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Short Communication

# Epidemiological information from general medicine. The concept of minimum morbidity rates

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**Abstract**

Health surveys are commonly used to measure morbidity, but these types of instruments are not free from errors and difficulties. Although the cost of cross-sectional studies is relatively lower than that of other epidemiological designs, such as cohort studies, this cost is not negligible, as they require some fieldwork, use questionnaires that are applied by interviewers, or need to take biological samples, or anthropometric measurements, and medical examinations, with specific technical equipen.

In health surveys, certain "levels" or "filters" have been considered. Level 1 or the first filter represents the total morbidity detectable in the community, determined by screening (questionnaires, tests, etc.).

**Keywords:** epidemiology; health information; population; representative; survey; general practice

## Introduction:

Health surveys are commonly used to measure morbidity, but these types of instruments are not free from errors and difficulties [1-3]. Although the cost of cross-sectional studies is relatively lower than that of other epidemiological designs, such as cohort studies, this cost is not negligible, as they require some fieldwork, use questionnaires that are applied by interviewers, or need to take biological samples, or anthropometric measurements, and medical examinations, with specific technical equipment [4].

In health surveys, certain "levels" or "filters" have been considered [5]. Level 1 or the first filter represents the total morbidity detectable in the community, determined by screening (questionnaires, tests, etc.). Carrying out a screening in the population (for example with questionnaires...) could find not only those patients who do not go to the general practitioner (GP), but also those who go to the GP but are not recognized as sick.

After passing this level 1, the patient becomes an element that expresses morbidity in primary care (level 2). Only a proportion of patients who reach to GP will be diagnosed as cases compared to those found by screening in the community. The spontaneous consultation of the patient with the GP depends on what the person understands by disease or the subjective assessment of his symptoms, and on the concept of disease by the doctor, in addition to the accessibility to the doctor, both in terms of time and economic cost.

Thus, morbidity data at the level of the GP consultation can be considered as "prevalence or minimum incidence." In certain environments, the incidence rates of a health problem are difficult to obtain for different reasons, both in determining the numerator (such as when clinical information is missing, lack of infrastructure, laboratory capacity, etc.), and in determining the denominator (for example, complex urban environment where hospitals act as a primary care level). To fill this gap, in these cases, we speak of estimation of the "minimum" incidence [6]. That is, the term "minimum incidence/prevalence rates" is used when the estimates do not necessarily cover the entire population. The concept of "minimum incidence/prevalence" is useful in epidemiology and it has been used with some frequency in different studies [7-16].

Registries in general practice are key sources for morbidity estimates, especially if all people are registered in a general practice and if GP is the gatekeeper of health care; So, diagnoses from medical specialists and other health care providers will also be known by the GP [17, 18]. Of the patients diagnosed as a case by the GP at the general medicine level, a small proportion will go to level 3: the cases diagnosed at the specialized level, both at the out-of-hospital or hospital level (level 4).

It must also be taken into account that prevalence of a disease is the proportion, in a certain population, of cases number at a point in time. Prevalence is an appropriate measure only in such relatively stable conditions, and it is unsuitable for acute disorders. Even in a chronic disease, the manifestations are often intermittent. In consequence, a "point" prevalence, based on a single examination, at one point in time, tends to underestimate the condition's total frequency. If repeated or continuous assessments of the same individuals are possible, a better measure is the period prevalence defined as the proportion of a population that is cases at any time within a stated period. It is necessary to take into account that in general medicine, continuity of care gives rise to repeated or continuous assessments, so the results of prevalence studies may be more accurate, and so avoid the possible underestimation of cross-sectional studies.

So, collection of data in general medicine is cumulative and continuous; the path of all patients begins and ends with the GP (17). Hay que recordar que in UK, 66 percent of respondents consult with a physician at least once a

year. Furthermore, 24 percent of those will see their doctor three times or more in a year. And, in countries such as France and Spain there is a higher share of people consulting a physician at least once a year [19].

General practice is an important source of information on the occurrence and distribution of diseases in the population [20]. Certainty of a diagnosis is not only important for the patient, but also for morbidity studies. Diagnoses of diseases recorded in general practice are generally valid with low numbers of false positive cases [21]. Concordance between health survey and general medicine prevalence data are good for chronic conditions [20, 22-25].

Epidemiology places clinical problems in the community perspective, their size and distribution, reveals problems and indicates which population should be studied, and how much action and where it is needed [26, 27]. The GP is in a rare position that combines the individual and community dimensions, and there is a great need to extend the clinical horizons to the epidemiological and community aspects of primary care. Unless GPs can follow the health and disease patterns of the community in which their patients live, they will not be able to know if the individual care they provide is relevant or effective. Individual and community care are not alternatives to the care given by GP. What is traditionally called individual, family and community attention are elements of the same reality and cannot be separated: that is, there is no individual attention, but always is both familial and community (17) In this way, the importance of research and Epidemiology at the GP level is often overlooked. There have been GPs pioneers who studied the problems of their patients with scientific rigor. Some of them have been recognized for their seminal work in the last century [28-29]. In this context, a useful alternative to obtain epidemiological information on morbidity is the use of data generated in the GP's office, by identifying of cases at patient presentation at the clinic. These data represent the “minimum morbidity” of the community.

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