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LETTER

## Missing asthma patients in epidemiologic survey?

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Dear Editor, We have read with great interest the recent “Journal of Asthma” article from Dr. Chu and Dr. Pahwa (1). In the article, the authors use a self-report method to collect information from patients to ascertain their asthma status, asking with one question, “Do you have asthma?” The patients had to answer “yes,” if they had been previously diagnosed with asthma by a physician and “no” if they had not. The authors also claim that self-reporting is the best method for them to know if the patients qualify to be in their study or not. However, Kemp et al. in “Problems of measuring asthma prevalence” report that there is no an important difference between finding patients by self-report or other diagnostic methods. As a result, the most feasible method for Kemp et al. was to use self-reports of the patients (2). Nevertheless, Kemp et al. came to that conclusion by analyzing two international studies that describe the prevalence of asthma in children (3) and adults (4), both of which used the self-report method to find the prevalence of this disease in different countries, but unlike Chu and Pahwa’s study, these other studies used self-reporting of respiratory symptoms and comorbidities that usually are present in patients with asthma and not self-reported diagnosis. Therefore, with these data they confirm the previous asthma diagnosis. However, this is something not taken into consideration in Chu and Pahwa’s recent study.

On the other hand, this article states that a “gold standard” does not exist in reference to knowing if there was a previous diagnosis of asthma or not. The authors also mention that all they needed was a self-report by the patient confirming previous diagnosis made by a physician. However, this self-report method is recommended in several big population epidemiologic studies (2). In Pakkanen’s study, the author concluded that there is not a specific method that confirms an asthma diagnosis. Therefore, the author mentions that only one method could not be

used as a “gold standard” in all epidemiological studies. For example, in cohort studies like Chu and Pahwa’s or even cases and controls, they prefer to use more specific methods to detect people with asthma; methods such as questionnaires *in which* the severity of the symptoms or search for bronchial hyperreactivity syndrome are described as being more useful (5).

Another important aspect in the Chu and Pahwa’s study is the use of a logistic regression model to calculate the measure of association, odds ratio (OR). Barros and Hirakata said that this measure could overestimate the correct association measure that every cross-sectional design should have, that is, the prevalence ratios (RP), they say this phenomenon shows more evidence in prevalence that are behind 10%, like this study.

In Barros and Hirakata’s study, they talked about some alternatives that could measure correctly prevalence ratios. They mention that a log-binomial model or the Poisson model are both recommended for a cross-sectional study like this one; given that both models provide exact estimations (6).

We consider that the study has a significant contribution in the epidemiology of asthma in Canada, but there are some methodological aspects that should be considered for future studies.

### Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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