

Inflammatory Bowel Disease among Trail residents: patterns in administrative health data

Background

Inflammatory bowel disease (IBD) is a group of chronic inflammatory conditions of the large and small intestines. The major types of IBD are Crohn's disease and ulcerative colitis. IBD can cause serious illness that is treated with oral medications, therapeutic enemas, and sometimes surgery. It should be noted that any relationship between IBD and environmental pollutants is entirely speculative at this time.

In 1994, there were reports of concerns about health problems attributed to environmental pollution in Northport, Washington, a community located across the border to the south of Trail. These related to potential exposure to environmental pollution discharged into the Columbia River by the zinc/lead smelter in Trail. Concerns from Northport residents prompted an investigation of IBD and chronic renal disease by the BC Ministry of Health. That investigation found that hospitalization rates for both conditions among Trail residents were no higher than those for residents of the entire Central Kootenay Health Unit.

In August 2012, a summary of a survey performed by researchers from Massachusetts General Hospital (MGH) was published, which identified high rates of occurrence of IBD in Northport. The estimated prevalence of IBD in Northport was far higher than that reported elsewhere in the United States. The researchers surmised that these findings were related to pollutants released into the environment by the lead/zinc smelter located in Trail.

As the researchers from MGH hypothesized that activities of the smelter in Trail was associated with the high prevalence of IBD in Northport, BC public health authorities deemed it prudent to assess the occurrence of IBD in Trail as well. The results of the 2012 IBD survey in Northport, WA also prompted the Mayor of Trail to request that the analysis performed in 1994 be updated. Dr. Tom Kosatsky (Medical Director – Environmental Health Services at the BC Centre for Disease Control) and his staff had already embarked on a preliminary analysis of IBD in Trail, which was completed this summer.

Findings

Data from administrative data sets (Provincial Discharge Abstract Database, Medical Services Plan Payment Information File, and PharmaNet) was used to assess trends over the recent past (2007-2011) in IBD-related hospitalizations, physician visits and dispensation of prescription medication. Data for Trail was compared to that for Nelson, Williams Lake, IH, or the Province.

Physician MSP claims: The rate of physician IBD-related claims for Trail residents decreased between 2007 and 2011, but the five-year average was higher than all other locations assessed. However, total physician MSP claims were highest in Trail, and it is unknown how higher rates of total physician MSP claims impact IBD-related physician claim rates.

Hospitalization rates: The IBD-related hospitalization rate for Trail residents declined between 2007 and 2011, but was higher than that in the other locations examined for all years except 2011. All-cause hospitalization rates in Trail were also higher than all other locations, and it is unknown how higher rates of all cause hospitalization affect hospitalization rates for IBD.

Prescription Rates: The prescription rate for IBD-related medications was higher in Trail area residents when compared to other communities. However, differences with comparison communities diminished over the study period.

Conclusion

Differences in physician practices between Trail and the comparison communities, as well as the older population in Trail relative to other areas included in the study, may explain the differences in health care services utilization seen. The BCCDC has offered to repeat these analyses when data becomes available for 2012 and 2013.

If the observed decrease in health care service utilization for IBD continues, or if rates remain stable, no further action will be warranted. If higher rates of health care service utilization for IBD occur in data that are more recent for residents of Trail, a more comprehensive detailed study of rates of IBD in Trail may be required.

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