2023 NPCR IDAHO SUCCESS STORY

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Applying Tools Developed in Response to the COVID-19 Pandemic to Further Cancer Surveillance

National Program of Cancer Registries

SUCCESS STORY

SUMMARY

The Cancer Data Registry of Idaho (CDRI), a program of the Idaho Hospital Association, is a population-based cancer registry that collects incidence and survival data on all cancer patients who are Idaho residents and out-of-state patients who are diagnosed or treated for cancer in Idaho. From April 2020 through December 2021, the Idaho Department of Health and Welfare (IDHW) asked CDRI epidemiologists to aid in the COVID-19 response. We developed analytic tools to support the COVID-19 response that have since been applied to cancer surveillance, including evaluation of unusual patterns of cancer.

CHALLENGE

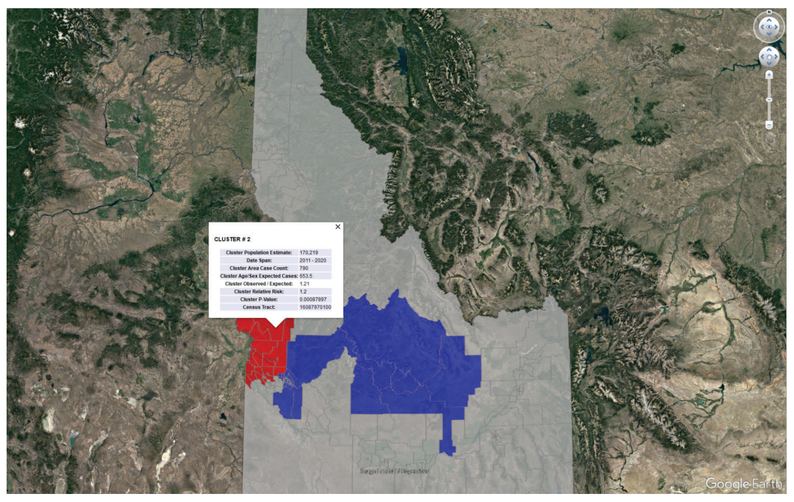
- Central cancer registries are tasked with creating actionable information for cancer control programs that can be used for resource prioritization and interventions.
- In 2022, CDC/ATSDR published updated "Guidelines for Examining Unusual Patterns of Cancer and Environmental Concerns" which included recommended methods for analyzing potential statistical clusters.
- Robust analyses of cancer data such as analysis of spatiotemporal patterns in incidence and mortality, have proven challenging, time-consuming, and resource intensive for CDRI in the absence of pre-existing tools to analyze potential clusters.

SOLUTION

- CDRI epidemiologists harnessed experience with tools that are familiar to the cancer surveillance community to analyze spatiotemporal patterns in COVID-19 incidence. These included a non-NAACCR version of the Texas A&M Geocoder for geocoding and SaTScan software for calculating spatial, temporal, and space-time scan statistics.
- CDRI epidemiologists applied lessons learned and tools developed during the COVID-19 response to the analysis of cancer incidence data.
- Using SAS, we built a system that reads census tract-level cancer incidence counts and population estimates, calls SaTScan from within SAS, and writes results for display in Google Earth Pro.

RESULTS

- CDRI built an efficient system for geospatial analysis and display of cancer incidence rates at the census tract level of geography.
- CDRI can use this system to monitor cancer case reports and identify areas that may be behind in reporting.
- The system can be used to perform statistical analyses consistent with the 2022 CDC/ATSDR guidelines.
- Our partners in cancer control, including the Idaho Comprehensive Cancer Control Program, Idaho Women's Health Check at Idaho Department of Health and Welfare, and the Comprehensive Cancer Alliance for Idaho, saw high value in displaying spatial patterns of cancer incidence using Google Earth Pro and can focus interventions based on these results.
- As an example, this map shows the boundaries of census tracts involved in low (blue) and high (red) spatial clusters of colorectal cancer incidence for 2011–2020.



SUSTAINING SUCCESS

- With an efficient system built for geospatial analysis and display of cancer incidence rates at the census tract level of geography, we intend to perform these analyses on an annual basis.
- We will use the results as a quality control tool to monitor case reporting, share them with our cancer control partners, and use them to examine unusual patterns of cancer.
- Within the next year, we plan to expand this effort to include cancer and non-cancer mortality data.

STORY QUOTE

"We have been beyond elated to utilize CDRI's new geospatial analysis on small area cancer statistics. As a result of the new system, we were able to identify late-stage cancer clusters for cervical and colorectal cancers in Idaho, which in turn informed programmatic efforts and interventions within the Idaho Comprehensive Cancer Control Program and Women's Health Check at the Idaho Department of Health and Welfare. To say it's an insightful, precise, and exciting tool for our work is an understatement!"

– Becky Creighton, MPH, Health Program Manager, Idaho Comprehensive Cancer Control Program

REGISTRY CONTACT

https://www.idcancer.org/

NATIONAL PROGRAM of CANCER REGISTRIES — NPCR — CANCER DATA DRIVING ACTION

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention