

Appendix 1. Pharmacy Telephone Survey Script

Start of Block: Default Question Block

Q1 Pharmacy ID number

Q2 Research assistant

Q3 Pharmacy type:

☐ Independent (1)

☐ Chain (2)

Q4 Pharmacy location:

☐ Rural (1)

☐ Non-Rural (2)

Q5 Pharmacy Phone Number

Q6 First Call Attempt date & time:

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Q7 Second Call Attempt date & time:

Q8 Third Call Attempt date & time:

Q9 Hi! I heard that I can get birth control from a pharmacy without a prescription. Can I talk to someone about that?

☐ Yes (1)

☐ No (2)

Q10 Were you:

☐ Placed on hold (1)

☐ call transferred (2)

☐ responding staff self-identifies as pharmacist (3)

☐ responding staff self-identifies as pharmacy technician (4)

☐ responding staff doesn't identify self (5)

Q11 Can I get birth control without a prescription?

☐ Yes (1)

☐ No (2)

Skip To: Q18 If Q11 = No

Q12 Ok great! So I was wondering what kinds can I get?

☐ Birth control pill (1)

☐ birth control patch (2)

☐ vaginal birth control ring (3)

Q13 (if not all options are mentioned) ok, Is that it?

☐ yes (1)

☐ no (2)

☐ plan B mentioned (3)

Q14 Is there anything I need to do at the pharmacy?

☐ Self-screening process mentioned (1)

☐ blood pressure check mentioned (2)

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Q15 Ok so much birth control can I get?

- ☐ 1 month (1)
 - ☐ 3 months (2)
 - ☐ 6 months (3)
 - ☐ 1 year (4)
-

Q16 How much will it cost without insurance?

Q17 Is there anything else I need to do?

- ☐ Yes: follow-up (1)
 - ☐ no (2)
 - ☐ other (3)
-

Q18 Ok is there somewhere else I can go?

- ☐ Provides alternative pharmacy (1)
 - ☐ provides alternative clinic information (2)
 - ☐ doesn't provide alternative (3)
-

Q19 Great! Thank you! (end call)

End of Block: Default Question Block

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Appendix 2. Descriptive Spatial Data

Appendix 3 shows a map of Utah with major features identified. As of 2020, approximately 63.1% of Utah land is owned by the federal government,¹ with an additional 10% owned by the state and approximately 5% designated as tribal land. As such, the majority of Utah's population is located in the Salt Lake City-Provo-Orem, UT Combined Statistical Area in north-central Utah which extends from Ogden to Provo and is home to >82% of Utahns.² An additional 5% of Utah's population resides in the St. George Metropolitan Statistical Area located in the far southwest corner of the state. Appendix 4 shows the population density for the state of Utah and the Salt Lake City-Provo-Orem, UT Combined Statistical Area.

Appendixes 5 and 6 show census tracts for the state of Utah and the Salt Lake City-Provo-Orem Combined Statistical Area by the percentage of the population living below the federal poverty level and the percentage of reproductive age females without health insurance. Census tracts with a higher percentage of the population living below the federal poverty level are predominately located in rural areas with some concentration in urban population centers. Census tracts with a higher percentage of reproductive age females without insurance overlap with those with a high percentage of the population below the federal poverty level.

Appendixes 7–10 show census tracts for the state of Utah and the Salt Lake City-Provo-Orem Combined Statistical Area by percent minority, percent Hispanic, percent Black, and percent Native American. Census tracts with the highest minority populations are found in West Valley City (just west of Salt Lake City), the Navajo Nation, the Uintah and Ouray Reservation (Ute Tribe), and two Goshute Tribe reservations found in Tooele County (west Utah). Tooele County also has the highest percentage of Hispanic people of any county in Utah. Tracts with the highest levels of Hispanic

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populations are found in the more rural areas of Utah (especially Northwestern Utah) as well as along the I-15 corridor from Ogden to Provo especially west of the interstate. Tracts with the highest proportion of Black residents are primarily found on the West side of I-15 south of Ogden and West of Salt Lake City.

References

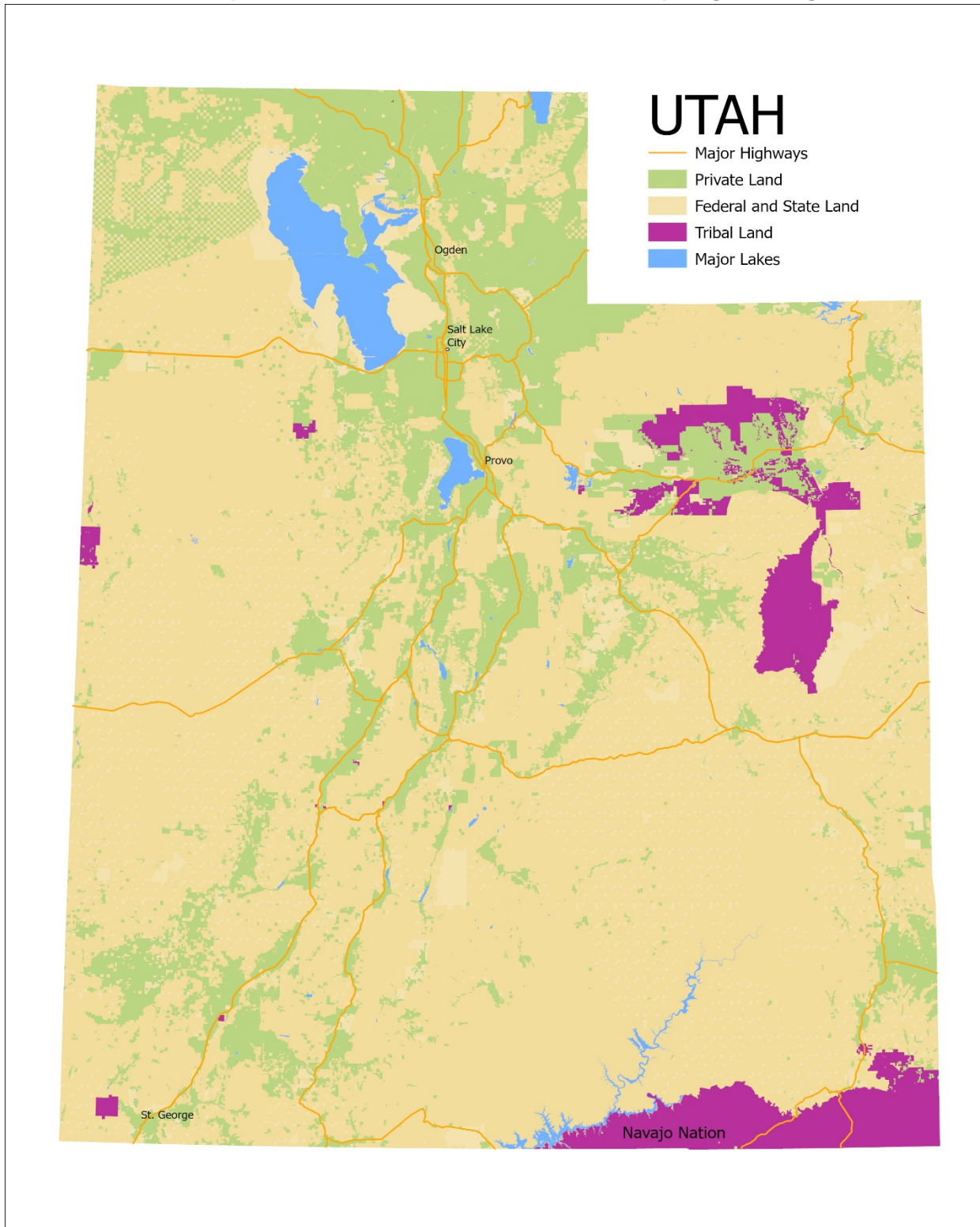
1. Congressional Research Service. Federal Land Ownership: Overview and Data. Updated February 21, 2020. Accessed September 2, 2021. <https://sgp.fas.org/crs/misc/R42346.pdf>.
2. U.S. Census Bureau, Population Division. Annual Estimates of the Resident Population for the Combined Statistical Areas in the United States and Puerto Rico: April 1, 2010 to July 1, 2019 (CSA-EST2019-ANNRES). Released March 2020.

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Appendix 3. Map of Utah with major features identified. Map created using data from State of Utah, Utah Automated Graphic Reference Center. Available at: <https://gis.utah.gov/>

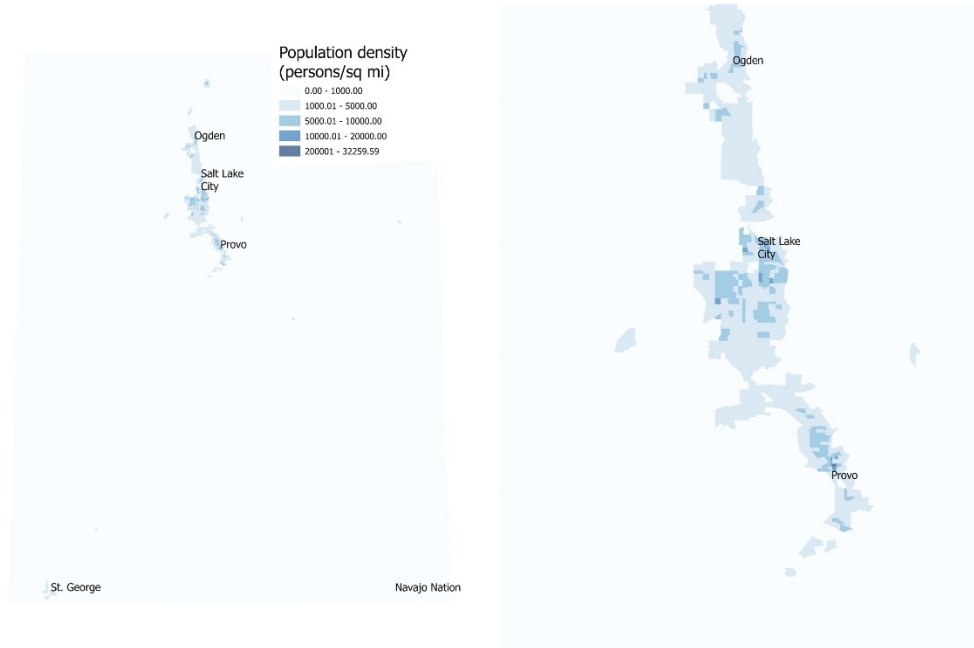


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Appendix 4. Population density. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Geographic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>

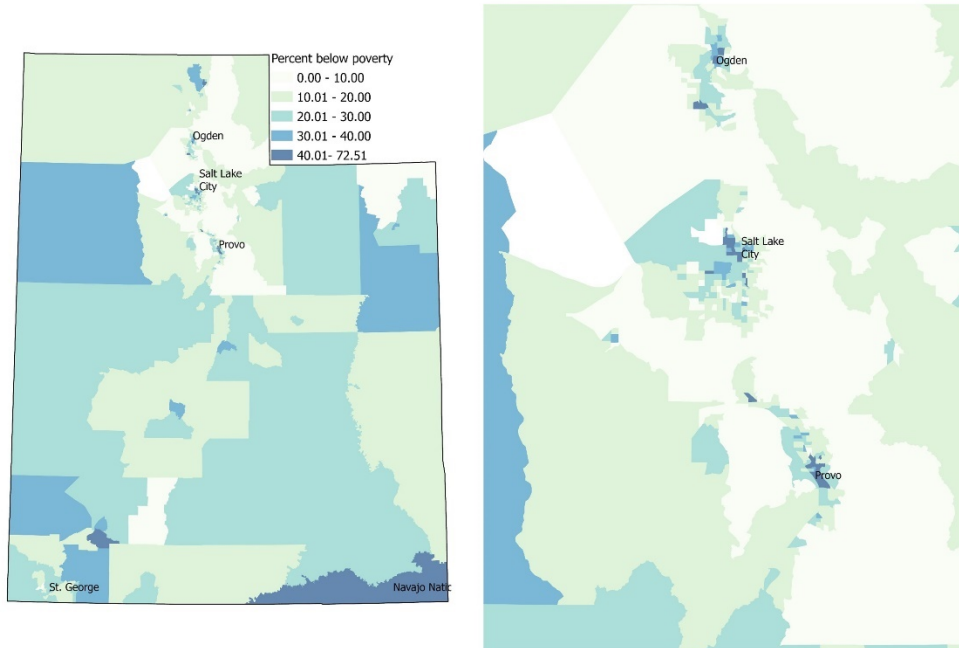


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Appendix 5. Poverty. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Geographic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>

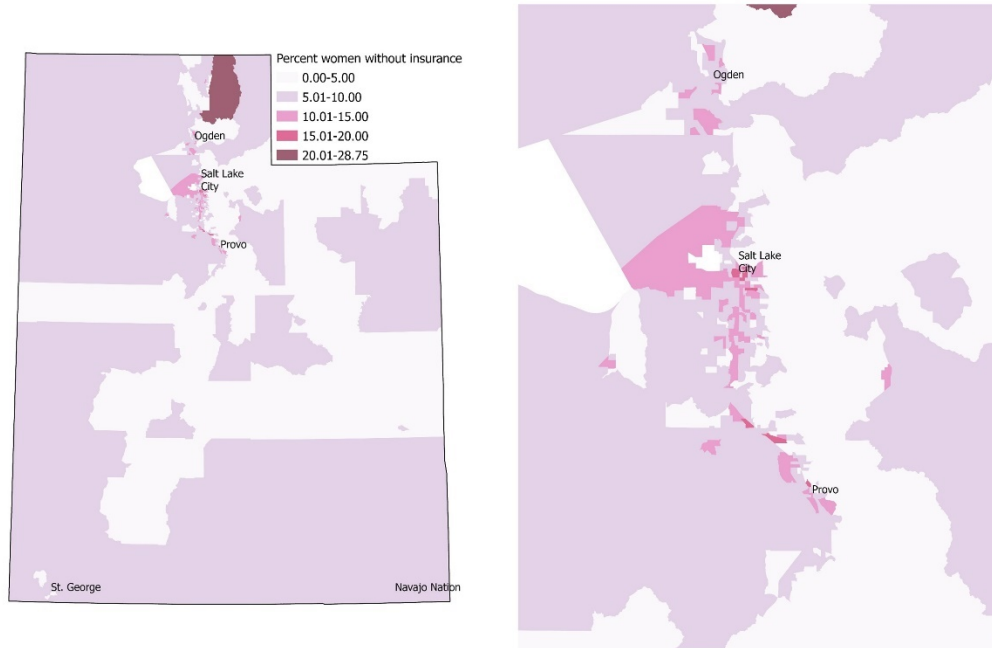


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Appendix 6. Females with no insurance. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Graphic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>

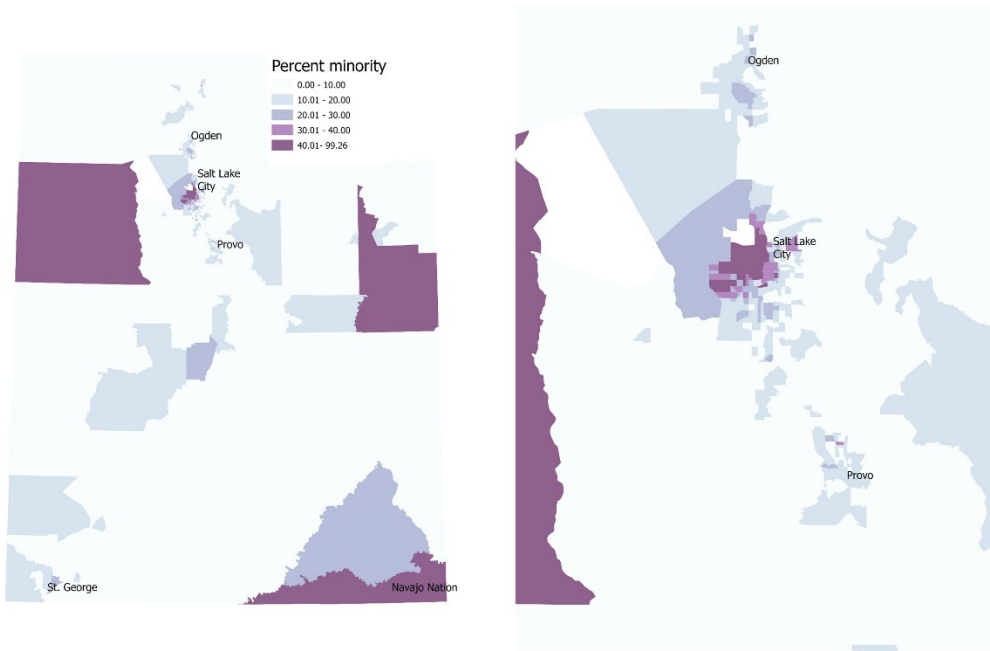


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Appendix 7. All minority people. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Geographic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>

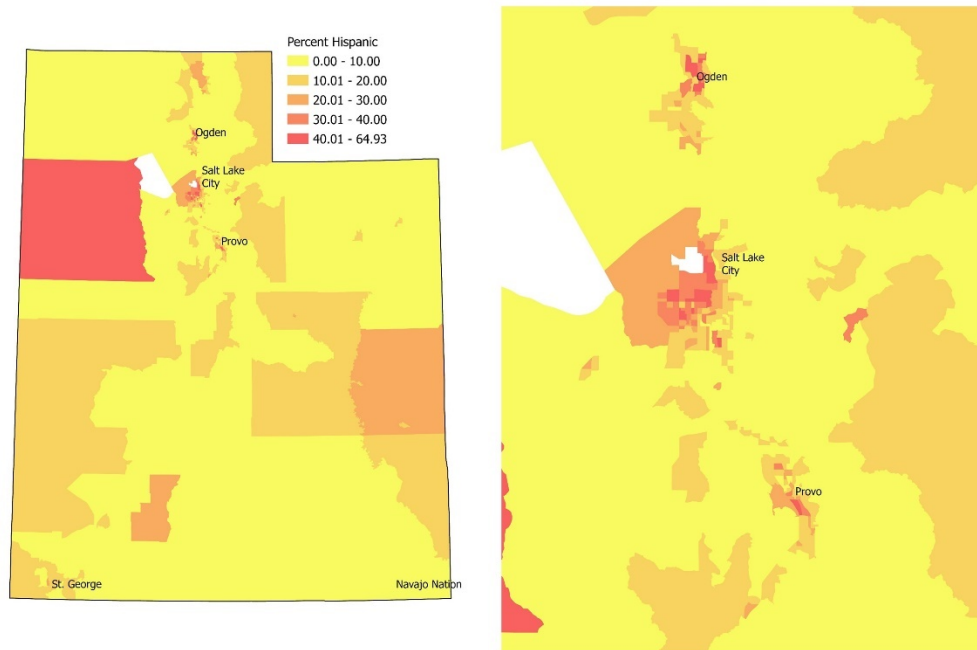


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Appendix 8. Hispanic people. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Geographic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>

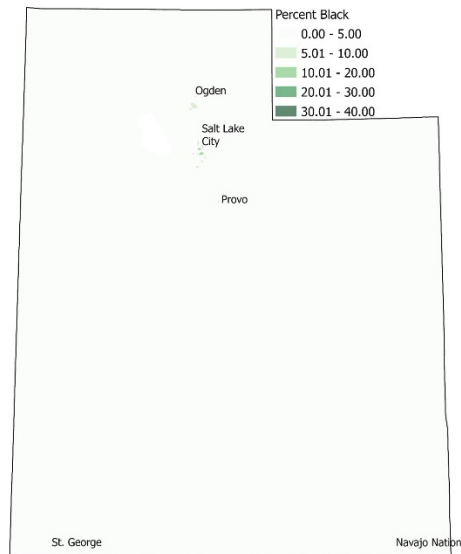


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Appendix 9. Black people. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Geographic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>



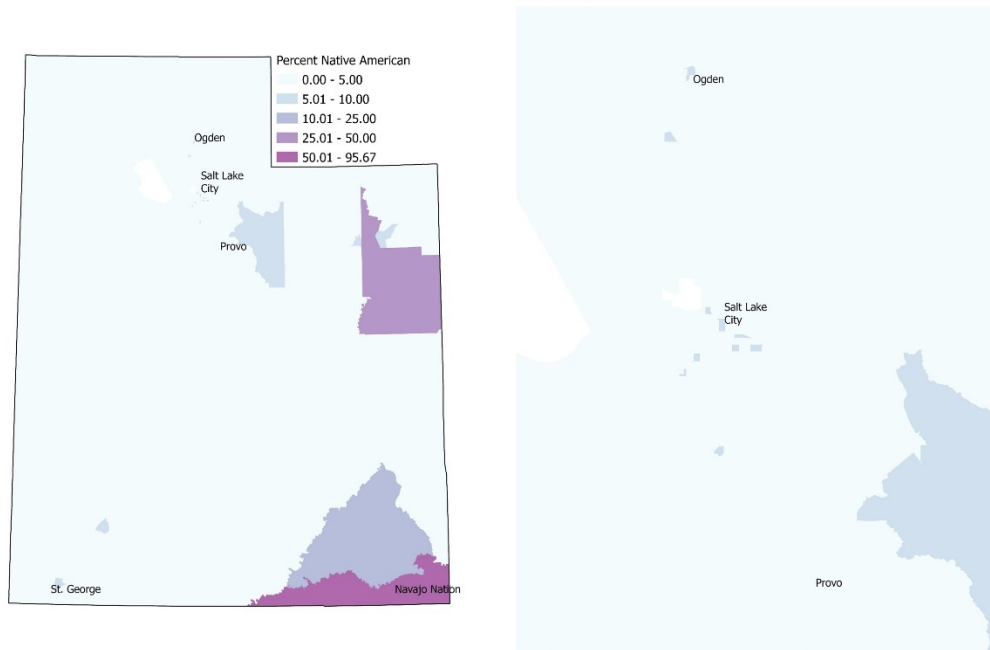
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Appendix 10. Native American people. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Graphic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>

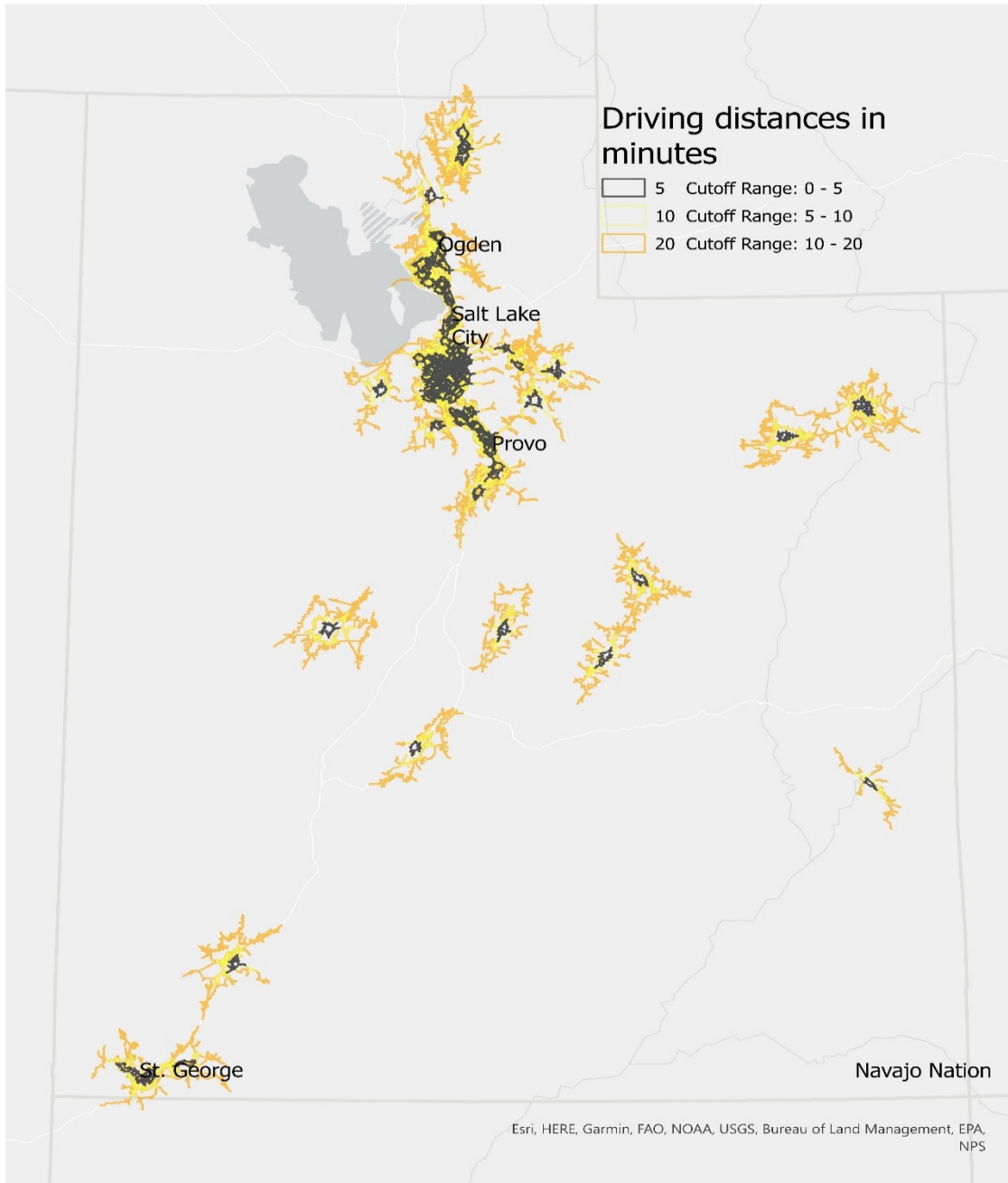


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Appendix 11. Driving distances. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Graphic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>



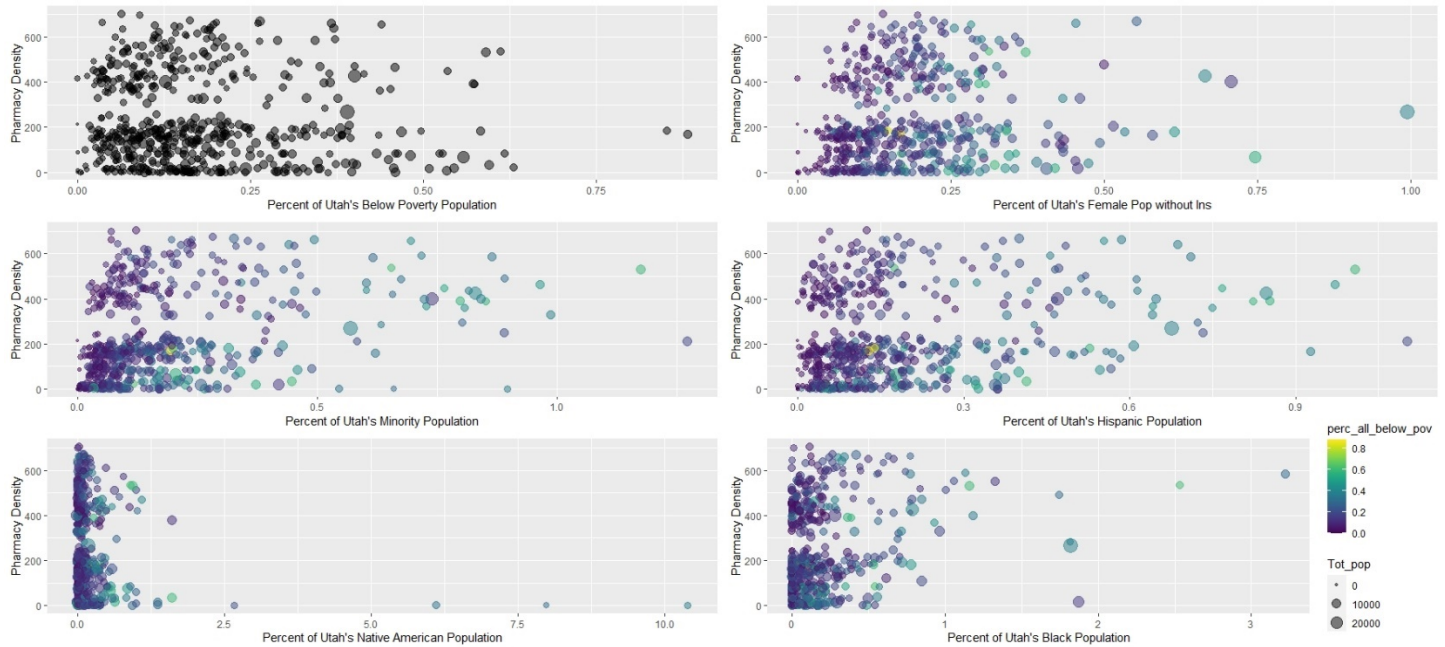
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Appendix 12. Density by characteristic. Map created with ESRI 2021. ArcGIS Pro: Release 2.8.2. Redlands, CA: Environmental Systems Research Institute. Data from State of Utah, Utah Automated Graphic Reference Center. Available at: <https://gis.utah.gov/> and United States Census Bureau. American Community Survey 2018 5-Year Estimates Public Use Microdata Sample File. Washington, DC. Accessed at: <https://www.census.gov/programs-surveys/acs/microdata/access.2018.html>



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Appendix 13. Explanatory Text for Appendix 12.

The graphs in Appendix 12 show the relationship between the density of participating pharmacies and the percent of Utah's population with selected demographic characteristics that reside in those census tracts. Density corresponds to a larger number of pharmacies within proximity of the census tract. The specific method of averaging kernel densities within census tracts makes the scale difficult to translate into directly interpretable units, therefore pharmacy density is most easily interpreted in relative terms as simply more or less dense than another. Each dot represents a census tract and is placed at the intersection of pharmacy density on the y-axis and percentage of the state's population with that demographic characteristic on the x-axis (e.g. ranging from 0.00% to 1% for poverty). The size of the dot corresponds to the size of the population in the census tract. Additionally, for females without health insurance and for the minority race or ethnicity designations, the dots are colored to illustrate the relationship between percent of the population living under the federal poverty level. By focusing on the percent of Utah's minority and impoverished populations that live in a tract we sought to focus on how well those persons are served by the pharmacy contraceptive program, regardless of whether they are a majority population in a certain area. (e.g. a census tract that is majority Hispanic).

Overall, these plots identify tracts with a high percentage of Utah's population which live under the federal poverty level and have low density of proximate participating pharmacies. This relationship is found for females of reproductive age without health insurance and for each of the minority race or ethnicity designations. This graph further illustrates that there are two distinct groups of census tracts: those above and below a pharmacy density of 300. Higher density values correspond with urban census tracts while lower densities correspond with more rural census tracts. This stark division demonstrates that a rural vs. non-rural divide in access to pharmacy prescribed contraception exists. Specifically, that marginalized populations within Utah who also reside in rural area have less access to participating pharmacies than similar populations in non-rural settings. The census tracts with a pharmacy density above 300 were entirely in the Salt Lake County area. There was a diversity of population sizes, poverty levels and race or ethnicity percentages at each level of

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pharmacy density, though more high poverty and high proportion Native American census tracts are clearly in the low-pharmacy density areas.