2023 NPCR LOUISIANA SUCCESS STORY

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Integration of Cancer Registry Data with Hospital Discharge Data and COVID-19 Data to Investigate Racial Differences in COVID-19-Associated Hospitalization Among Cancer Patients

National Program of Cancer Registries
SUCCESS STORY

SUMMARY

To assess the effect of chronic disease on racial differences in COVID-19-associated hospitalization among cancer patients, the Louisiana Tumor Registry (LTR) conducted a comprehensive analysis. This analysis involved integrating cancer registry data with COVID-19 data to identify cancer patients who tested COVID-19 positive. Subsequently, this cohort of cancer-COVID-19-positive patients was linked with the Hospital Inpatient Discharge Data (HIDD) file to identify COVID-19-associated hospitalization (COVID-19-AH) and enrich chronic disease data initially collected by LTR. Combining these three data sources resulted in an extremely robust dataset that unveiled the substantial role of chronic diseases in the racial disparities in COVID-19-AH, especially hypertension, diabetes, and renal disease.

CHALLENGE

- How do we define a COVID-19-associated hospitalization?

- How do we quantify the effect of chronic disease on the racial disparity in COVID-19-associated hospitalization?

SOLUTION

- Define a COVID-19-associated hospitalization: Any patient admitted to the hospital within 14 days of a laboratory-confirmed diagnosis of COVID-19 regardless of the reason for admission (CDC's definition).

- Categorize chronic disease burden: Chronic diseases were categorized by the number of chronic diseases (0, 1, 2, ≥3). In addition to the number of chronic diseases a patient had, we also investigated individual types of chronic diseases.

RESULTS

- Non-Hispanic Black cancer patients (NHBCP) had a higher prevalence of chronic diseases than non-Hispanic White cancer patients (NHWCP) (79.5% vs. 66.0%).

- NHBCP had higher COVID-19-associated hospitalization than NHWCP (27.2% vs. 17.2%).

- NHBCP had 80% higher odds of COVID-19-associated hospitalization than NHWCP after adjusting for sociodemographic and clinical factors.

- Chronic disease explained 37.8% of the racial disparity in COVID-19-associated hospitalization.

- Hypertension, diabetes, and chronic renal disease were the top 3 chronic diseases explaining 9.6%, 8.9%, and 7.3% of the racial disparity, respectively.

SUSTAINING SUCCESS

- Our study provides more stark evidence that enduring racial health disparities affect COVID-19-associated hospitalization. To reduce the vulnerability to COVID-19-associated hospitalization, multifaceted approaches may help to address the root causes of inequities.

- To continue addressing the health disparities facing Louisiana, we plan to obtain COVID-19 and HIDD data annually to update the dataset and provide similar statistics over time.
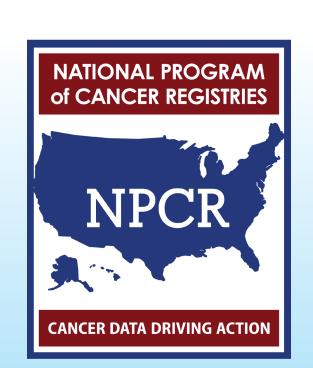
STORY QUOTE

"This research represents a fruitful outcome arising from a collaborative effort across diverse entities, including LSU Health New Orleans' Louisiana Tumor Registry, Stanley Scott Cancer Center, School of Medicine, and the Louisiana Department of Health. Moreover, it underscores the valuable role of linking population-based cancer registry data with other surveillance data to tackle pressing public health concerns related to racial disparities."
– Xiao-Cheng Wu, MD, MPH, CTR

REGISTRY CONTACT

https://sph.lsuhsc.edu/louisiana-tumor-registry/

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