

data and summarizes the state of the art in respect to the prevalence, cost, recognition, and treatment of mental disorders and substance abuse.<sup>8</sup> This report confirms earlier work and states flatly that "the general medical care sector is a major component of the de facto treatment system for substance abuse and mental disorders in the United States. Clearly, primary care medicine has the patient access to play a major role in the diagnosis, care and prevention of these disorders and their sequelae."

A further analysis of data from all five ECA sites is presented in this issue of the Journal.<sup>9</sup> The authors are chiefly concerned with the prevalence of psychiatric disorders among users of medical services. These, they demonstrate by comparison with non-users, are relatively high in respect to affective reactions and substance abuse, and they re-emphasize the importance of recognizing the emotional component of medical consultations. In so doing, they reflect the study of Hankin, *et al*, who found that patients with mental disorder made greater use of general medical services than those without such disorder.<sup>10</sup>

The case for a closer integration of the general medical and the mental health services would therefore seem to be self-evident. Nonetheless, as a recent editorial in the *Journal of the American Medical Association* has pointed out, "the government has a chimeric attitude towards mental illnesses, quantifying the problems and proposing solutions while simultaneously providing barriers to their solution."<sup>11</sup> Kamerow and his colleagues identify three principal categories of barrier: the education and attitudes of general physicians, the attitudes of patients to their psychiatric disorders, and the constraints imposed by third-party reimbursement. There may, however, be another, equally obstructive factor if the stated views of a vice-president of the American Psychiatric Association are representative. According to Dr. Paul J. Fink:

"I no longer believe that the general practitioner can develop psychiatric skills and be a substitute for the psychiatrist . . . The primary care doctor refuses to learn the value of psychiatric intervention and the best methodology for dealing with emotionally disturbed mentally ill people. In my experience, the hundreds of hours spent in instruction and in postgraduate courses have done little to change the basic, prejudicial, and negative attitudes that primary care physicians hold for

psychiatrists and their patients. My position is for the protection of the patients, not for the protection of psychiatry."<sup>12</sup>

This shadow of an inter-professional dispute recalls the pertinent question raised by the editor of this Journal in an editorial "Who shall deliver primary care?"<sup>13</sup> The answer, as Dr. Yankauer made clear, lies in health services research and not in rhetoric. Nowhere is such research more needed than in the field of mental health.

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## Clustering of Disease

Disease clustering has always intrigued epidemiologists, luring them with the prospect of clues to causal explanations. It is a reasonable presumption that if a disease aggregates in clusters, then one or more of its causes must aggregate as well, and thereby be easier to identify. Defined broadly, the term "clustering" would encompass any excess of disease occurrence. Although epidemiologists have usually taken clustering to indicate an excess of disease in space or time, these are only two of the possible markers that can be used to define clusters. Another is occupation; in this issue of the *Journal*, Schulte, *et al*, describe the experience of the National Institute for Occupational Safety and Health (NIOSH) in its investigation of 61 reported clusters of occupational cancer.<sup>1</sup>

Research into disease clustering, especially with regard to space and time, has often been accompanied by specialized methods.<sup>2</sup> Nevertheless, the core methodologic issues and the utility of studying disease aggregation conform to widely applicable epidemiologic principles: for research on clustering, as in other epidemiologic research, the comparison of disease rates is the central methodologic tool to identify causes or non-causal markers for causes; and the utility of a particular comparison of disease rates depends on the extent to which the possible explanations can be narrowed to a reasonable few.

Consider clustering in space or time. These clusters can be defined in regard to space alone, time alone, and a combination of space-time. Space clustering is merely geo-

graphic variation in occurrence; the study of space clusters amounts to comparing incidence rates in different places. Virtually every disease varies in occurrence from one place to another, mimicking the geographic variation that exists for all causes of disease, environmental and genetic. A multitude of possible explanations will usually be found for spatial clusters, the number depending on the geographic distances involved. On an international scale, the socioeconomic, dietary, ecological, genetic, and other potential causes that might explain variation in disease occurrence are so numerous that relatively few possible explanations can be discarded. On a more local scale, geographic variability within communities or small regions can focus attention on a narrow range of possible causal explanations, facilitating impressive strides in identifying which factors cause disease. The remarkable work of Black, McKay and Dean,<sup>3-6</sup> who earlier in this century investigated clustering of enamel discoloration and from it discovered the relation between fluoride levels in drinking water and dental caries, exemplifies the rapid progress and public health utility that can result from the study of spatial clusters. Even for variation in disease occurrence within a small area, however, there are often numerous factors that vary in a similar pattern, requiring many possibilities to be eliminated before real etiologic insight is attained.

Time clustering without spatial aggregation means that the incidence of disease fluctuates over time in a similar pattern in different places. Like variability in space, variability in time is more revealing over short ranges than over long ones, since fewer explanations can account for such variability. For example, seasonal swings in disease frequency point clearly to environmental factors that also vary seasonally (genes do not, eliminating genetic explanations). On the other hand, secular variation over long periods may be explained by a wide variety of factors that change with time, including such diverse possibilities as changes in diagnostic practice and changes in the gene pool, and may therefore be more difficult to account for correctly.

Space-time aggregation, in which the disease rate varies with both time and place, is often extremely revealing, since explanations for such clusters are restricted to the limited set of factors that vary in the same specific pattern as the disease. Space-time clustering is caused by environmental agents that move from place to place or suddenly appear in specific locations, such as infectious organisms, toxic chemicals, or new drugs with local popularity. Legionnaire's disease, acquired immune deficiency syndrome, phocomelia and "Minimata disease" are diseases for which knowledge of the space-time aggregation of cases facilitated the identification of causal explanations.

The payoff from clustering research comes from the specific hypotheses that emerge to explain the observed pattern of excess occurrence. If the research is limited to a specific cluster with only a few cases and a small relative increase in disease frequency, the prospects for useful etiologic information are dimmer. Increasingly, cluster research is a response by health agencies to lay reports of perceived clusters. These reports are frequently based on questionable criteria for case ascertainment, and on a retrospective or vague definition of the population. In such situations it can be difficult to determine whether any etiologic connection exists for some or all of the cases, or whether the cluster represents the "Texas sharpshooter" phenomenon described by Grufferman.<sup>7</sup> (The Texas sharpshooter first fires at the side of the barn, and then paints the

bulls-eye around the bullet hole.) Furthermore, the number of cases in reported clusters is typically too few for an informative statistical analysis.

The scientific frustrations of studying specific cluster reports are nicely illustrated by the NIOSH experience with reported clusters of cancer among workers. Of the 61 investigations of reported cancer clusters, only 16 confirmed that an excess of cases occurred. Even from these 16 studies little or no etiologic insight emerged. Many of the reports involved cases for which there was no identifiable exposure to carcinogenic agents on the job or insufficient time after suspected exposures for cancer to develop. Seldom was an exposure quantifiable in any meaningful way. Only four reports out of the 61 involved more than 10 cases; the small numbers hindered more useful data analyses.

These 61 cluster investigations must have involved a substantial effort, but it would be difficult to argue that any epidemiologic knowledge has resulted. As a surveillance system, lay reports of disease clusters yield an extremely high proportion of false alarms. Epidemiologic research should be based on better information than can be obtained from these informal reports of clusters. For productive research, potential causes should be adequately quantified, ideally with some means of assessing individual exposures. Information on known or suspected confounding factors should be available. Subject identification should be based upon protocols that prevent ascertainment bias, and the study population should comprise enough subjects for an informative analysis. None of these conditions prevails in the usual *ad hoc* cluster investigation.

The accelerating health-consciousness of our society may stimulate citizens to report apparent clusters; it is safe to predict that such reports will pose an increasing drain on our public health agencies. Unfortunately, a full investigation of all cluster reports inevitably will restrict resources for more thorough and informative epidemiologic research. I do not mean to imply that the investigation of cluster reports is either completely undesirable or scientifically useless; I think that a clear case can be made that some investigations of clusters lead to important new insights. The discovery of the relation between exposure to polyvinyl chloride and angiosarcoma of the liver<sup>8</sup> is but one example of a useful cluster investigation. This and the examples cited above of fruitful cluster research involved relatively large increases in the occurrence of a seldom-seen disease—essentially an outbreak of a new disease. Research into perceived clusters of more common diseases, however, unless the clusters are striking excesses, has rarely been scientifically useful.

Nevertheless, as Schulte, *et al*, clearly points out, an important purpose in responding to reports of perceived clusters is to assuage community anxiety about environmental problems. The investigation of cluster reports can thus serve both social and scientific ends, and might be seen more constructively as a social service than as a scientific activity. Viewed in this light, it might be sensible to reconsider the priorities of local and national health agencies in responding to reports of perceived clusters. The protocol of the Minnesota Department of Health cited by Schulte, *et al*, is a useful model. The initial response is to provide information and to educate those who report the apparent cluster; a formal study is undertaken only in those presumably rare situations that promise useful knowledge. An official policy along these lines would be desirable for all public health agencies—local or national—that are compelled to respond to reports of perceived clusters. As a result greater effort would be directed

toward educating the concerned public about the unevenness of disease occurrence and less effort directed toward intensive epidemiologic studies in unproductive settings that leave public health scientists and the public with an unsatisfying result.

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## Hispanic/Latino—What's in a Name?

What's in a name? That which we call a rose  
By any other name would smell as sweet.

William Shakespeare<sup>1</sup>

Rose is a rose is a rose is a rose.

Gertrude Stein<sup>2</sup>

Most of us are newcomers to this land. Our roots here may extend back hundreds of years or only a few days, but they end as immigrant, refugee, indentured servant or slave. At the turn of the century, our expressed ethic was to merge these past national identities in a great melting pot from which a new American identity would emerge in a classless, casteless society.

The Civil Rights movement in the middle of the present century exposed the sordid realities behind such dreams; the word ethnic came to replace the older American ethic. The term "Ethnics" was first applied to a diverse group of second and third generation European immigrants settled in inner-city neighborhoods, who feared the invasion of Blacks; the same word, "ethnic" was later applied to an equally diverse group of more recent immigrants from Latin American countries and Puerto Rico, although the latter were citizens of the United States.

American dictionaries define the word ethnic in slightly different ways but with a sharp difference from the British definition of the term. Thus, the Americans:

- "relating to a community of physical and mental traits possessed by members of a group as a product of their heredity and cultural tradition."<sup>3</sup>
- "pertaining to or characteristic of a people, especially to a speech or culture group."<sup>4</sup>
- designating any of the basic groups or divisions of mankind or of a heterogeneous population as distinguished by customs, characteristics, language, common history, etc."<sup>5</sup>

The English definition is very simple:

- "pertaining to a race; peculiar to a race or nation."<sup>6</sup>

This confusion of definition is reflected in the manuscripts we receive for publication in the *Journal*: ethnicity can be synonymous with race, culture, or nationality or any combination of the three different terms.

All four dictionaries agree on one point, however. The word ethnic is derived from the Greek *ethnikos* meaning race

or nation; moreover, it was first applied to nations not converted to Christianity—to heathens, pagans, i.e., groups not within the fold. Those who read the Hayes-Bautista/Chapa penetrating historical analysis in this issue of the *Journal*, of the uses to which the "ethnic" term "Hispanic" has been put in the United States<sup>7</sup> will recognize the appropriateness of this application of ethnic. Whatever cohesion exists within the diverse groups covered by the term "Hispanic", it is a product of the prejudice and discrimination directed against them. Treviño, who opposes any change in current terminology, is fully in agreement on this point.<sup>8</sup>

The situation is reflected in an amusing way by a columnist writing in a Spanish language newspaper published in Los Angeles. Freely translated, his definition of "Hispanic" runs as follows: "Hispanic seems to be a subdivision of Latinos into which we put only those Latin Americans of low income who have black skins or are obvious half breeds."<sup>9</sup>

Prejudice and discrimination are hardly new to America. Quite apart from Blacks, immigrants—first from Ireland and China, then from Italy, Poland and other European countries and French speaking Canada—endured the same humiliations from those in seats of power when they arrived here. What distinguishes the "Hispanics" is that they are lumped together as a single group without even the dignity of being assigned to a country of origin, something we have not done to any other immigrant group in official statistics until the recent appearance of "Southeast Asians". In general, recent immigrants, including most "Hispanics", are comparable with Blacks: minorities that tend to be poor and poorly educated; skin color, language, accent, dress or behavior make them stand out as palpably different from the majority; hence they become objects of suspicion.

All four dictionaries consulted also agree on the definition of the term "Hispanic".\* It is derived from the Latin Word for Spain, *Hispania*, and means Spanish; occasionally it is used to take in the whole Iberian peninsula. Most of those whom we call "Hispanic" (or their ancestors) may speak Spanish or Portuguese but, otherwise, they (or their ancestors) have little or no connection with the people of the Iberian peninsula. They have immigrated to the United States

\* Dr. Treviño<sup>8</sup> consulted a different dictionary and came up with a somewhat different definition.