

MONTANA

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Working Together to Describe Cancer Treatment Resources in Montana

NATIONAL PROGRAM OF CANCER REGISTRIES SUCCESS STORY

SUMMARY: The Montana Cancer Coalition (MTCC) has identified “increasing availability of and access to diagnostic and cancer treatment” as a key objective for the Montana Comprehensive Cancer Control Plan 2016-2021. The first step to addressing this objective is to get a clear picture of the cancer treatment resources that are currently available in Montana. To do this, the MTCC treatment and research implementation team and the Montana Central Tumor Registry (MCTR) combined resources to get a more complete picture of cancer treatment resources than either would be able to produce alone. MTCC conducted a survey of hospitals in Montana to collect detailed information on which cancer treatment services were offered at each facility. Forty-four of the 65 hospitals responded to the survey. For the 21 non-responding facilities, treatment data from the MCTR was used to determine if each treatment service was offered. MCTR also analyzed patient data to identify the proportion of Montana cancer patients who live more than a 30, 60, or 90-minute drive from a facility that offers the type of treatment services they received. MCTR also analyzed the data to determine which patient groups are more likely to live farther away from treatment facilities. Through integrating these two data sources MTCC and MCTR created an interactive map displaying the locations of facilities that offer various types of cancer treatment and prevention services in Montana and a report that summarized the findings of the treatment facility spatial analysis and identified the patient groups who were disproportionately affected by long drive times. These two resources will be used to inform approaches to increasing cancer treatment resources in a way that promotes health equity.

CHALLENGE: Montana is the 4th largest state geographically but it has a relatively small population of just over one million people. While there are 65 hospitals across the state, 50 of them are critical access hospitals and only nine have cancer treatment centers (seven are certified by the Commission on Cancer). The MTCC treatment and research implementation team had started gathering information about cancer treatment services across the state but lacked the infrastructure and expertise to use that data to its fullest potential and to use the facility data with cancer patient data.

SOLUTION: For the 21 non-responding facilities, treatment data from the MCTR was used to determine if each treatment service was offered. A facility was considered to offer the treatment service if at least one patient diagnosed from 2011 to 2015 had the facility listed as the treatment facility for their treatment.

Cancer treatment services were divided into three broad categories: surgery, chemotherapy, and radiation. These categories were defined by treatment summary information within the MCTR that categorize whether each type of treatment was received but not details of the specific treatment or schedule.

All Montana residents diagnosed with invasive cancer from 2011 to 2015 were included in the study. Patients were divided into groups

according to which treatment services they received in their first course of treatment. A patient could be included in more than one treatment group if they received more than one type of treatment.

GIS Online software from ESRI was used to calculate the 30, 60, and 90-minute drive time areas around each facility and for the spatial join between these areas and patients' address at diagnosis. Chi square analysis was used to compare the distribution of age at diagnosis, sex, summary stage, and race by drive time categories.

RESULTS: The combined work of the MTCC treatment and research team and the MCTR epidemiologist produced a/an:

- [Interactive story map](#) displaying the locations of facilities that offer various types of cancer treatment and prevention services in Montana. The map was presented at the MTCC annual meeting in May 2018 and work to fine tune and promote the map continues to be a priority of the treatment and research team.
- [Surveillance report: Availability of Cancer Treatment in Montana: Where are the Gaps?](#) released in June 2018. The report summarized the findings of the treatment facility spatial analysis and identified the patient groups who were disproportionately affected by long drive times. The report was sent to all members of the MTCC, local health department staff, and cancer registrars in Montana as well as being posted on the MCTR website.

Together these two products will inform data-driven approaches to increasing cancer treatment resources in a way that promotes health equity.

SUSTAINING SUCCESS: The MTCC treatment and research team is currently developing a process to promote the map and to keep the map up to date as treatment resources change.

Because the treatment categories used in this analysis were very broad and did not account for specialty care that may be needed based on cancer site or stage, many cancer patients who live close to a facility that offers some cancer treatments may still need to travel for their cancer care. Additionally, since pediatric oncology care is only offered at two facilities in Montana a higher proportion of pediatric cancer patients face high travel time for treatment than what is described in the report. Further analysis can be done to describe the actual drive times of Montana cancer patients.

MCTR is currently working on improving the quality of our geocoding results so that a higher proportion of cases are geocoded to the street address. Once at least 85% of cases are geocoded to the street address MCTR will perform a more rigorous spatial analysis by calculating actual travel times for patients and identifying which patient and cancer characteristics most influence travel time.

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