

Expanding the National Health Expenditure Accounts (NHEA) Technical Documentation

Background

The National Health Expenditure Accounts (NHEA) have been produced annually by the Office of the Actuary at the Centers for Medicare and Medicaid Services (CMS) and its precursor organizations, since 1960. They track medical expenditure by source of payment (private, public, out-of-pocket) and type of expenditure (hospital, physician, etc.). Information is summarized and data tables are available to the public via download from the Centers for Medicare and Medicaid Services (CMS) website at

<http://www.cms.hhs.gov/NationalHealthExpendData>.

The NHEAs contribute substantially to our understanding of medical spending. However, because they focus only on spending, the NHEAs provide no information on the value of health care spending, as they do not track the desired output of investment in health care – improved health. Further, the data are not necessarily at the right level of aggregation to measure value. To make these productivity calculations, one needs to understand spending at the same level as health outcomes, which are most naturally measured by disease. Thus, a central issue in expanding the NHEA and our purpose is adding the more disaggregated (or micro) data needed to estimate prevalence of disease and costs.

Chapter 1. Data sources

The data used to create the analytic files for our purposes originated from the Centers for Medicare & Medicaid Services (CMS) and the National Center for Health Statistics (NCHS).

Medicare Current Beneficiary Survey (MCBS)

We obtained information on medical care (hospital, physician, home health, etc.) related to a medical condition, disease or screening and/or preventative service from claim data from the Medicare Current Beneficiary Survey (MCBS). Data was obtained through a data use agreement with CMS. MCBS is a nationally representative survey of Medicare beneficiaries, conducted by CMS for the entire Medicare population including the aged, disabled, and institutionalized. Information on demographic and participant characteristics, income, health insurance and health care expenditures, and health status and functioning are provided in the MCBS survey datasets. Two data files are released annually from the MCBS, the Access to Care and the Cost and Use. For this exercise we used the Cost and Use data files which contain a sample of “ever” enrolled participants with survey data linked to participant claims.

The MCBS provides linked claim data for beneficiaries participating in the survey. The Medicare claims data included information on seven different types of claims: from Part A, inpatient, outpatient hospital care, home health care, skilled nursing home services and hospice care claims, and from Part B, claims for the physician supplier/carrier and durable medical equipment. Claim files have detailed information including the date of the claim, Medicare payments, coinsurance amount, other payments, medical conditions as identified by principal diagnosis (ICD9-CM code) and secondary diagnoses codes, and procedure codes.

There are limitations in the MCBS as medical claim data are thought to be imperfect because it cannot be used to identify individuals with a medical condition or chronic disease when care for those conditions was not sought. In addition, care for many chronic diseases are grouped with routine visit care and are not always identified separately in the medical claim and event data files.

National Health and Nutrition Examination Survey (NHANES)

The National Health and Nutrition Examination Survey (NHANES) is a publicly available national representative survey conducted by NCHS. The NHANES data contain demographic and participant characteristics as well as survey questions to identify individuals who have (ever) been told they have a particular medical condition, chronic or acute disease, and have been screened or received preventative services for a particular condition or disease. In addition, laboratory and medical examination data for items such as blood glucose levels and blood pressure measurements are collected by trained medical personnel and available in the NHANES public release datasets. Information collected by NHANES at the medical examination allows for the identification of undiagnosed medical conditions such as undiagnosed diabetes and high blood pressure. Mortality data are also available in the NHANES. NHANES public release datasets were downloaded from: <http://www.cdc.gov/nchs/nhanes.htm>.

In the NHANES we had what was considered the ‘gold standard’ information for the presence of medical conditions and chronic diseases. We used the NHANES to validate existing information on medical conditions and disease information in the claim data source and to impute for missing data where rates were below the expected level, and where data was missing or seemed illogical.

Population

For this exercise, we defined the population as participants 65 years or older as of January 1 of the year of study, and included both community dwelling people as well as those living in an institution. Derivation of data was performed separately for each population by year and data source. Datasets were then combined for analyses. Years of study included 1999-2012.