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BACKGROUND

Huntsman Cancer Institute (HCI) created The System for Health Assessment Population data Evaluation (SHAPE) in 2024 with intention to host a robust system for monitoring the large catchment area.

The catchment area consists of Utah, Idaho, Montana, Nevada, and Wyoming. This tool has become more powerful over the past year to meet the needs of the institution.

GOALS

Our goal is to standardize and streamline the approach for gathering and disseminating data for our catchment area.

METHODS

Data was gathered from Cancer InFocus (CIF), Health Informational National Trends Survey (HINTS), HCI's Community Health Assessment Survey (CHAS), Federal Communications Commission (FCC), US Census Bureau, Annual Homeless Assessment Report (AHAR), Area Deprivation Index (ADI), Environmental Protection Agency (EPA), Centers for Disease Control and Prevention (CDC), United States Department of Agriculture (USDA), Utah Cancer Registry (UCR), National Cancer Institute (NCI) State Cancer Profiles, and our local Electronic Data Warehouse (EDW). The geographic levels of this data range from national to census-tract.

A portal that streamlines the process for researchers to request data and visualizations was created [Figure 1.]. It has been instrumental in keeping the SHAPE team organized.

Tableau is used to visualize key metrics across domains such as cancer incidence, mortality, and stage; health behaviors, health care access, environmental exposures, clinical trial engagement, and more.

Geovisualization functions include travel time [Figure 2.], and travel distance mapping [Figure 3.] with user-specified origins and destinations, heat mapping of metrics, and other thematic mapping.

SQL Server Reporting Services are used to provide summary data on accruals, travel time, distance, sociodemographic characteristics [Figure 4.], etc.

OUTCOMES AND LESSONS LEARNED

Semi-automated database integration of patient, population, and geographic layers allows our institution to understand the cancer control needs across our very large catchment area. Having this data compiled into one database allows us to build reports and visualizations with ease.

Building in thorough documentation at every step is critical. Live data can be stored in the database, but "snapshots" of the data should be taken on the same day each year to ensure standardization in annual reporting. We learned about several crucial data points that inform staff and senior leaders about what to prioritize within our catchment area.

Acknowledgements

Figure 1.

2019-2024 HCI Treatment Trial Participants

Traveling more than 2 hours
- **30%** of HCI patients
- **27%** of HCI treatment accruals

Legend:
- ☐ No accruals
- ■ Treatment accruals
- ★ Huntsman Cancer Institute
- ⬗ Affiliate
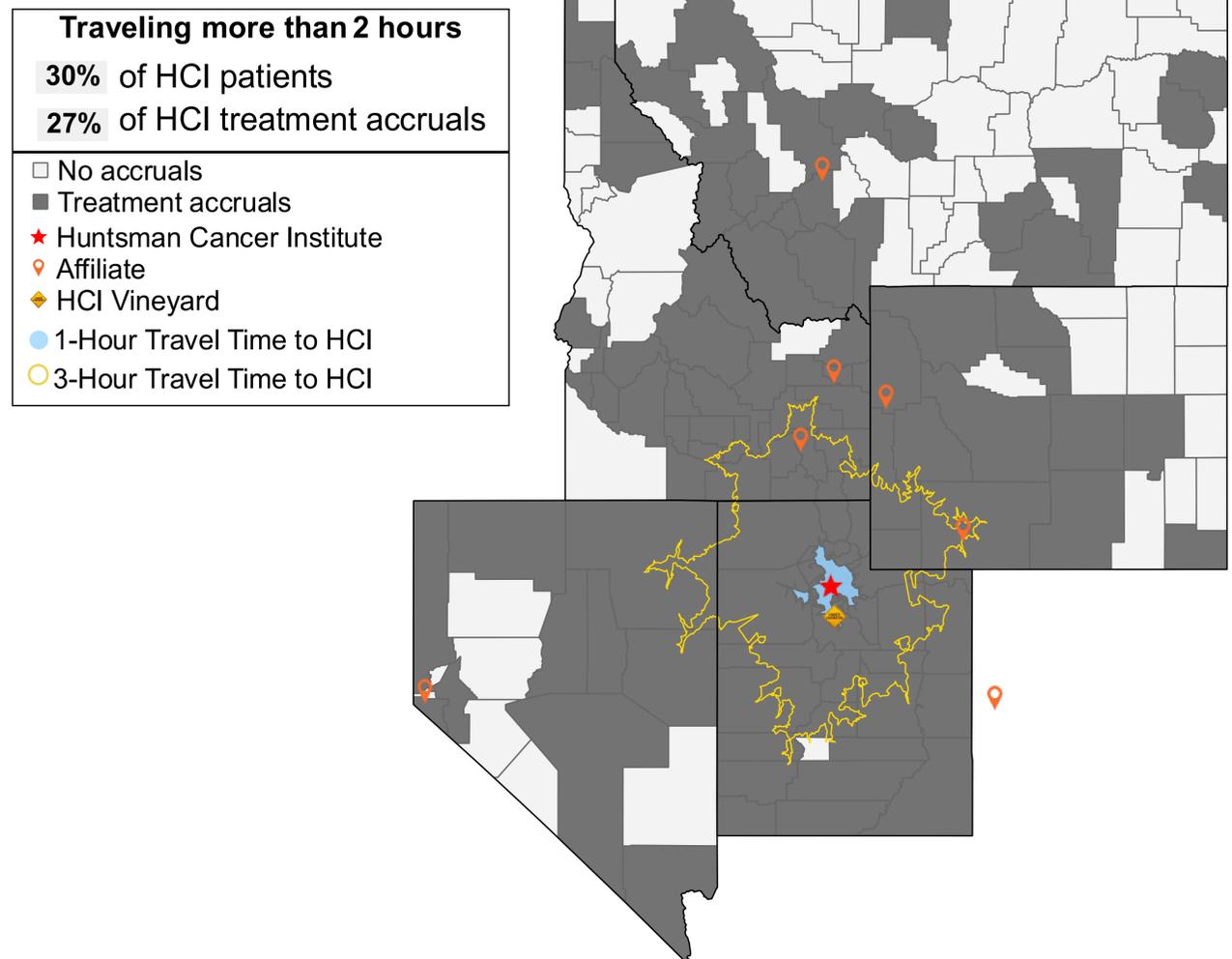- ◆ HCI Vineyard
- ● 1-Hour Travel Time to HCI
- ○ 3-Hour Travel Time to HCI

Figure 2.

2019-2024 HCI Treatment Trial Participants

Traveling more than 150 miles
- 31% of HCI patients
- 28% of HCI treatment accruals

Legend:
- ☐ No accruals
- ■ Treatment accruals
- ★ Huntsman Cancer Institute
- ◆ HCI Vineyard
- ⬗ Affiliate
- ● 150 miles from HCI