A Mixed Method Approach to Identifying Unique Catchment Area Needs

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1. Background
Huntsman Cancer Institute (HCI) serves Utah, Montana, Nevada, Idaho, and Wyoming – a large geographic region with unique population needs and challenges for cancer control strategies. HCI uses its System for Health Assessment and Population Evaluation (SHAPE) to integrate patient and population data to understand heterogeneous catchment area needs.

2. Goals
Our goals are to use SHAPE to:

- Identify the burdensome geographic and socioeconomic characteristics facing the residents of our catchment area
- Use them to help inform institutional priorities to address the needs of our population

3. Solutions and Methods
We identified transportation burden in our catchment area by using Tableau to visualize travel times from our institution. Visuals displayed travel time ranges of one, two, three, and four hours, helping us assess the extent of the issue.

Data from the American Community Survey, the U.S. Department of Agriculture, and Social Vulnerability Index were visualized to inform which counties were facing poverty, rurality, and social vulnerability metrics.

4. Outcomes
We were able to successfully identify several geographic and socioeconomic factors that impact cancer care in our catchment area. First, we quantified the disproportionate percentage of frontier land (51 percent of the geographic area is in the most isolated frontier category – Frontier and Remote [FAR] Level Four), residents living in frontier areas compared to the United States overall. Two of the states in our catchment (MT, WY) have most of their population in frontier areas, which are commonly underserved. We found that the median percentage of people below the poverty level is 1 to 1.3 percent higher in rural and frontier counties, respectively, than metropolitan counties in our catchment area. We now have a more comprehensive understanding of the implications of travel for individuals within our catchment area; for example, 27 percent of HCI patients and 30 percent of clinical trial participants travel over two hours. The combination of long travel distances, poverty, and rurality/ frontier residence in our catchment area poses unique challenges for cancer control efforts. Our findings from our population surveillance system continuously inform the institution of where efforts should be focused to have the most impact.

5. Lessons Learned and Future Directions
HCI's automated population data integration system identifies priority areas to address the unique needs of our population. The SHAPE resource serves the Office of Community Outreach and Engagement in ensuring that our outreach efforts are reaching the right places.