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Social outcomes associated with alcohol-related diagnoses: a population-based analysis using linked administrative data

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Objective

The objective of this population health research is to identify the social burden associated with having an alcohol related diagnosis.

Methods

We used linkable population-based administrative data files held in the Population Health Research Data Repository to conduct our research, fiscal years 1990/91 to 2014/15. Data came from several domains including health, social services, justice, and the Canadian Census. We used ICD-9/10-CA codes from the hospital abstract database, medical claims data, and prescription drug data to identify individuals with an alcohol-related diagnosis. Individuals' socioeconomic status was determined using neighbourhood-level income data from the Canadian Census. We matched, 3:1, diagnosed cases to individuals in our repository using on age, sex, income, and community area. We linked cases and matches to administrative data from justice and social services to identify social outcomes associated with having an alcohol-related diagnosis. Outcomes included receipt of income assistance, residence in publically funded social housing, having a child apprehended by child and family protective services, having a charge for driving under the influence recorded in the justice data, and having a charge for domestic violence recorded in the justice data. We modelled rates using generalized estimating equations from 5 years before date of diagnosis to a maximum of 20 years after date of diagnosis. Models tested for significant differences in rates between cases and matches both before and after diagnosis; as well, we tested for time trends in rates both before and after diagnosis.

Results

We identified 52,991 individuals with an alcohol related diagnosis between 1990/91 and 2014/15: 34,145 males and 18,846 females. 80.3% of cases had a mental-health related alcohol diagnosis. Diagnoses followed a socioeconomic gradient with the greatest number of cases coming from low-income neighbourhoods. Cases had a significant spike in rates from one year before to one year after diagnosis date, compared with matches, across all indicators. When we followed individuals for 20 years after diagnosis, we found a significantly elevated rate of social service use and involvement with the justice system, across all outcomes, for all years.

Conclusion

Receiving an alcohol-related diagnosis is associated with subsequent increased use of social services and contacts with the justice system. Upstream efforts to reduce alcohol-related diagnoses may result in reduced use of social services and justice contacts.

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