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Understanding Epidemiology of Diabetes Mellitus

I read the article by Fatani et al. (1) with considerable interest; however, I would like to emphasize that most epidemiologists, when assessing the prevalence of diabetes mellitus, consider prevalence to be a uniform concept that can be applied in the same way in different countries. However, prevalence is a flexible term, influenced directly not only by epidemiological features but also by cultural, socioeconomic, and environmental patterns, which are directly related to the degree of de-

velopment of a country. I therefore feel that prevalence should be viewed differently in different countries according to degree of development and related factors.

I have recently conducted a major survey in the south of Spain (Cadiz) to assess the prevalence of diabetes mellitus in that area. As a result, I have shown that the socioeconomic patterns and the degree of health-care development are relevant to any epidemiological study on diabetes mellitus. There are certain general considerations in such studies: 1) the level of health and social care, 2) the diagnostic awareness of the doctors in the area, 3) the general population life expectancy, 4) the life span of the diabetic population, and 5) the net population movement (births, deaths, emigration/immigration). Each of these factors may be operative to a different degree; Table 1 details the epidemiologic features for countries at different stages of development.

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TABLE 1
Epidemiologic features of countries at different stages of development

| | Features | Situations | Consequences |
|-----------------------|--|--|--|
| Undeveloped countries | <ul style="list-style-type: none"> Low health-care level Low diagnosis awareness Low general life span Low diabetic life span High birth rate High mortality rate at all ages and in different diseases Increasing emigration | <ul style="list-style-type: none"> Net population movement negative Unknown incidence Late diagnosis High unknown diabetes level | Low prevalence |
| Developing countries | <ul style="list-style-type: none"> Better health care Increasing life span Increasing diabetic life span Increasing knowledge of diabetes by doctors Decreasing birth rate Decreasing mortality rate Less emigration | <ul style="list-style-type: none"> Net population movement positive Decreasing unknown diabetes mellitus level Early diagnosis Increasing prevalence of diabetes mellitus Incidence clearer | High increase in prevalence of diabetes mellitus |
| Developed countries | <ul style="list-style-type: none"> Full health and social care Low birth rate Low mortality rate Increased general life expectancy Increased life span in diabetic people High immigration Good diagnosis awareness | <ul style="list-style-type: none"> Net population movement positive Less unknown diabetes mellitus level Increased diabetes mellitus prevalence Earlier diagnosis | Prevalence and incidence becoming real |