
Future Directions for the National Health Expenditure Accounts: Conference Overview

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Since 1984 the Centers for Medicare & Medicaid Services (CMS) has sponsored a series of conferences to discuss improvements to national health expenditure account (NHEA) activities. This article summarizes the 2005 conference and highlights changes made since the previous conference, commissioned papers on future directions for NHEA projects, and participant recommendations.

BACKGROUND

Over the past 20 years, CMS, formerly the Health Care Financing Administration (HCFA), engaged in ongoing efforts to improve the methodology and data collection processes used to develop the NHEA. The NHEA are an annual series of statistics on national health spending that were first published in 1964 (Lazenby et al., 1992). HCFA convened conferences in 1984, 1990, and 1998 to discuss recommendations for changes in methodology, dissemination strategies, and future improvements and extensions to NHEA projects (Lindsey and Newhouse, 1986; Haber and Newhouse, 1991; Huskamp and Newhouse, 1999).

In April 2005, CMS held a fourth conference to discuss possible improvements and extensions to current NHEA activities. This article summarizes recommendations from the previous conference in March 1998 and improvements since that time.

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It also provides an overview of four commissioned papers on future directions for NHEA projects that were presented at the 2005 conference, and summarizes suggestions made by conference participants.

1998 STATUS RECOMMENDATIONS

Within the constraints imposed by the underlying data and by resource limitations, CMS has addressed several of the recommendations made at the 1998 meeting, as follows:

- *Release of State-Level Expenditure Estimates*—In March 2006, CMS released State of provider estimates through 2004 (Centers for Medicare & Medicaid Services, 2006a). In 2002, CMS published State-of-provider and State-of-residence estimates through 1998 (Martin et al., 2001).
- *Release of Expenditure Estimates by Age*—CMS published spending estimates by age for the years 1987, 1996, and 1999 in December 2004, and plans to produce periodic updates of these estimates in the future (Keehan, et al., 2004).
- *Improve Treatment of Capital Investment in the NHEA*—A methodological change in the treatment of capital investment was adopted for the 2004 NHEA release that more fully captures capital investments in the health care system. Capital investment was redefined to include the value put in place for all structures where the provision of medical services is the primary activity of the occupants. Additionally, the

definition has been broadened to include investment in all capital equipment by medical care providers (Sensenig and Donahoe, 2006).

- *Facilitation of International Comparability of the NHEA*—At a recent meeting of the Organization for Economic Co-operation and Development (OECD), CMS presented preliminary estimates of expenditures using a functional approach (i.e., presenting estimates by type of service instead of just establishment-based estimates by provider category) that are consistent with the System of Health Accounts (SHA) developed by the OECD. In addition, CMS has participated in the annual OECD Health Account Expert meetings and has been reporting health expenditure data on annual bases crosswalked to the SHA definitions when possible.
- *Presentation of Real Health Expenditures*—CMS now presents real health expenditures using an economywide gross domestic product (GDP) chain-type price index to deflate overall national health expenditures (NHE) and medical-specific health expenditures using specific producer price indexes and consumer price indexes to deflate the various sectors of personal health care expenditures (PHCE) (Centers for Medicare & Medicaid Services, 2006b).
- *Provision of Estimates on a More Timely and Predictable Schedule*—CMS now releases an update of the historical NHEA estimates each January, i.e., 13 months after the end of the most recent calendar year in the series (Smith et al., 2006). Also, while estimates of future health care spending were not previously available on a predictable schedule, CMS now releases these estimates each February, and has taken advantage of the Internet to speed data dissemination.
- *Better Coordination of Federal Data Collection Efforts*—CMS has participated

in intergovernmental initiatives to produce expenditure estimates such as the mental health and substance abuse accounts led by the Substance Abuse and Mental Health Services Administration, survey development and feedback, and collaboration with other agencies to improve data collection methods. CMS has also participated in an inter-departmental committee on employer-based surveys (including representatives from U.S. Bureau of Labor Statistics, Office of Management and Budget, and Department of Health and Human Services), worked with the U.S. Bureau of Census on the Service Annual Survey and newly developed quarterly survey, and worked with the Agency for Healthcare Research and Quality (AHRQ) on the Medical Expenditure Panel Survey (MEPS) household and insurance component surveys. These collaborations resulted in additional data gathered by the different surveys and a better understanding by data users of the results.

The other recommendations from the 1998 conference which could not be implemented because of data, methodologic, or resource limitations include:

- Disaggregate health expenditures by function (although preliminary estimates have been made, final estimates have not been completed).
- Disaggregate health expenditures by plan type.
- Disaggregate expenditures by disease type.

2005 CONFERENCE GOALS

CMS uses the periodic conferences to better tailor the information it produces to the needs of the users of that information. The following highlights the four areas of focus from the 2005 conference that will help in that task.

- A discussion of efforts to improve the comparability of health accounts data from other OECD countries to that of the U.S. health accounts with implications for how health spending data are measured and presented. Particularly important is how the U.S. could produce regular estimates using a functional approach, as opposed to its current establishment based estimates.
- Comparison of the MEPS and NHEA data. The article by Sing et al. (2006) is the first formal comparison since the original year of MEPS data (1996). The data user community makes heavy use of both data sources, so their consistency is of obvious importance. Within the NHEA domain, there are implications for the allocation of spending to payer, particularly for the business and household estimates, for estimates of spending by age, modeling efforts, and actuarial estimates. Currently, MEPS provides a general distribution of spending for the NHEA; with the reconciliation of the two data sources, analysts will be able to understand and account for differences in levels.
- The classification methods used by the NHEA, specifically as they relate to the flow of funds issues caused by the 2003 Medicare Prescription Drug, Improvement, and Modernization Act (MMA). A prominent issue is how the financing of the Medicare prescription drug benefit is reflected in the accounts. This issue also raises a broader question of how different dimensions of the accounts should be shown.
- A discussion of integrating the NHEA and the National Income and Product Accounts (NIPA). Such integration has important implications for many efforts, such as the Medicare Trustees and the U.S. Congressional Budget Office in their efforts to forecast future Medicare

and private spending, and would provide a more accurate portrayal of the role of the health care sector in the U.S. economy.

The meeting began with an overview by CMS staff of the NHEA and recent improvements. The next four sessions focused on presentations on selected subjects, with discussants commenting on the subject matter, and the audience also discussing the topics. The meeting concluded with a summary of key recommendations for CMS and an open discussion of future directions for the NHEA.

CONFERENCE SUMMARY

First, CMS presented an update since the 1998 conference of the improvements in the accounts and related products and future plans. One related product is the disaggregation of the NHEA by business, household, and government, which quantifies the financing burden imposed on each sector (Cowan and Hartman, 2005). Three other related products included in the presentation were health spending by age, State, and projections of health spending (Keehan et al, 2004, Martin, Whittle, and Levit, 2001, Borger et al, 2006). CMS also provided details on benchmarking efforts underway with the NHEA, which included the improvements to the estimates of capital spending, incorporation of the most recent 2002 Economic Census, expansion of the private health insurance (PHI) estimates to include property and casualty insurance reimbursement of medical expenses, and various other statistical and methodological changes.

The first topic for discussion presented by Eva Orosz was issues of harmonization between the U.S. NHEA and the SHA. The SHA is intended to facilitate international comparison of health expenditures, but is based on a “functional approach” to

classify expenditures, thus allowing direct comparisons of spending by type of care. The most notable effect of applying such a change to the NHEA would be to reclassify certain types of spending within the total amount of spending. For example, the NHEA classify drug expenditures by hospitals as hospital spending, whereas a functional approach classifies such spending as drug spending.

Although the gap in total NHEA and total U.S. SHA spending estimates (2003) was only 2 percent, there were larger gaps between estimates of specific spending components that stemmed principally from the SHA use of a functional approach. For example, the U.S. SHA estimates of the functional category inpatient curative and rehabilitative care was approximately 20 percent of total spending, while the NHEA estimate of hospital expenditures was 31 percent of total spending.

Orosz identified key issues for harmonizing the SHA and NHEA estimates: (1) the SHA functional approach to classification versus the NHEA provider approach; (2) the NHEA inclusion and SHA exclusion of spending on research; and (3) the NHEA lack of accounting for the export and import of health services. Presenting expenditures by function would require the disaggregation of several categories of provider expenditures to reflect specific services they provide. The presenter outlined a specific approach to this disaggregation.

Thomas Getzen commented that it would be useful to harmonize the efforts at more detailed levels, not just at the top line, and suggested that more focus be placed on workforce issues. Gerard Anderson requested a study of why U.S. health spending estimates differ between what CMS and the OECD report. Both discussants expressed an interest in connecting expenditures to outcome and producing health expenditures by disease.

The second topic, presented by Merrile Sing and Jessica Banthin, was a joint effort by CMS and AHRQ to reconcile NHE estimates (2002) from the NHEA and national health spending data from the MEPS. The estimates differ in two key respects: (1) the scope of the population and services included; and (2) use of facility-versus population-based estimates. With respect to the population of interest, the MEPS does not include institutionalized persons, including those in the military, prisons, long-term care facilities, assisted living facilities, group homes, juvenile facilities, residential treatment centers, and other types of group living arrangements, while the NHEA do. In addition, the MEPS estimates do not include expenditures for other personal health care nor for non-prescription and non-durable goods, whereas the NHEA do. Second, the NHEA estimates are based on revenue data from various health care providers and classify expenditures by the provider that collected the revenue (e.g., hospitals, nursing homes, physicians, clinics, dentists). In contrast, the MEPS classifies expenditures by type of service (e.g., home health services, hospice, outpatient surgery), regardless of the provider that collected the revenue. Moreover, the MEPS only includes personal health care expenses that are tied to specific patients and events, whereas the personal health care portion of the NHEA also includes spending such as disproportionate share hospital monies that are not tied to specific patients (Sing et al., 2006).

However, the authors made several adjustments to the NHEA estimates to try to make them consistent with the MEPS estimates. First, they adjusted the scope of the included population and services covered by removing from the NHEA expenditures for services used by institutionalized populations, active duty military and foreign visitors, as well as expenditures

for the two NHEA patient care categories of personal health care, and non-prescription drugs that are not included in the MEPS. Second, they attempted to make NHEA service categories comparable to the MEPS by shifting expenditures across categories. For example, they moved hospital-based home health service expenditures from the hospital category to the home health category. Third, they adjusted for non-patient care revenues such as revenues from philanthropic giving, gift shops, cafeterias, and investment income and removed lump-sum payments not associated with specific patients or events, such as maternal and child health grants and disproportionate share payments.

Even after these adjustments, however, the two estimates of NHE differed by 16 percent for 2002. For all the major categories of expenditures except out-of-pocket spending, the MEPS spending estimates were lower than those for the adjusted NHEA. The authors noted that a previous reconciliation of 1996 estimates found a gap of 7 percent between the two estimates. They believed one reason for the wider discrepancy was that better data were available for the 2002 reconciliation, including 2002 Economic Census data that includes North American Industrial Classification System categories, suggesting that the 1996 estimates were too low.

Katharine Levit and Sherry Glied applauded the effort by CMS and AHRQ to reconcile the NHE and MEPS estimates. Levit suggested there be a focus on refining the methods for both estimates and documenting specific reasons why there are differences. She identified several areas for future research, including underreporting and use of the Medicare cost reports to assist with hospital-based estimates. Glied raised some questions on the validity of a few of the adjustments, specifically for the institutionalized population, expressed

concern about the growing magnitude of the differences, specifically for Medicaid, private health insurance, and hospitals, and suggested that reconciliations be done on a more regular basis.

A third topic, presented by Nancy-Ann Min DeParle, was how policymakers use the NHEA. She noted that CMS had made preliminary decisions about how the NHEA would account for shifts in health expenditures resulting from 2003 MMA. These decisions were incorporated into the release of the NHE projections that covered the period 2004-2014. The presentation described and commented on the following decisions:

- Spending for prescription drugs in Medicare Part D will be classified as Medicare expenditures.
- Transitional assistance for prescription drugs to Medicare beneficiaries in 2004 and 2005 will be classified as Medicare expenditures.
- Transitional assistance for private drug discount cards to Medicare beneficiaries in 2004 and 2005 will be classified as the administrative cost of private health insurance (PHI).
- Maintenance of effort (clawback) payments made by States to Medicare for dually-eligible beneficiaries who will now receive drug benefits through Part D plans will be classified as Medicare expenditures.
- Employer subsidies paid by Medicare to private employers who provide qualifying retiree health benefits to Medicare eligible beneficiaries will be classified as PHI.

Ms. DeParle agreed with CMS' decisions about the first three issues, but disagreed with the decisions about the clawback payments and employer subsidies. She expressed concern that classifying clawback payments as Medicare spending will understate the State contributions and recommended classifying these payments as

State expenditures in the NHEA. She also recommended that the NHEA classify the subsidies to private employers as Medicare spending rather than as PHI. She notes the controversy surrounding the cost projections of the MMA and believes that policymakers will want as much detail as possible on the ways in which the MMA has reallocated expenditures. At a minimum, she suggested that CMS consider issuing sidebar tables that will clarify the transfers of funds resulting from the MMA.

Both discussants raised issues about measuring health expenditures to satisfy different needs of the users. Henry Aaron discussed using a net versus gross approach to measuring health expenditures, as he felt it was important to show both who pays the bill and who finances the payment. John Cookson also commented that the private sector will want to evaluate the impact of premium and out-of-pocket growth and the interaction with changes over time of covered services.

The final topic, presented by Mun Ho and Dale Jorgenson, was a plan of action for linking the NIPA and the NHEA in order to provide a dataset that will accurately portray the role of the health care sector in the U.S. economy and facilitate projections of spending over the next 75 years as required by law. Ho and Jorgenson discussed several gaps and inconsistencies between the NHEA and the NIPA that create difficulties for this effort:

- *Lack of Detail in the NIPA Government Accounts*—Unlike the personal consumption expenditure table, the government consumption expenditure table does not provide a breakdown of expenditures by provider type (e.g., hospital, physicians, nursing homes).
- *Unclear Definition of Health in Government Accounts*—The definition of health in the

NIPA estimates of government expenditures by function is not clear and should be consistent with the NHEA definition.

- *Lack of Detail on Government Health Industry in Input-Output Benchmark Tables*—The 1997 input-output benchmark tables do not provide breakdowns for government expenditures by ambulatory health care, hospital care, and nursing and residential care.
- *Consistency of Treatment of Non-Profit and Government Providers in NHEA and NIPA*—The authors recommend that a common framework be adopted for the treatment of non-profit and government hospitals and clinics.
- *NHEA Need to Distinguish Between Primary and Secondary Commodities*—They also recommend that the NHEA distinguish between primary and secondary commodities as the NIPA and input-output benchmark tables do.

Katharine Abraham thought that because the U.S. statistical system is decentralized there needs to be an effort to explain and understand the differences between the various data sets. This includes not only documenting the differences, but harmonizing the classification basis. She also suggested more effort be placed on what we are getting for what we spend, such as through non-market or disease-based estimates. Marilyn Moon commented how important the conference was because it dealt with measurement issues, which are critical in order to address the challenges over the long-run regarding the affordability of health care, and the quality of outcomes produced by the health care system.

Topic discussions at the conference can be found at: <http://www.cms.hhs.gov/NationalHealthExpendData/>.

DISCUSSIONS AND RECOMMENDATIONS

Participants started from a goal of trying to make the NHEA as useful for policymaking as possible. The discussion focused on prioritizing future improvements and extensions in the face of resource constraints. Participants made the following recommendations:

- *Develop Estimates of Expenditures by Disease*—A key area of discussion was whether the NHEA should move toward creation of spending estimates by function or by disease or possibly both. Given resource limitations, some participants felt that estimates by disease should be a higher priority than estimates by function because disease estimates would be useful in attempting to measure medical care output, in part because this might facilitate the development of price deflators that could account for quality change (Berndt et al., 2000). The group also discussed the difficulty in defining proper deflators for expenditures at the functional level and particularly accounting for change in quality of care.
- *Reconcile MEPS and NHEA More Frequently*—Participants agreed that more frequent reconciliation (annual, if resources permit) of MEPS and NHEA estimates would be helpful. One participant noted that more frequent reconciliation would make it easier to do estimates by disease, age, and function.
- *Present Both Net and Gross Medicare Payments after MMA Implementation*—To clarify the transfers resulting from the MMA, the group recommended presentation of a matrix of net and gross Medicare payments.
- *Rethink Conceptual Foundation of NHEA*—Many participants recommended classifying subsidies to private

employers that offer qualifying retiree drug coverage as Medicare expenditures instead of PHI. The group then discussed the broader question of how to classify expenditures incurred when a public program subsidizes a non-public benefit, noting that the NHEA have traditionally classified the expenditures under the payer or financer of the funds that is ultimately responsible for the benefit for the target group. The group recommended that CMS revisit the conceptual foundation of the NHEA in order to determine the approach that will produce estimates that are most useful for policymaking in the future.

- *Increase Consistency of Estimates From NIPA and NHEA*—The participants supported Ho's and Jorgensen's recommendations regarding increased consistency (where there is no obvious rationale for differences) between the NHEA and NIPA on items such as primary and secondary commodities and treatment of non-profit and government services.
- *Provide a Production Account in the NHEA*—Participants recommended a production account in the NHEA that would allow the analysis of the return to resources expended on health care.

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