Immigrants Contributed An Estimated $115.2 Billion More To The Medicare Trust Fund Than They Took Out In 2002–09

Cite this article as:
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Health Affairs, , no. (2013):

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ABSTRACT Many immigrants in the United States are working-age taxpayers; few are elderly beneficiaries of Medicare. This demographic profile suggests that immigrants may be disproportionately subsidizing the Medicare Trust Fund, which supports payments to hospitals and institutions under Medicare Part A. For immigrants and others, we tabulated Trust Fund contributions and withdrawals (that is, Trust Fund expenditures on their behalf) using multiple years of data from the Current Population Survey and the Medical Expenditure Panel Survey. In 2009 immigrants made 14.7 percent of Trust Fund contributions but accounted for only 7.9 percent of its expenditures—a net surplus of $13.8 billion. In contrast, US-born people generated a $30.9 billion deficit. Immigrants generated surpluses of $11.1–$17.2 billion per year between 2002 and 2009, resulting in a cumulative surplus of $115.2 billion. Most of the surplus from immigrants was contributed by noncitizens and was a result of the high proportion of working-age taxpayers in this group. Policies that restrict immigration may deplete Medicare’s financial resources.

Politicians and others are concerned that Medicare might not be sustainable, given current projections of health care spending growth, the surge in enrollment driven by the aging baby-boom generation, and the diminished size of the working-age population paying into the program through payroll taxes. The role that immigrants play in funding Medicare and their use of the program is not well understood. Because Medicare accounts for 21 percent of all annual US health care expenditures, knowing more precisely how immigrants factor into Medicare revenues and expenditures is important to ongoing policy discussions.

Medicare is financed through general revenues, payroll taxes, beneficiary premiums, and other sources, including taxes on Social Security benefits and payments from states. Medicare has two trust funds, the Hospital Insurance Trust Fund and the Supplementary Medical Insurance Trust Fund. The Hospital Insurance (HI) Trust Fund primarily finances inpatient care through Medicare Part A; it receives most of its income from payroll taxes and interest on past surpluses generated from those taxes. The Supplementary Medical Insurance (SMI) Trust Fund primarily pays for Medicare Part B, which covers physician services (both inpatient and outpatient) and outpatient care. Despite its name, the SMI Trust Fund is not a trust fund in the usual sense of the term; it is fully funded annually by enrollee premiums and yearly congressional appropriations from general revenues.

The most recent annual report from the Medicare Board of Trustees projected that the HI Trust Fund will be exhausted in 2024. At that point, revenues and assets will not be sufficient to cover the full costs of the Medicare program. Studies have found that immigrants use less...
health care than US-born individuals, even in some public programs. However, because previous studies have not tabulated immigrants’ contributions to health care funding, concerns remain that immigrants may be a financial drain on the health care system.

We used nationally representative data on Medicare spending, income, and taxation to determine HI Trust Fund contributions and expenditures attributable to the US-born, immigrants, and noncitizen immigrants. We then calculated the net trust fund surpluses or deficits attributable to each group.

**Study Data And Methods**

**Data Sources** We determined HI Trust Fund contributions from the March supplements to the Current Population Survey (CPS) for 2003–10 (the 2010 survey included 209,802 respondents). The CPS, conducted jointly by the Census Bureau and the Bureau of Labor Statistics, provides nationally representative data for the civilian noninstitutionalized population. Each year’s survey includes questions on personal income for the previous calendar year, as well as on place of birth and citizenship status.

We determined Medicare expenditures using the 2002–09 Medical Expenditure Panel Surveys (MEPS) conducted by the Agency for Healthcare Research and Quality (our 2009 sample included 36,333 respondents for whom we could identify nativity status). This survey provides detailed health care spending data for a representative sample of the civilian noninstitutionalized population and enables the identification of Medicare expenditures.

We linked data from MEPS to data from the National Health Interview Survey (from which the MEPS sample is drawn) to confirm nativity and citizenship status. A detailed description of our definitions and data sources appears in the online Appendix.

**Contributions, Expenditures, Surpluses, and Deficits** The CPS includes detailed individual-level income data, allowing us to calculate immigrants’ and others’ shares of 2009 tax contributions to the HI Trust Fund. Most contributions are from payroll taxes, but some are from income taxes on Social Security benefits collected from higher-income beneficiaries. The Appendix provides details of our HI Trust Fund contribution and expenditure calculations.

SMI Trust Fund spending is not paid for by the HI Trust Fund and hence was not used in our calculations of trust fund finances. However, we also report immigrants’ and others’ shares of most categories of this spending (see the Appendix for details).

To generate dollar estimates for HI Trust Fund contributions and expenditures, we multiplied immigrants’ and nonimmigrants’ shares of total contributions and expenditures by the Medicare Trustees’ estimates of total 2009 HI Trust Fund revenues and expenditures. We calculated each group’s total net surplus or deficit by subtracting its HI Trust Fund expenditures from its HI Trust Fund contributions. In calculating per capita figures, we used CPS data to estimate population figures. Finally, we repeated our analysis separately for citizen and noncitizen immigrants as well as for two age groups, people ages 18–64 and people ages 65 and older.

Although we report results principally for 2009, we replicated all analyses for each year in the period 2002–08.

**Statistical Analysis** We determined significance using chi-square tests for proportions and linear regressions for dollar estimates (including time trends). As explained in the Appendix, we performed sensitivity analyses employing alternative regression modeling strategies that might be appropriate for highly skewed data such as health expenditures. These yielded virtually identical results. The Institutional Review Board of Cambridge Health Alliance exempted this study from review.

**Limitations** Several limitations of our study should be noted. Our data may undercount noncitizens’ surplus since undocumented immigrants may avoid government surveys such as the Current Population Survey. The impact of this possible undercount on our estimate of payroll tax contributions is hard to quantify. However, the Social Security Administration’s Office of the Chief Actuary estimated that undocumented immigrants contributed a net of $12 billion to the Social Security Retirement Trust Fund in 2007. Since about one-fifth of the federal payroll tax goes to Medicare and four-fifths to Social Security, the estimate suggests that undocumented immigrants’ net contribution to Medicare is about $2.5 billion. Although undocumented immigrants are probably also underrepresented in the MEPS data, this should have little impact on our findings since Medicare expenditures on their behalf are minimal.

We conservatively credited revenue from HI Trust Fund interest to immigrants in proportion to their tax contributions in 2009. However, interest accrues on surpluses from prior years. Hence, crediting interest in proportion to past surpluses would raise our estimate of immigrants’ share of HI Trust Fund contributions.

Conversely, we assumed that other sources of HI Trust Fund revenues, such as general tax revenue and premiums, were proportional to revenue from payroll taxes. Although we have no
data on immigrants’ share of these revenue sources, they account for little of the trust fund’s income: Premium contributions account for only 1.3 percent and general tax revenues for just 1.0 percent. On the expenditure side, we made the intuitively reasonable but unproven assumption that immigrants’ share of skilled nursing facility and hospice expenditures, which are not included in the MEPS data, were proportional to their share of inpatient, home health, and Medicare Advantage expenditures.

**Study Results**

**Population** In 2009 immigrants constituted 13.6 percent of the US population, according to the CPS. As expected for two nationally representative samples, the CPS and MEPS samples had similar demographic characteristics, including age, sex, race or ethnicity, insurance, nativity, citizenship status, and number of years in the United States (Exhibit 1).

**Contributions, Expenditures, and Net Surplus or Deficit by Nativity Status** In 2009 immigrants contributed $33.1 billion to the HI Trust Fund, or 14.7 percent of all contributions, and were responsible for $19.3 billion of its expenditures, or 7.9 percent (Exhibit 2). Immigrants accounted for 4.8 percent of hospitalization expenditures; 14.2 percent of home health expenditures (a figure that is based on small numbers and should be interpreted cautiously); and 11.8 percent of trust fund expenditures on Medicare Advantage premiums. Among Medicare enrollees, average expenditures were $1,465 lower for immigrants ($3,923) than for the US-born ($5,388)—a difference that was of borderline significance (p = 0.05).

Immigrants generated a trust fund surplus of $13.8 billion in 2009. In contrast, the US-born generated a deficit of $30.9 billion. Noncitizen immigrants (about 7.1 percent of the US resident population) contributed a net surplus of $10.1 billion, or $466 per capita (Exhibit 3), accounting for most of the surplus from immigrants. When stratified by age group, per capita net contributions by US-born people of working age (ages 18–64) and retirement age (ages 65 and older) did not differ significantly from immigrants’ net contributions. For the younger

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**EXHIBIT 1**

Demographic Characteristics For 2010 Current Population Survey (CPS) And 2009 Medical Expenditure Panel Survey (MEPS) Respondents, By Nativity Status

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>CPS (N = 209,802)</th>
<th>MEPS (N = 36,333)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Foreign-born (n = 29,104)</td>
<td>US-born (n = 180,698)</td>
</tr>
<tr>
<td><strong>AGE (YEARS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–17</td>
<td>7.9% ****</td>
<td>27.3% ****</td>
</tr>
<tr>
<td>18–39</td>
<td>39.3</td>
<td>28.2</td>
</tr>
<tr>
<td>40–64</td>
<td>40.6</td>
<td>31.0</td>
</tr>
<tr>
<td>65+</td>
<td>12.2</td>
<td>12.8</td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49.8**</td>
<td>49.0**</td>
</tr>
<tr>
<td><strong>RACE OR ETHNICITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>21.5****</td>
<td>71.7****</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>7.6</td>
<td>12.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>48.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Other</td>
<td>23.0</td>
<td>4.4</td>
</tr>
<tr>
<td><strong>PRIMARY HEALTH INSURANCE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>44.3****</td>
<td>58.5****</td>
</tr>
<tr>
<td>Medicare</td>
<td>12.1</td>
<td>14.6</td>
</tr>
<tr>
<td>Medicaid or other public</td>
<td>10.6</td>
<td>12.0</td>
</tr>
<tr>
<td>Uninsured</td>
<td>33.0</td>
<td>14.1</td>
</tr>
<tr>
<td><strong>IMMIGRATION/CITIZENSHIP STATUS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years in US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤10</td>
<td>35.5</td>
<td>—</td>
</tr>
<tr>
<td>&gt;10</td>
<td>64.5</td>
<td>—</td>
</tr>
<tr>
<td>US citizen</td>
<td>38.6</td>
<td>—</td>
</tr>
</tbody>
</table>

**Source:** Authors’ analysis of data from the 2010 Current Population Survey and 2009 Medical Expenditure Panel Survey. **Notes:** Percentages were weighted to the US population. Significance is for comparisons between the US-born and immigrants. *Not applicable. **p < 0.05 ****p < 0.001**
group, the per capita net contributions were $1,424 for the US-born and $1,332 for immigrants. For the older group, the figures in both cases were deficits rather than surpluses: $−3,333 for the US-born and $−2,099 for immigrants.

Immigrants accounted for 10.6 percent of SMI Trust Fund expenditures, including 11.3 percent of Medicare Advantage premiums, 14.2 percent of home health agency expenditures (an estimate based on small numbers), 10.8 percent of prescription drug expenditures, 6.8 percent of physician expenditures, and 7.8 percent of outpatient (including emergency department) expenditures. Per capita SMI Trust Fund expenditures for immigrants ($721) were $175 lower than for the US-born ($896)—a difference that was not significant ($p = 0.11). Noncitizen immigrants’ per capita SMI Trust Fund expenditures of $295 were $601 lower than those of the US-born ($p < 0.001). As noted above, we did not use these expenditures in our calculation of HI Trust Fund finances.

**TRENDS OVER TIME** In each of the years from 2002 to 2009, immigrants contributed a surplus to the HI Trust Fund (Exhibit 4), generating a total surplus of $115.2 billion during the period. Their contributions remained largely unchanged over time. During the same period, the net trust fund contributions (contributions minus expenditures) for US-born people declined, generating a deficit of $28.1 billion.

**Discussion**

Immigrants, particularly noncitizens, heavily subsidize Medicare. In 2009 immigrants contributed $13.8 billion more to the HI Trust Fund than it paid out on their behalf (Exhibit 4). Most of this surplus came from noncitizens. Between 2002 and 2009 immigrants’ cumulative surplus contributions totaled $115.2 billion.

Immigrants pay into the HI Trust Fund in several ways. Those with legal status contribute through payroll taxes under valid Social Security numbers. Undocumented immigrants often pay payroll taxes under Social Security numbers tied to invented names or belonging to someone else, because to comply with federal law employers must obtain a Social Security number from every employee. Less frequently, undocumented immigrants pay self-employment taxes (in lieu of payroll taxes) under individual tax identification numbers, which allows them to claim credit for their contributions should they eventually obtain legal status.

In 2009 the dependency ratio—the ratio of working-age to retirement-age people, or those ages 18–64 to older people—among immigrants was 6.5 to 1, compared to 4.7 to 1 for the US-born. Noncitizen immigrants had a particularly high...
dependency ratio, 12.4 to 1, reflecting their relative youth. Because many noncitizens eventually become naturalized at older ages, this last estimate is biased upward. Although individual immigrants may have lower lifetime earnings than US-born people, depending on their age at arrival, the high proportion of working-age adult immigrants results in large excess payments to the HI Trust Fund.

The recent drop in Mexican immigration\(^{11}\) and the overall aging of the US population may eventually reduce immigrants’ dependency ratio, and hence their surplus contributions to Medicare. However, this source of surplus contributions seems likely to continue for some time. The dependency ratio among immigrants did not fall between 1995 and 2010, according to our analysis of CPS data; the large cohort of Mexican immigrants from the 1990s and 2000s will not reach retirement age for decades; immigration of mostly working-age individuals from Asia continues to grow;\(^{12,13}\) and the Census Bureau projects that net immigration (both absolutely and as a share of the US population) will continue to increase for the next eighteen years and will be higher in 2060 than it is now.\(^{14,15}\)

Several factors other than age likely play a role in immigrants’ Medicare surplus. First, some immigrants who are eligible for Medicare may not use it because they retire to their country of origin.\(^{16}\) Elderly immigrants may be ineligible for Medicare because they have not worked the required forty quarter-years in the United States,\(^{17}\) lack legal status, or—if they are legal residents—do not meet the five-year (legal) residency requirement of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996.

Immigrants also cost Medicare less—a consequence of both their lower rates of enrollment and their lower expenditures once enrolled. These lower expenditures may reflect the under-representation of immigrants among the “oldest old,” those ages eighty-five and older. Differences in health status per se probably don’t explain these findings: Although immigrants arrive in the United States healthier than the US-born,\(^{18}\) immigrants’ health advantage has eroded by age sixty-five.\(^{18,19}\)

However, poor access to care among elderly immigrants may play a role in their low use of Medicare.\(^{19}\) Previous studies have found that immigrants—especially noncitizens\(^{20}\)—use less health care than do the US-born.\(^{3,4,21}\) This disparity has remained largely unchanged over time\(^{3}\) and has been observed among the publicly insured, the privately insured, and the uninsured.\(^{3-5}\)

Our 2009 findings are not an anomaly. Immigrants provided surpluses to the HI Trust Fund in every year between 2002 and 2009 (Exhibit 4), and this surplus was relatively constant.

Our study is the first of which we are aware to quantify immigrants’ share of contributions, and therefore the net surplus or deficit provided by immigrants, to a US health care sector. The surplus, if any, that immigrants provide to the health care system as a whole—or to programs other than Medicare—is not known. Although most political discourse regarding immigrant health care financing has focused on uncompensated care, that care accounts for a far smaller proportion of national health care spending than Medicare does (2 percent versus 21 percent).\(^{1,22}\)

Immigrants may withdraw more resources than they contribute to some government services. However, our finding that immigrants heavily subsidize the HI Trust Fund should raise skepticism about the widespread assumption that immigrants consistently drain public resources.

**Conclusion**

Having ourselves witnessed immigrants dying needlessly because of lack of health care, we (and many of our colleagues) are motivated by the belief that all patients have a human right to
health care. But economic concerns—including the worry that immigrants are driving up US health care costs—have often dominated the debate over immigration. Our data offer a new perspective on these economic concerns.

Policies that reduce immigration would almost certainly weaken Medicare’s financial health, while an increasing flow of immigrants might bolster its sustainability. Because Social Security’s eligibility criteria and payroll tax–based funding closely track those of Medicare, our findings support the argument that immigration helps sustain Social Security.

Providing a path to citizenship for currently undocumented immigrants would affect Medicare’s finances in multiple ways. It would likely increase payroll tax collections by reducing immigrants “off the books” employment and removing barriers that keep them out of higher-paying jobs. But in the long term it would probably increase the number of immigrants eligible for Medicare, and hence expenditures on their behalf.

However, the age structure of the immigrant population is far more important than either of these factors. Encouraging a steady flow of young immigrants would help offset the aging of the US population and the health care financing challenge that it presents.

The authors report no conflicts of interest. All of them contributed substantially to the design of the study as well as to the manuscript revision. Leah Zallman was responsible for writing the manuscript and analyzing the data. Her work was supported by an Institutional National Research Service Award (No. T32HP12706) from the Health Resources and Services Administration for the Harvard Medical School Fellowship in General Medicine and Primary Care. The content is solely the authors’ responsibility and does not necessarily represent the official views of Harvard University or its affiliated academic health care centers, the National Center for Research Resources, or the National Institutes of Health. The authors thank Bruce Vladeck, senior adviser at Nexera, for his guidance in the study design and his review of the manuscript. Vladeck did not receive compensation for his contributions. [Published online May 29, 2013]

NOTES

7 To access the Appendix, click on the Appendix link in the box to the right of the article online.
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David Himmelstein is a professor at the City University of New York.

In this month’s Health Affairs, Leah Zallman and coauthors report on the impact of immigrants on Medicare’s Health Insurance Trust Fund.

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