



# Urban Legend: Addressing Knowledge Gaps in Inflammatory Bowel Disease Epidemiology

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The prevalence of Inflammatory Bowel Disease (IBD) is rising globally, with recent estimates citing 6–8 million people affected worldwide [1]. With rising prevalence comes an urgency to optimize healthcare delivery for IBD. Although new biologic and small molecule therapies for IBD are rapidly emerging and therapeutic drug monitoring has improved the efficacy of existing therapies, significant regional outcome disparities remain. Confounding efforts to identify risk factors for IBD development [2, 3] and sparse quantification of regional outcome disparities [4, 5] have fragmented efforts to ameliorate care barriers. Defining regional IBD epidemiology is the first step to identifying populations at higher relative risk for disease development and poor outcomes after diagnosis.

In this issue of *Digestive Diseases and Sciences*, Morton et al. [6] report the results of their epidemiologic study of the Manawatu region of New Zealand, a previously understudied region in the northern island of the country. This region, comprised both urban (80%) and rural (20%) components, is inhabited by 145,761 people, with a significant Maori population (17.1%). Their analysis of the District Health Board Databases identified 666 people with IBD in this region, reporting an age-standardized prevalence of 397.9 per 100,000. They identified 207 new IBD cases between 2011 and 2015, and an age-adjusted incidence rate of 27.2 per 100,000. As reported in other IBD epidemiologic studies [3–5, 9], the authors found a higher incidence and prevalence

in the “urban” areas of the Manawatu region. This designation of “urban” can be questioned, as the authors defined it as a region with population of  $\geq 1,000$ , in contrast to the National Center for Health Statistics in the United States classifying non-metropolitan (non-core) regions as populations  $< 10,000$  [7]. Similarly, in Canada, “rural” is defined as a population that does not fall within a census metropolitan area (50,000 people minimum), or a census agglomeration (10,000 people minimum) [8]. Previous meta-analysis investigating the relationship between incidence and prevalence of IBD based on urban residence has also used a threshold of 10,000 to delineate rural vs urban populations [9].

It is unclear if the population threshold used by Morton and colleagues accounts for actual urban areas, since incidence and prevalence in relation to predominant locations of employment, transportation infrastructure, population density, and the proximity to comprehensive (tertiary or quaternary) healthcare centers within the Manawatu region are not described. Knowledge of resource distribution is essential for the assessment of IBD healthcare disparities, particularly since rural residence is associated with fewer gastroenterology visits and increased healthcare utilization for IBD-related events [4, 5, 10]. As the incidence and prevalence of IBD rise, accurate description of populations is essential to identify those at risk for poor outcomes. Although standard definitions of rural and urban populations may not be possible given geographic variance, justification for variances in definition is needed to avoid perpetuating narratives that may not be universally applicable or accurate.

There is indeed an impressive incidence of IBD in the Manawatu region, defined thanks to the painstaking efforts of Morton and colleagues. The authors hope that their findings will spark further study of specific risk factors and outcomes in this region, to include data-evaluating risk relating to both population distribution and demographics as well

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as healthcare access and infrastructure. Consistent description of these factors is of paramount importance to ensure smoother translation of regional findings and allow better visualization of commonalities in IBD healthcare barriers across patient populations.

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