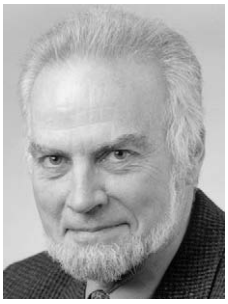
Preface



Edward O. Bixler, PhD
Guest Editor

Epidemiology is the study of distribution and determinants (risk factors) of risk for a disease in populations, and it is critical to the understanding of normal sleep patterns, as well as the distribution of and the risk for sleep disorders. It is considered a cornerstone of public health research and provides a quantitative foundation for public health policy, as well as a basis for preventative medicine and public health. From a historical perspective, Hippocrates is considered by some to be the father of epidemiology, as he described diseases according to place (endemic) and diseases focused in time (epidemic). A major focus of epidemiology is the minimization of bias. Most research methodologies share many of these types of bias (eg, internal and external validity). However, epidemiologic research pays particular attention to generalization and sampling issues. The increased sample size of most epidemiologic studies can increase the precision and the generalizability of the findings. In terms of sampling, many epidemiologic studies are based on volunteer samples while others obtain a truly representative sample. This latter strategy reduces the risk of selection bias, enhances generalizability, and improves the precision of the prevalence estimates. Thus, many modern epidemiologic studies have strived to obtain a truly representative sample.

Epidemiologic methodologies have contributed a great deal to our current understanding of normal sleep, as well as sleep disorders. The articles in this issue of *Sleep Medicine Clinics* are the outcome of a meeting held in Hershey, Pennsylvania, in November 2007 when representatives of the major epidemiologic cohorts within sleep were invited to participate. The intent was to bring together these various cohorts in order to share common threads of findings and identify areas of disagreement requiring further study. This issue is organized by age of the subjects, beginning with children and concluding with adults. The initial article, by Dr. Bixler and colleagues, assesses the validity of some of the commonly used diagnostic criteria and etiologic risk factors for sleep-disordered breathing (SDB) based on a representative sample of elementary school children aged 5 to 12 years. The second article by Drs. Budhiraja and Quan describes the major results from the well established TuCASA child cohort, which was based on a sample of 6 to 12-year-old white and Hispanic children. The third review by Dr. Mayes and colleagues assesses the association of reported sleep problems with various childhood disorders based on a large clinical and community sample of children. In the following article, Dr. Liao, a cardiovascular epidemiologist, and his coauthors describes the association between autonomic balance in terms of heart rate variability and SDB based on a secondary analysis of the Penn State Child Cohort. The remaining six articles report on epidemiologic research involving adults. The review by Dr. Young describes her representative sample based on state employees aged 30 to 60 years, with four follow-up evaluations over 16 years. The next article is based on older adults: Drs. Punjabi and Aurora review the cardiovascular and non-cardiovascular consequences of SDB based on the largest multicenter cohort (subjects were recruited from several existing cardiovascular cohorts). The next review by Dr. Bliwise addresses the issue of the age dependence of SDB, based on the follow-up of one of the earliest established SDB cohorts. The following article is by Dr. Vgontzas and colleagues and evaluates

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the confounding effects of other sleep complaints and stress on the report of sleep duration independent of obesity based on the Penn State Cohort, which was a representative sample of the community between the ages of 20 and 100 years. The next review by Dr. Vela-Bueno and coauthors explores the sleep patterns reported by a large sample of college students. In the final article, Dr. Ohayon assesses the longitudinal association between insomnia and psychiatric disorders, organic diseases, and pain in a representative sample of the United States.

In closing, I want to thank all of the authors for taking time out of their busy schedules to contribute to this project. The list of authors was based on the participants in our original meeting. There were some investigators who were not able to attend this meeting or did attend but were not able to submit a manuscript. I gratefully want to thank Sarah Barth of Elsevier for her tenacious efforts in seeing this project through to its final form. I would also like to thank the Sleep Research and Treatment Center staff who made all of our data collection possible, and especially my longtime colleague and friend Dr. Vgontzas. Finally, I want to thank my mentor Dr. Kales, who taught me about the importance of testing hypotheses based on quality data, and most of all for his pioneering efforts in the establishment of the field of sleep medicine.

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