Clinical Medicine From 10,000 Feet

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Many of the articles in this issue of the *WMJ* have a strong flavor of public health. Whether looking at the profile of drug resistance in Pseudomonas Aeruginosa in the largest health system in Wisconsin,[1] using statewide hospital discharge data to assess the frequency of serious maternal postpartum morbidity,[2] or the use of death certificates and Emergency Department visits to assess methods used for completed or attempted suicide,[3] investigators help clinicians think about these issues by reporting their studies with attention to the variations within the regions and populations in the state.

Wisconsin has wide variations in race and ethnicity, socioeconomic status, climate, geography, health systems, and many other factors that affect health.[4] The *WMJ* has published a great deal of work over the past 50 years that has taken the larger, statewide view or put local findings in the context of other regions of the state. The *WMJ/Wisconsin Medical Journal* has served as a repository of data on most of the public health issues that come up regularly in articles we publish today. For example, severe maternal mortality was discussed in a review by Hunter in 1949,[5] suicide has been a focus for many articles in the *WMJ*, going back to 1965,[6] and issues of bacterial drug resistance first came up with penicillin not long after it began to be widely used.[7]

Given that most of the delivery of medical care in Wisconsin is through large regional health systems, publishing articles that show statewide variations should help clinicians within those systems consider interventions that may be particular to their regions. A dramatic example of this came during the polio epidemic in the 1950s where authors examined the incidence of polio in relationship to the use and distribution of gamma globulin.[8] Local physicians, public health, and large clinics had to make plans for what might work, prior to the Salk vaccine. They concluded that the state would not have enough for the intervention to be useful. I have distinctly painful memories of the gamma globulin shot I got during that epidemic and certainly was one of the subjects of this study.

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While the *WMJ* does publish well done research from a single hospital or local health system, we encourage authors to look at their results in the context of what might be known about the problem statewide. Wonderful resources have become available over the past 25 years to help clinicians who want to compare/contrast their populations and prevalence of conditions with other parts of the state or country. The County Health Rankings sponsored now by the Robert Wood Johnson Foundation (http://www.countyhealthrankings.org/) originated and were originally tested in Wisconsin and offer important comparative data on behavioral and chronic diseases by county and region. There are additional state and national sources of data that allow comparisons of quality, outcomes, and resources that authors should consult when writing up the results of their studies. A good example in this issue is the single clinic study on travel patterns of pregnant women, which references data from the Wisconsin Department of Health Services and the Centers for Disease Control and Prevention to help put their results into a larger context.[9]

We should expect authors to examine what they find from their data as it applies to other populations or to suggest the need to repeat a study in different populations to see whether what they have found is generalizable. Weiker and colleagues do just that in their study in this issue finding a lack of clinical value of Vitamin D supplementation for alleviating leg cramps by pointing out the need to extend their study to subjects that are not well represented in their study population.[10]

One of the most dramatic changes in medical education in the past decade has been the growing emphasis on physicians seeing themselves as population health managers. Whether family doctors in rural communities or subspecialty surgeons with statewide or regional network of patients, we all take care of populations and have the responsibility to know the characteristics of those populations and how they are similar to or different from others in the state or region. Knowing and understanding the characteristics of one's clinical populations should allow tailored interventions for those patients and communities. One potential value of electronic health records is to allow rich analyses of patient populations so that clinicians and clinical programs can use creative approaches to improving quality.

We are becoming accustomed to seeing maps of the state in relation to many health-related problems. The Dartmouth Atlas of Health Care (http://www.dartmouthatlas.org/) looks at cost and outcomes from region to region. We can now "see" what we do from a higher level. Both the Medical College of Wisconsin and the University of Wisconsin School of Medicine and Public Health have engaged in curricular reforms that emphasize longitudinal community-based education that seeks to integrate clinical training and community and population health. They also understand that data analysis and clinical epidemiology are basic sciences in the new curriculum. While still learning and practicing the skills of patient- and family-centered care, future physicians should also be expected to ask themselves and the systems in which they work how their individual patients differ from general populations. It goes without saying, for example, that Green Bay is different than Chicago, but to effectively and efficiently take care of their patients, clinicians in both cities need specifics on how those populations differ, other than the NFL teams they support.

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