

EXPLORING MENTAL HEALTH SERVICES FOR FAIRFAX COUNTY YOUTH

Zarni Htet, Chanida Lerditsomboon, Eirik Iversen, Ben J. Swartz
with Joshua Goldstein, Stephanie Shipp, and Vicki Lancaster (SDAL)
Partner: Fairfax Health and Human Services (HHS) - Michelle Gregory,
Sophia Dutton, and Linda Hoffman

Project Description

Fairfax Health and Human Services (HHS) is interested in developing long-term population and economic forecasting capabilities, in the context of specific topics (e.g., mental health services/accessibility)

Research Questions

1. Are mental health services accessible to address depression and anxiety for Fairfax County youth?
2. Are mental health services available?

Data Discovery & Selection

- ★ American Community Survey (ACS)
- ★ Fairfax Community Health Dashboard
- ★ Web Scrape of Psychology Today
- ★ Fairfax Youth Survey
- ★ Substance Abuse and Mental Health Services (SAMHSA)
- ★ Virginia Department of Education (VDOE)

Literature Review

What is Mental Health Disorder?

A mental health disorder is: behavioral/psychological; of clinical significance, accompanied by a concomitant distress and/or a raised risk of death; or an important loss of freedom; involves an unexpected cultural response to any situation²

Service availability barriers³

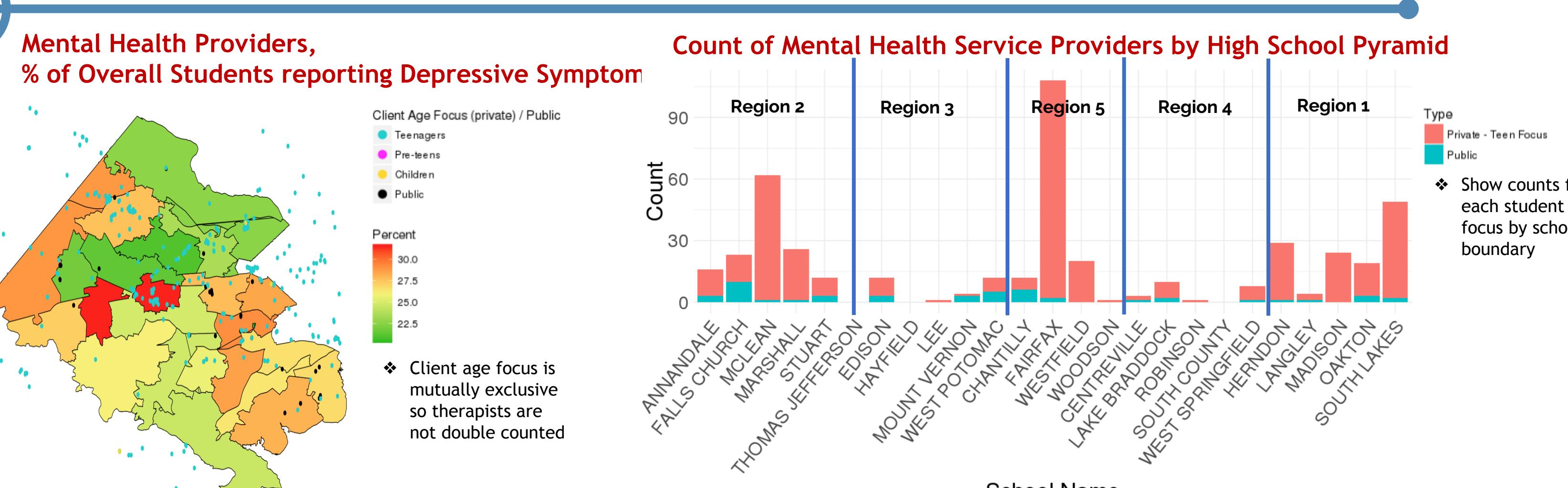
- Physical Location (e.g., low visibility for anonymity)
- Cultural Barriers (e.g., stigma towards receiving care varies)
- Administrative Barriers (e.g., hours conflict with schedule)

Mental health services provided by Fairfax County⁶

- Wellness/prevention services, community based organizations, intervention programs, Medication support services, etc.

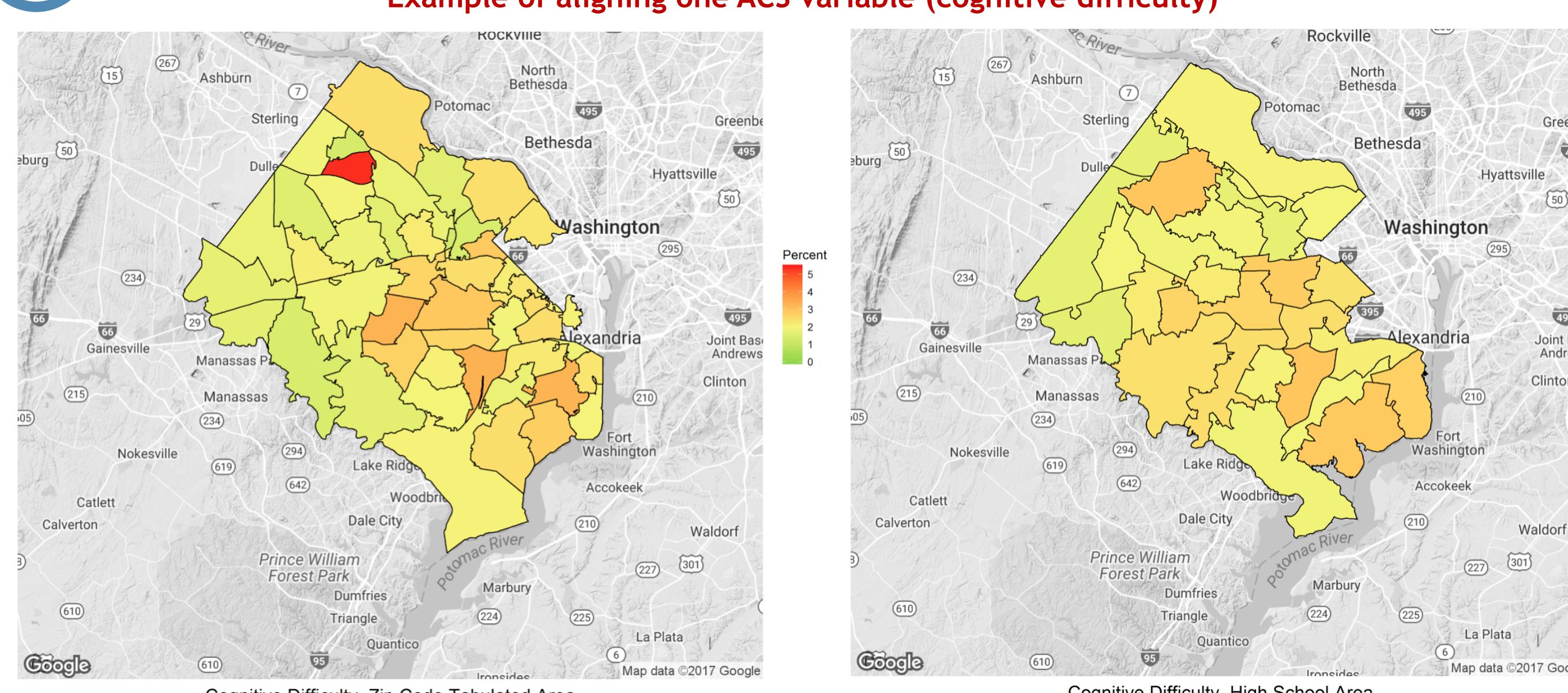
Barriers and services provided are similar to those of San Francisco and LA⁴

Psychology Today Web Scrape⁷



Aligning ACS Data to Fairfax HS Pyramid Boundaries

Example of aligning one ACS variable (cognitive difficulty)



- Created a synthetic population of Fairfax county and impute each individual with characteristics of the variables of interest to us (e.g., age, income, race, cognitive ability, language difficulty)
- Re-computed summary statistics of those individuals by high school boundaries
- Data sources: From the Census Bureau, PUMS micro data and ACS tables by zip code tabulated area (ZCTA)

Method Summary

- Imputed (or sampled) a synthetic population for Fairfax using public use micro data
- Imputation was used by Multivariate Imputation by Chained Equations (MICE)⁸
- Specified a distribution for each variable of interest conditional on the others
- Reweighted the synthetic person data according to ACS tables to match the distribution of age, income, etc. in each zip code tabulated area.

Next Steps

- Fit a simple model using the Fairfax County Survey data
- Find walkability scores for neighborhoods in the 25 HS pyramid boundaries to determine if mental health providers are accessible
- Create a full predictive model if we can obtain FCPS youth survey data with geography

References

1. <http://www.fairfaxcounty.gov/demograph/youthpdf.htm>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC556080/>
3. <https://www.ncbi.nlm.nih.gov/pubmed/24898523>
4. <https://sfwellness.org/our-program/results-impact/>
5. <http://achieve.lausd.net/sm/>
6. <http://www.fairfaxcounty.gov/living/healthhuman/reports/youth-behavioral-health-service-report.pdf>
7. <https://www.psychologytoday.com/>
8. Buuren, Stef, and Karin Groothuis-Oudshoorn. "mice: Multivariate imputation by chained equations in R." *Journal of statistical software* 45.3 (2011).