Journal of Economic and Social Measurement 20 (1994) 159–161
IOS Press

GUEST EDITOR'S PREFACE

The papers that are published in this special issue of the *Journal of Economic and Social Measurement* all focus on statistical and methodological studies that are directed to the design of the National Medical Expenditure Survey. Like its predecessor, the National Medical Care Expenditure Survey (1977), the 1987 National Medical Expenditure Survey (NMES-2) was established to provide an assessment of the health care utilization, expenditures, sources of payment and health insurance coverage of the U.S. civilian non-institutionalized population. In addition, data collection in 1987 was extended to the population resident in nursing and personal care homes and facilities for the mentally retarded. Sponsored by the Agency for Health Care Policy and Research, the data are used to meet the needs of government agencies, legislative bodies and health care professionals with respect to the analysis and the formulation of national health policies. Recently, the NMES-2 data has served as one of the data sets that guide the current health care reform effort.

The papers published in this special issue provide a set of statistical and methodological studies that serve to evaluate the capacity of the NMES-2 design to satisfy a set of well defined analytical demands. These studies address survey design strengths and limitations from an analytical perspective, examine potential sources of measurement error and evaluate the impact of alternative estimation and imputation strategies on survey estimates. The results of these methodological investigations also provide insights to the redesign of the next cycle of the National Medical Expenditure Survey (NMES-3), which is planned as a comparable data collection effort to allow for an assessment of the nation's health care experience in calendar year 1996.

While the NMES-2 survey was designed to produce estimates of health care parameters at both the national and Census region levels, the data do not facilitate the production of comparable health care estimates at the state level. Currently, a number of health care financing and health care delivery reforms are under consideration for separate implementation in specific states. As this

trend continues, there will be increased demand for direct state specific health care estimates to help policy-makers at the local level formalize and evaluate alternative health care initiatives. To address this concern, the paper on "Alternative Options for State Level Estimates in the National Medical Expenditure Survey", summarizes the limitations of the NMES-2 design in this regard, and also examines the implications of a range of alternative designs that would enhance the capacity of the NMES-3 to produce state level estimates. To complement this study, the paper on "An Application of Small Area Estimation Techniques to Derive State Level Estimates of Health Insurance Coverage From the 1987 NMES" provides a summary of alternative model-based estimation strategies that have been developed to produce small area estimates in the absence of a direct estimation capability due to sample size constraints. Using program statistics as a benchmark for the number of Medicaid recipients and data from the Current Population Survey for estimates of the uninsured population at the state level, the performance of these alternative small area estimation strategies are assessed in terms of accuracy.

Family level data collected in longitudinal surveys comparable in nature to the NMES-2 design present special analytical problems due to the dynamic nature of family units over time. Throughout the reference period of the survey, families change their composition and new families are created or dissolved as a function of marriage, divorce, birth, death, separation, migration and institutionalization. The paper on "Family Unit Constructs, Dynamics, and Analysis in the Household Component of the National Medical Expenditure Survey" describes the extent and type of change in family structure over the course of the survey year. It also provides a framework to derive national health care estimates at the family level within the context of a panel survey design.

Also of interest in an era of health care reform is the use of key criteria for determining eligibility for community based long-term care services. Activities of Daily Living (ADL) have come to refer to a set of tasks generally perceived as necessary to function independently. In NMES-2, functional status was determined using an Activities of Daily Living measurement approach. Data from the survey indicate that a significant representation of the elderly report improvement in functioning over a one year period. The patterns of change reported in the paper "Getting Better? Change or Error in the Measurement of Functional Limitations" call into question the reliability of reported ADL measures.

To complete this set of statistical and methodological investigations, the paper on "An Evaluation of a Method Used to Impute Residence Data" is directed toward the estimation strategy considered in the NMES-2 Institutional Survey. In order to derive national estimates of the health care utilization, expenditures

and sources of payment associated with the institutional population in nursing and personal care homes and facilities for the mentally retarded, it was necessary to have complete information regarding the number of days in 1987 that a sampled person was a resident of an eligible institution. As a consequence of the panel nature of the survey design, not all sampled residents satisfied this requirement. This study provides a summary of the characteristics of individuals with missing residence history data and describes the imputation procedure adopted to construct complete residence history profiles.

Steven B. Cohen, Director
Division of Statistics and Research Methodology
Center for Intramural Research
Agency for Health Care Policy and Research
Suite 500
2101 East Jefferson Street
Rockville, MD 20852
USA