Master of Data Science - University of British Columbia Okanagan

Minutes for May 27, 2020 - 11:00 AM - 12:00 PM PST via Microsoft Teams Meeting

Present: Sofia Bahmutsky, Ngan Lyle (Minutes), Kaitlyn Hobbs, John Braun

Meeting Notes

LTC analysis

- Get better data on COVID numbers in LTC homes.
- Dig deeper WRT Residents' council numbers. Would this predictor explain any outliers?
- Potentially flag military intervention homes
- Collapse the LHIN predictor to fewer categories

  Suggested regions —

  - Toronto
  - GTA
  - Ottawa
  - SW Ontario (populated)
  - NW Ontario (remote)

PHU analysis

- Taking the proportion of COVID cases by population is problematic because we are not accounting for variance. That is 0.5 of a small population is different from 0.5 of a large population. However, may be best to leave this as is.
- Covid case proportions - need to consider variability/probability distributions of small versus large regions. This is only a concern in the response variable (comorbidities can be left alone).
- Median as a measure of proximity at the PHU level
- Can remove the sparsely populated PHUs without COVID cases from the analysis so that the proximity data are more meaningful
- Aerial sensoring approach to what is going on in the individual DBs
- Poisson regression to see how cases relate.
- Can order factors for analysis.
- Zero inflated models - poisson (structural zeros versus relevant zeros)

Further work

- Add staff numbers and proportions of worker type to LTC data
- Perform on American data

Action Items

For LTC analysis

- Dig deeper number of COVID cases at LTC homes
- Look at number of cases for 10 non-residence council homes - if nothing is suspicious (no outliers) remove the variable. Otherwise, flag homes during subsequent analysis and investigate abnormalities. Look at deviance of residuals.

For PHU analysis

- Look at distribution of prox data for PHUs to see if there's an alternative method to taking the median.
- Remove Northwestern Ontario PHUs and rerun analyses/perform aerial censoring.
- Temporal Visualization: group by day and PHU and overlay on proximity data (overall amenity proximity?)