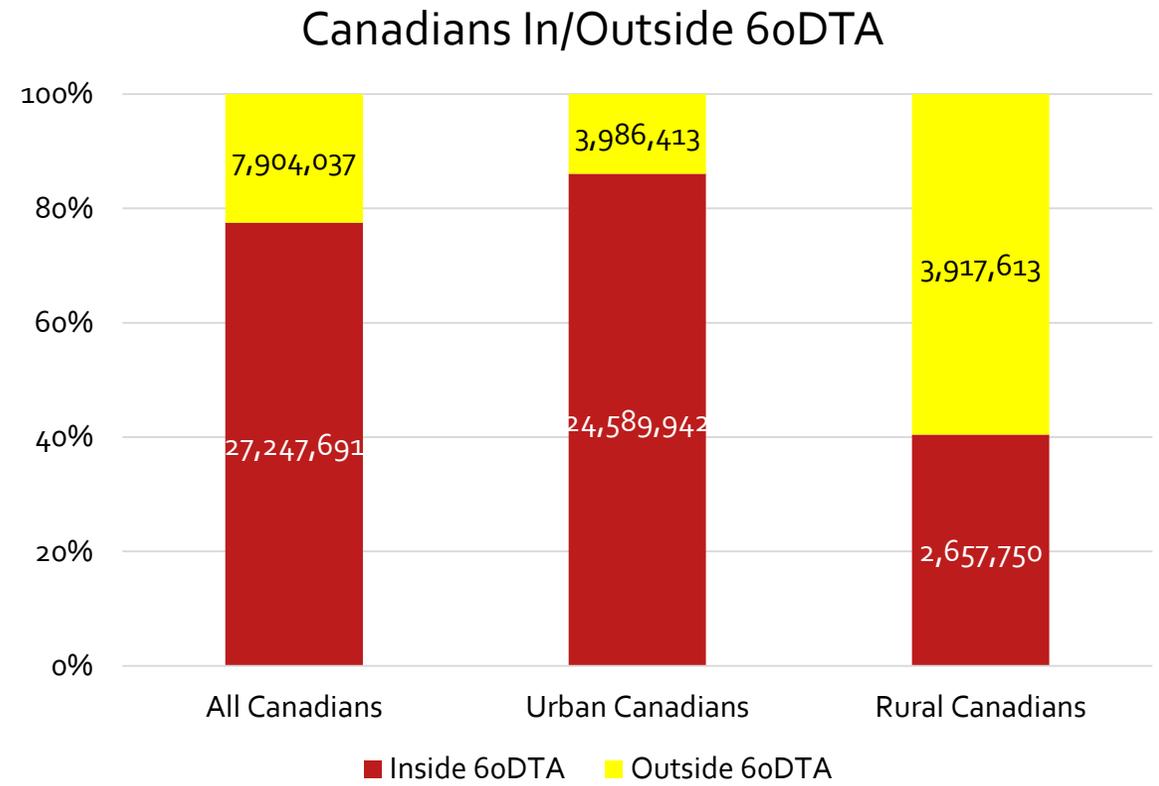
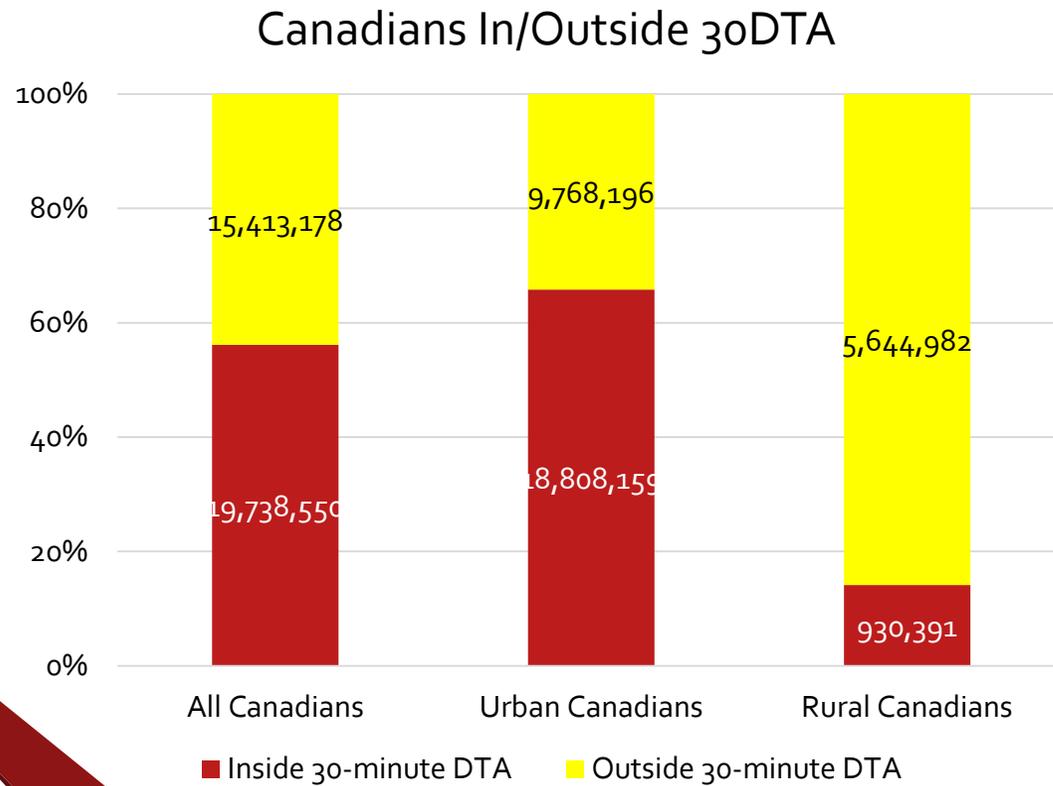
% of Rural Pop in 30DTA



60-Minute DTA Population Breakdown



Comparing 30- and 60-DTA

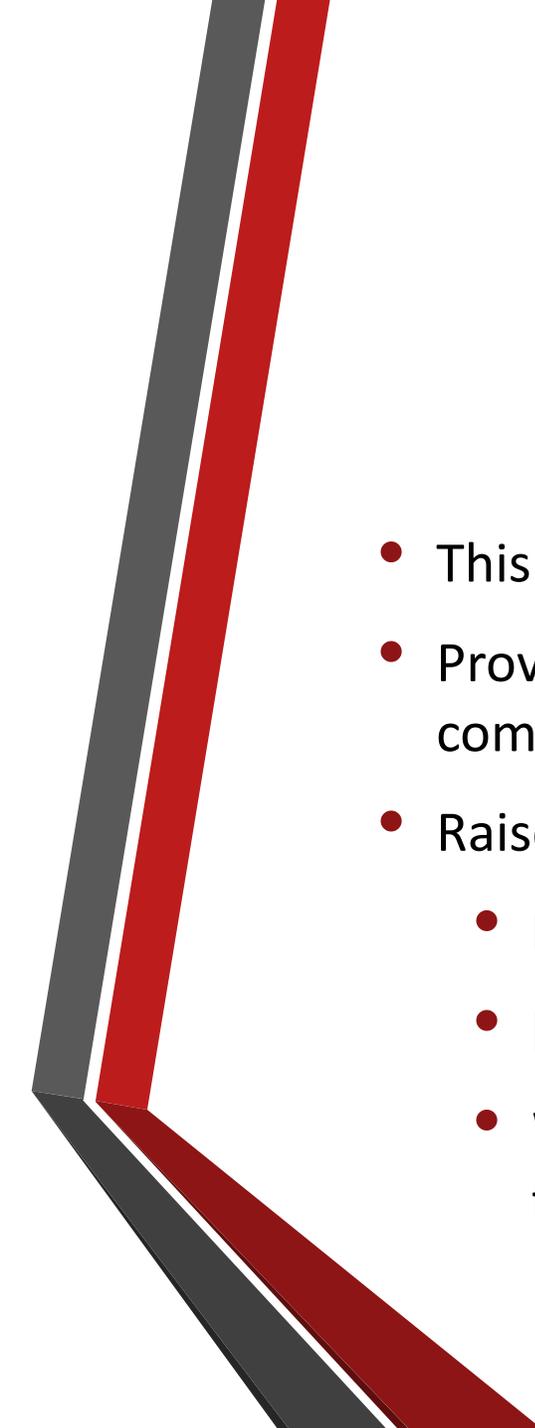


Discussion

- With 85 ITEPs across the country, we see high numbers for urban coverage given the location of most sites (30-min 68% and 60-min 86%)
- Around 60% of rural population must spend more than 2 hours commuting each day to access an ITEP
 - 7.9 million Canadians live more than an hour away from an ITEP site, 3.9 million of which are rural Canadians
- Distance matters - long commutes are associated with negative health outcomes (see Statistics Canada, 2017), and relocation poses numerous barriers (e.g. Griffith & Rothstein, 2009)

Discussion cont.

- Addressing this geographic access gap is important to strengthening rural teacher labour markets and reducing achievement gaps (Miller, 2012)
- Geographic access affects enrolment in post-secondary (Turley, 2009)
- A rural-urban gap exists in Canada (Looker, 2009)
 - “it is not enough to get the youth to the PSE institutions, but rather it is important to get the PSE institutions ... to the rural areas and rural youth” (p. 25)
- Distance is not always a rural issue (Frenette, 2004)



Implications

- This study brings a discussion of geographic access into the Canadian ITE context
- Provides a sense of the number of Canadians who do and do not live within commuting distance of ITEPs
- Raises questions around accessibility of ITEPs
 - How much does this affect ITEP application and attendance rates in Canada?
 - How do we bring ITE to students? Are alternative programs an answer?
 - What supports can we provide students who do commute long(er) distances to attend? How does this affect their program engagement?

Limitations

- Only mapped physical sites (e.g. cannot take into account online and blended programs)
- Assumed an even distribution – used data at the smallest available unit
- Changes to ITEP sites over time; may not be aware of every offering
- Other influences - not everyone in the ‘commuting zones’ has the same opportunity (Byun et al., 2012)