STAYING COVERED:

HOW IMMIGRANTS HAVE PROLONGED THE SOLVENCY OF ONE OF MEDICARE'S KEY TRUST FUNDS AND SUBSIDIZED CARE FOR U.S. SENIORS

AUGUST 2014

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PART

I

EXECUTIVE SUMMARY

How do immigrants affect the health of the nation? In America, immigrants work as doctors, home health aides, radiology technicians, and pharmacists. They staff nursing homes and retirement communities, caring for others' loved ones as they age. Their innovations drive lifesaving advances in pharmaceuticals and biotechnology. And they work on public health programs, tracking illnesses and preventing them from spreading.

This study examines a less visible way that immigrants impact the health of the nation: by providing valuable contributions to Medicare, a publicly-funded health insurance program that provides care to 50 million American seniors and disabled individuals. In recent years, many policymakers have voiced concerns about the long-term sustainability of the Medicare program. With baby boomers retiring at the rate of 10,000 people per day, there will soon be fewer working-age Americans to cover their care.[1] Since the 1980s, for instance, there have been roughly 240 seniors for every 1,000 working-age individuals in the country. By 2030, that figure is expected to rise by about 70 percent, reaching 411 seniors for every 1,000 working-age adults in the country.[2] The Medicare Trustees have written that this will present a major strain on the Medicare program. They project Medicare's Hospital Insurance Trust Fund, a pool of funds covering services like hospitalizations and home health care, will become insolvent by 2030.[3]

Considering their demographic makeup, it makes sense that immigrants could play a valuable role boosting the finances of the Medicare program. Immigrants tend to be younger and are more likely to be working-age than the U.S. population as a whole.[4] Many also come to the U.S. eager to work, and their higher labor-force participation rate makes them valuable contributors to the U.S. economy as taxpayers.[5] Despite these characteristics, there has been little research on the role that immigrants play supporting Medicare's long-term finances. In this report, we use data from the Current Population Survey and the Medicare Expenditure Panel Survey to examine the impact immigrants have on Medicare's Hospital Insurance (HI) Trust Fund, the only part of Medicare that functions like a true trust fund, with the financing coming principally from U.S. payroll taxes. It is also the only part of Medicare projected to become insolvent in the coming years, making it a critically important area to analyze. We examine data from 1996 to 2011, providing insight into the contributions and expenditures of immigrants for a longer time period than has ever been done before.

Our work paints a powerful picture about the role immigrants play in sustaining a critical American entitlement program. We find that from 1996 to 2011, immigrants contributed billions more to the Medicare Hospital Insurance Trust Fund than was expended on their benefits. Without the large subsidy produced by immigrants during that period, in fact, Medicare's core trust fund would be slated to become insolvent by 2027— an event that could jeopardize care for millions of Americans or force Congress to raise taxes on working individuals to cover benefits.

KEY FINDINGS

Immigrants are subsidizing Medicare's core trust fund. In the period from 1996-2011, immigrants contributed $182.4 billion more to Medicare's Hospital Insurance Trust Fund than was expended on their benefits. Immigrants generated multibillion-dollar surpluses in the trust fund during every year examined in our study. In the average year between 1996 and 2011, they contributed $11.4 billion more to the trust fund than was expended on their care.

Immigrants played a critical role subsidizing Medicare's Hospital Insurance Trust Fund during the recent recession. From 2008 to 2011, a period when the great recession and its after effects eroded trust fund contributions, Medicare's Hospital Insurance Trust Fund operated at a deficit, failing to bring in enough contributions to fully cover costs each year. Immigrants, however, continued to generate surpluses in the program during this time, including a $16.3 billion surplus during the height of the recession in 2008.

Medicare's Hospital Insurance Trust Fund would be nearing insolvency if not for the contributions of immigrants in recent years. If immigrants had not participated in the Medicare program from 1996 to 2011, Medicare's core trust fund would be expected to become insolvent by the end of 2027. This is roughly three years earlier than currently predicted by the Medicare Trustees.

The role immigrants play subsidizing Medicare's Hospital Insurance Trust Fund distinguishes them from the broader population. While immigrants contributed a net of $182.4 billion from 1996 to 2011, the U.S.-born population generated a deficit of $68.7 billion during the same period.

Our work counters assumptions some policymakers have advanced about the role of immigrants in U.S. entitlement programs. Many critics of immigration have argued that immigrants are a net drain on America's public health care resources—a particular concern as baby boomers retire and become dependent upon the publicly-funded Medicare program. This report, however, uses hard data to show that instead of being a drain on the Medicare program, immigrants are instead arguably a key reason why the Medicare's Hospital Insurance Trust Fund will remain solvent through the next decade and able to adequately cover care. The effect of immigrants on the program, in fact, is likely even more dramatic than described here. Our calculations only take into account immigrant Medicare contributions from 1996 to 2011. Immigrants were likely generating surpluses for the Medicare trust fund both before and after that window, making their impact prolonging the solvency of the trust fund even greater.

This report shows that any discussion of immigration reform should also take into account the real role that current and future immigrants could play strengthening U.S. entitlement programs. Our work makes clear that policies that reduce the number of young, working-age immigrants arriving in the U.S. will weaken the financial health of Medicare's Hospital Insurance Trust Fund. Conversely, policies that increase the number of immigrants arriving in the coming years will likely add to the balance of the trust fund, supporting the provision of timely care. Many of the comprehensive immigration reform options currently being discussed on Capitol Hill would increase the number of immigrants moving to America in the coming years. Doing so would increase the number of working-age people in America, and by extension the tax revenues that the trust fund can ultimately draw on.[6]

PART II

INTRODUCTION

In recent years, the number of immigrants in the United States has been growing. In 2011, the Pew Hispanic Center reported that 40.4 million foreign-born residents were living in the country, including 18.1 million citizens. This population made up more than one in eight members of the U.S. population overall, a 30 percent increase over the share of the population made up of immigrants in 2000.[7, 8] By 2025, researchers estimate that 19 percent of all Americans—or almost one in five—will have been born elsewhere.[9]

Politicians and others have expressed concern that rising immigration levels could lead to increased stress on the country's limited healthcare resources. Recent data on immigrant healthcare utilization, however, suggests the opposite may in fact be the case. In the last decade, research has consistently shown that immigrants spend fewer healthcare dollars than the U.S.-born population on a per person basis.[10, 11, 12, 13] This is markedly true for public healthcare programs. In 2003, for instance, immigrants who had been in the U.S. for more than 10 years spent $376 from such public programs per person. Newly arrived immigrants, or those here for less than 10 years, spent only $135 per person, while the U.S.-born population spent $533.[14] These patterns hold true for health care spending through private insurance programs as well. While U.S.-born, privately insured individuals spend $1,991 per person per year through private programs, recent immigrants spend just $949 annually, and more established migrants spend $1,141 per person each year. Non-citizen immigrants typically spend roughly half as much as the U.S.-born population on their care.[15]

FIGURE 1:
ANNUAL SPENDING FROM PRIVATE AND PUBLIC HEALTHCARE PROGRAMS BY INDIVIDUALS OF DIFFERENT NATIVITY STATUSES, 2003

	Immigrants in U.S. Less Than 10 Years	Immigrants in the U.S. More than 10 Years	U.S. Born
Public Healthcare Programs	$135	$376	$533
Percent Less than U.S.-Born Spending	74.7%	29.5%	N/A
Private Insurance	$949	$1,141	$1,991
Percent Less than U.S.-Born Spending	52.3%	42.7%	N/A

SOURCE: Ku, L., Health insurance coverage and medical expenditures of immigrants and native-born citizens in the United States. Am J Public Health, 2009. 99(7): p. 1322-8.

Many factors likely contribute to the lower medical expenditures of immigrants. As a group, immigrants are more likely to be young and working-age than the broader U.S. population. Their lower expenditures, however, are not fully explained by their younger age: Even after accounting for the age difference, immigrants use less medical care than the population overall.[16] Some have suggested that immigrants seek care less frequently because they do not have insurance or cannot afford to pay for healthcare.[17, 18, 19] Many immigrants may avoid care because they lack the English skills to navigate the healthcare system or because of cultural beliefs and norms.[20, 21, 22] Some experts have even argued that immigrants may be healthier on average than the U.S.-born population, although recent data casts doubt on this assumption.[23]

In this study, we document the real role immigrants have had in recent years strengthening the finances of Medicare's Hospital Insurance Trust Fund, a pool of funds that covers everything from lifesaving hospital procedures to end of life care. To do this, we analyze government data to calculate not only how much was spent on immigrants' behalf from Medicare's Hospital Insurance Trust Fund, but also how much they contributed to the program through payroll taxes. Putting these two pieces together paints a powerful picture: From 1996 to 2011, immigrants contributed almost $185 billion more to the trust fund than was spent to cover their care, enabling it to remain solvent for well three years beyond what it would have otherwise.

PART III

BACKGROUND

MEDICARE'S TRUST FUNDS

Medicare was created in 1965 as a public program providing federally funded health insurance coverage for older Americans as well as some individuals with long-term disabilities. More than 50 million Americans currently count on Medicare for their health coverage.[24] Medicare also accounts for a large portion of U.S. healthcare spending each year, making it a particularly important program to study for those hoping to understand the impact immigrants have on our broader healthcare system. In 2012, 20 percent of national healthcare costs were made up of Medicare spending, making it the largest single payer in the U.S. healthcare economy.[25]

FIGURE 2:
U.S. NATIONAL HEALTHCARE EXPENDITURES MAJOR FUNDS BREAKDOWN, 2012

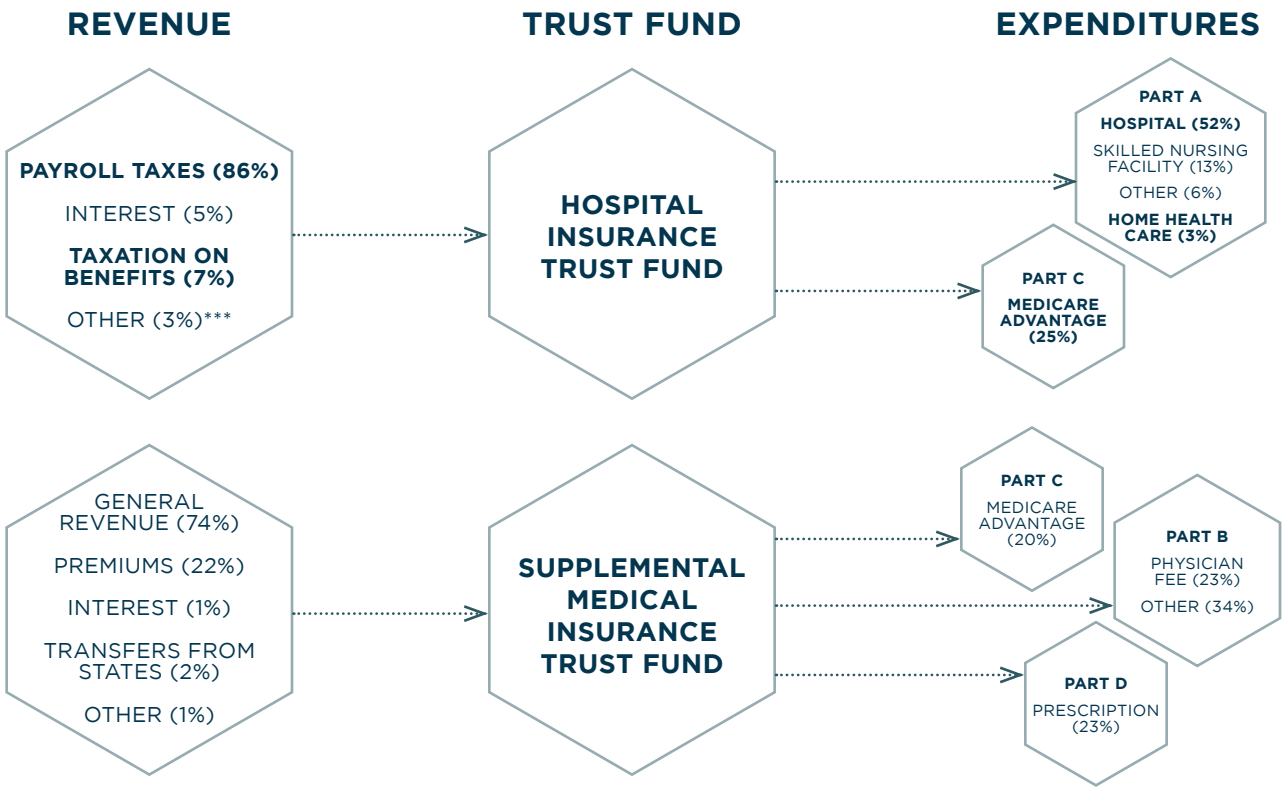
- MEDICARE (20%)
- MEDICAID (15%)
- PRIVATE (33%)
- OUT-OF-POCKET (12%)
- OTHER (20%)

Source: Centers for Medicare & Medicaid Services (CMS). National Health Expenditures 2012 Highlights. 2012 [Accessed March 2014]. Available from: http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/highlights.pdf

Medicare is financed through a combination of general revenues, payroll taxes paid by working Americans, beneficiary premiums, and other funding sources—including state payments and taxes on Social Security benefits.[26] The program is comprised of two core trust funds—the Hospital Insurance (HI) Trust Fund and the Supplementary Medicare Insurance (SMI) Trust Fund. The HI trust fund primarily finances inpatient care, like the serious surgeries and home healthcare services covered by Medicare Part A. The SMI trust fund finances services like doctors' visits, lab tests, and preventative care available through the Medicare Part B program.[27]

In Figure 3, we chart the primary inputs and outputs to each of the two trust funds. Of the two, the HI trust fund is the only section of Medicare that functions like a true trust fund, with financing primarily coming from payroll taxes and interest on past trust fund surpluses. The SMI trust fund is fully funded each year by enrollee premiums and Congressional appropriations from general revenues.[28] That means that when healthcare spending is high, the two trust funds are impacted very differently: While Congress must boost appropriations to keep the SMI trust fund fully funded, the HI trust fund must dip into assets from prior years when costs exceed revenue, eroding the trust fund balance. Because the HI trust fund works the most like a traditional trust fund, we refer to it as Medicare's "core trust fund" throughout the report.

FIGURE 3:
REVENUES AND EXPENDITURES FOR MEDICARE TRUST FUNDS, 2011* **



**Based on authors' analysis of the Medicare Trustees Report, 2012*
***Percentages may not add up to 100 due to rounding error.*
**** Includes Premiums (1.4%), General Revenue (0.2%) and Other (1.0%)*
Components captured directly in our analysis are bolded

Medicare is now under growing financial pressure, a development largely due to the large number of baby boomers becoming eligible for Medicare and rising healthcare costs. This changing demographic obviously represents a threat to the Medicare Hospital Insurance Trust Fund balance and to the program's long-term sustainability. The most recent

Medicare Trustees report estimates that the Hospital Insurance Trust Fund will no longer be able to fully cover the program's benefits by 2030, making efforts to scale back costs or develop new funding sources a priority for many policymakers.[29]

THE ROLE IMMIGRANTS PLAY CONTRIBUTING TO MEDICARE

Immigrants pay into the Medicare Hospital Insurance, or HI trust fund, in several ways. Legal immigrants—both citizens and those here on visas—contribute just as non-immigrants do, through payroll taxes tied to valid Social Security Numbers (SSNs). Unauthorized immigrants often contribute to the Medicare trust fund as well. This is because federal law requires employers to collect a SSN from each of their workers. Employers, however, are not required to verify those SSNs for authenticity. To obtain jobs, many unauthorized workers provide fake SSNs or those tied to other individuals, and wind up having taxes withheld as a result.[30] Occasionally but not as often, unauthorized immigrants will instead pay self-employment taxes (in lieu of payroll taxes) under individual tax identification numbers, allowing them to claim credit for their contributions if they eventually are able to legalize their status.[31]

A variety of factors impact how immigrants interact with the Medicare program as they age. Immigrants with legal status become eligible for Medicare when they turn 65, the same as non-immigrant citizens. However, in order to use their Medicare benefits, they must have worked legally in the U.S. for at least 40 quarters (10 years) and made payroll tax contributions during that time. This requirement excludes some authorized immigrants from the program. In other situations, even immigrants with enough work experience to become Medicare beneficiaries may not end up doing so because they retire to their countries of origin. Studies show that about one third of immigrants eventually return to their country of origin, and roughly 65 percent of those do so after living and working in the U.S. for more than 15 years. Those immigrants then are net contributors to the program: They pay payroll taxes for benefits, yet never draw down as beneficiaries. Unauthorized immigrants play a similar role.

In a recent study published in the journal Health Affairs, we demonstrated that immigrants generated a cumulative surplus of $115.2 billion dollars to the Medicare Hospital Insurance trust fund between 2002 and 2009. During the same time period, U.S.-born individuals generated a net deficit of $28.1 billion.[32] These findings suggested that immigrants are subsidizing Medicare spending for the U.S.-born; however, to fully conclude that immigrants are a net positive for Medicare, it is useful to look at a longer time frame, as well as more recent data. Building off this past work, the current report examines the impact of immigrants on Medicare for the longer time period of 16 years and also examines the behavior of immigrants in the program in more recent years, including 2010 and 2011. This allows us to provide a more accurate snapshot of current conditions. We also examine how much sooner Medicare's Hospital Insurance Trust Fund would have become insolvent if immigrants had not contributed to or utilized the fund from 1996 to 2011.

STUDY STRUCTURE

This study uses data from the Current Population Survey (CPS) and the Medicare Expenditure Panel Survey (MEPS)–a nationally representative survey that provides detailed healthcare spending information–to determine Hospital Insurance Trust Fund contributions and expenditures from 1996 to 2011. We gather this data for the U.S.-born and foreign-born populations, as well as non-citizen immigrants. We also calculate net trust fund surpluses or deficits for each group. To gain a more complete understanding of immigrants' Medicare expenditures, we also calculate the expenditures made by the Supplementary Medical Insurance Trust Fund to cover their care. For additional information on our methods and sources, see the Methodology Appendix.

PART
IV

THE ROLE OF IMMIGRANTS SUBSIDIZING MEDICARE'S CORE TRUST FUND

As health expenditures rise and the baby boomer generation becomes eligible for Medicare, concerns abound that Medicare's revenue and assets will not be able to keep up with rising costs. At the same time, debates about immigration reform have long been dominated by economic concerns. The often-pervasive perception is that immigrants drain U.S. healthcare resources through reliance on uncompensated care pools, emergency rooms, and public programs, which are primarily funded through the tax contributions of the U.S.-born. Such critics argue that policies restricting immigration would help reduce U.S. healthcare costs by lowering the number of people relying on public healthcare programs. Such arguments might appear intuitive. However, they do not account for the fact that immigrants not only contribute (sometimes heavily) to financing healthcare in America, they also tend to spend substantially fewer healthcare dollars.[33]

FIGURE 4:
CONTRIBUTIONS, EXPENDITURES, AND SURPLUS GENERATED BY IMMIGRANTS IN THE HOSPITAL INSURANCE TRUST FUND, 1996-2011

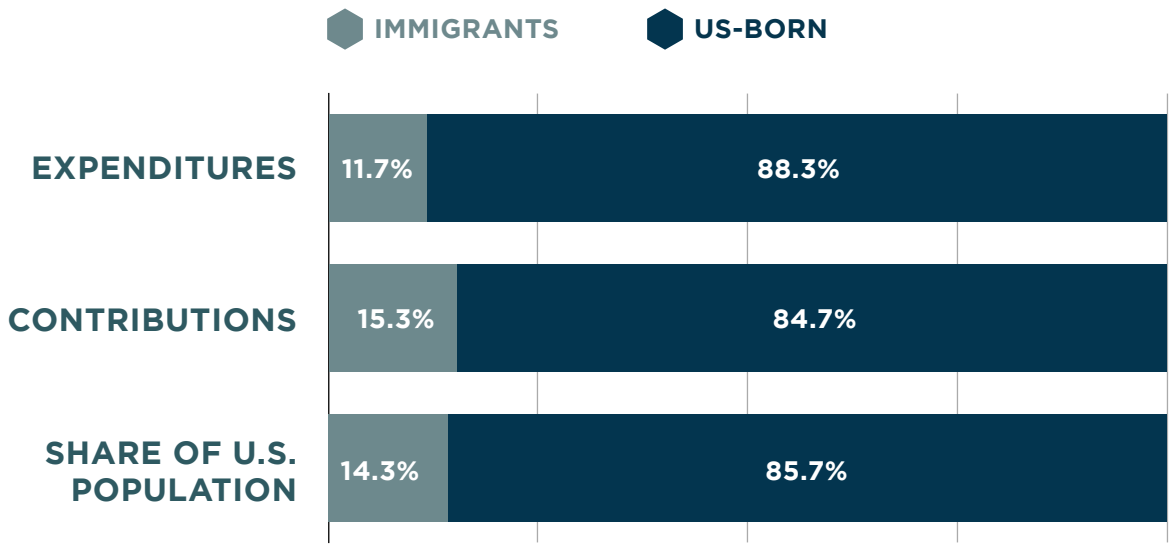
		WITHDRAWALS		CONTRIBUTIONS	
Year	Surplus Generated by Immigrants	US-born	Immigrants	US-born	Immigrants
1996	1.7	117.7	12.2	110.6	14
1997	6.0	130.3	9.2	115.1	15.1
1998	4.9	124.4	11.4	124.2	16.3
1999	12.5	124.7	5.9	133.2	18.4
2000	12.9	122.7	8.4	145.8	21.4
2001	16.1	135.9	7.5	151	23.6
2002	13.6	141.5	11	154	24.6
2003	11.6	141.7	12.9	151.2	24.6
2004	14.6	159	11.6	157.7	26.2
2005	19.2	172.8	10.1	170.1	29.3
2006	13.4	173.3	18.6	179.5	32
2007	12.5	182.1	21	190.3	33.4
2008	16.3	218	17.6	196.9	33.9
2009	13.8	223.2	19.3	192.3	33.1
2010	8.4	224.3	23.6	183.6	32
2011	4.8	226.6	30.1	193.9	35

This study found that between 1996 and 2011, immigrants, including citizens and noncitizens, contributed a total of $182.4 billion more to Medicare's Hospital Insurance Trust Fund than they used in benefits. This pattern of immigrants contributing billions more to the trust fund than was spent on their care was exhibited in every single year examined in our study. In 2005, for instance, immigrants contributed $29.3 billion to the trust fund but spent only $10.1 billion in benefits, producing a surplus of $19.2 billion. In 1999, they contributed $18.4 billion in contributions, but spent only $8.5 billion on benefits. In 11 of the 16 years examined, in fact, the surplus generated by immigrants exceeded $10 billion.

The enormous contributions immigrants made during the period examined in our study played a valuable role subsidizing Medicare's core trust fund and ensuring its financial health and viability during the last decade. This was particularly true during the recent recession. In the years since 2008, dropping payroll figures have contributed to lower contributions to the trust fund overall. From 2008 to 2011, the Hospital Insurance Trust Fund has operated at a deficit every single year, ranging from a low of $4.7 billion in 2008 to a high of $32.3 billion in 2010. Immigrants, however, continued to generate surpluses in the program every single one of those years. In 2011, the most recent year studied, immigrants contributed $35.0 billion to the trust fund, or 15.3 percent of all contributions. Their spending totaled $30.1 billion, making up just 11.7 percent of all trust fund expenditures that year.

FIGURE 5:

IMMIGRANTS' AND U.S.-BORN PERSONS' SHARE OF U.S. POPULATION AND OF MEDICARE TRUST FUND CONTRIBUTIONS AND EXPENDITURES, 2011

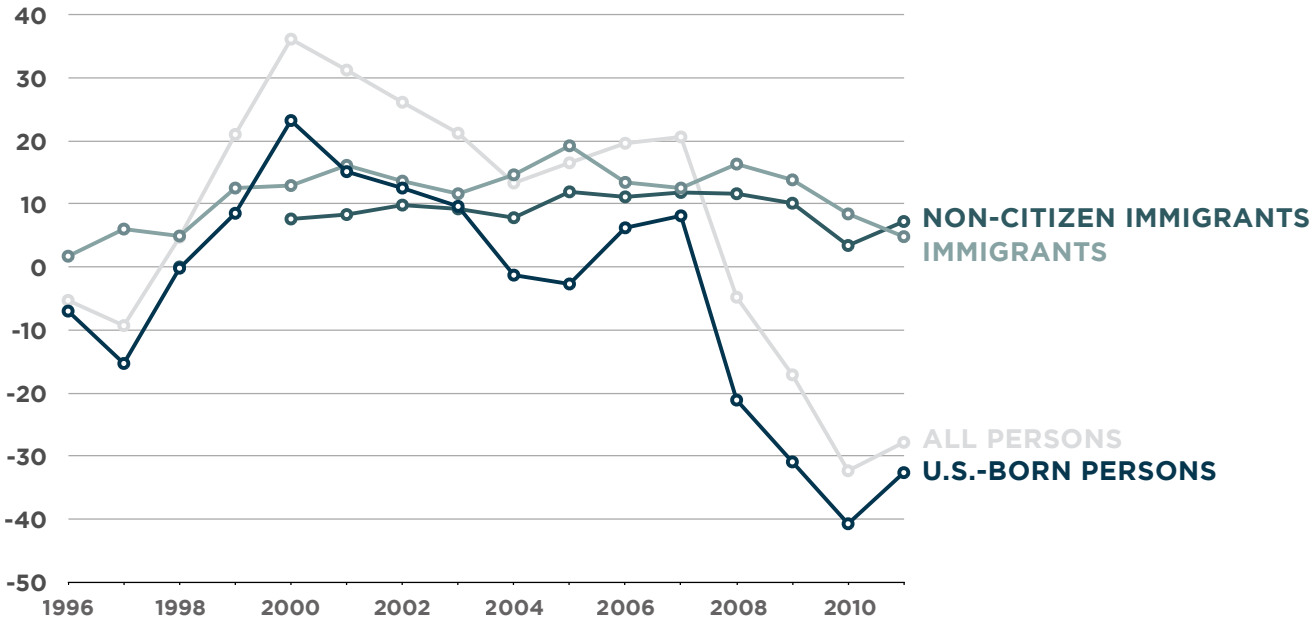


SOURCE: Author's analysis of data from the 2012 Current Population Survey (CPS) and 2011 Medical Expenditure Panel Survey (MEPS).

Their role as net contributors to the program also distinguished immigrants from other segments of the U.S. population overall. Viewed cumulatively, the trust fund spent $68.7 billion more on the benefits of the U.S.-born population than they contributed in payroll taxes during the entire 1996 to 2011 period. On a yearly basis, U.S.-born individuals generated net deficits for the program in 10 of the 16 years we studied. In some years, particularly during the recession, those deficits were quite sizeable. In 2009 and 2011, for instance, the trust fund spent roughly $30 billion more on the benefits of the U.S.-born than they were able to pay in as payroll contributions. In 2010, that deficit widened to more than $40 billion.

FIGURE 6:

NET MEDICARE HOSPITAL INSURANCE TRUST FUND SURPLUS OR DEFICIT ATTRIBUTABLE TO IMMIGRANTS, U.S.-BORN PERSONS, NON-CITIZENS, AND ALL U.S. RESIDENTS, 1996-2011



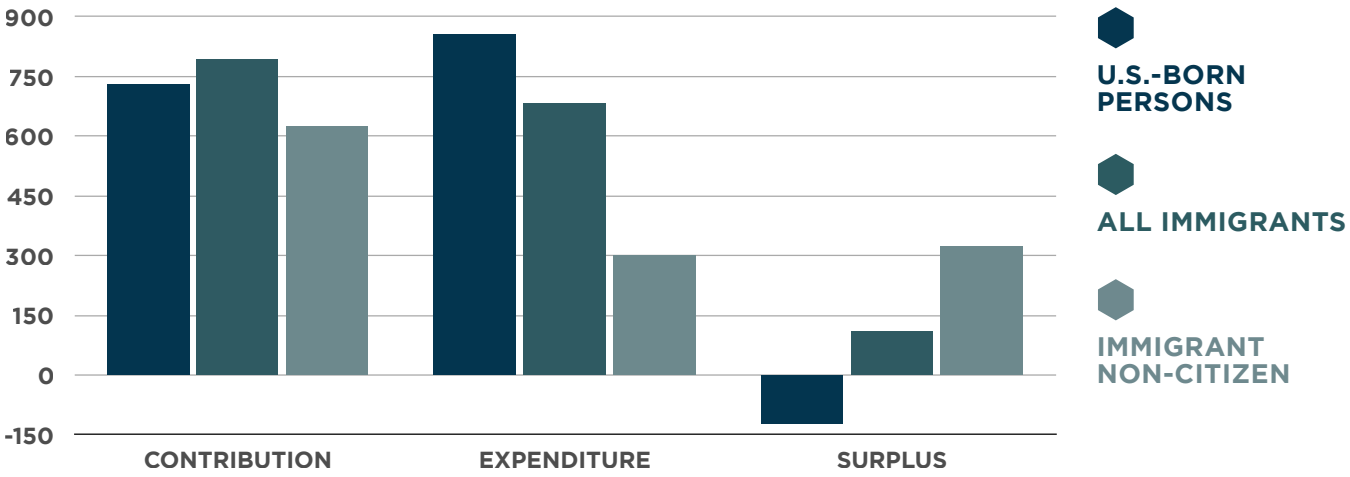
SOURCE: Author's analysis of data from the 2012 Current Population Survey (CPS) and 2011 Medical Expenditure Panel Survey (MEPS).
Note: Data for non-citizen immigrants for 1996-1999 not shown due to unavailability in MEPS data set.

To better visualize the spending patterns of immigrants, it's instructive to take a look at how the contributions break down on a per person basis. In 2011, immigrants overall contributed $794 per person to the Hospital Insurance trust fund, but drew down $684 in benefits per person. During the same year, the average U.S.-born individual actually contributed less to the trust fund than he or she drew down in benefits—contributing $732 per person, but spending $856. In other words, while immigrants on average contributed $62 more per person to the trust fund than the U.S.-born, they spent $172 less in benefits. Our analysis indicates that non-citizen immigrants, a group that includes both authorized and unauthorized immigrants, played a particularly large role subsidizing the care of the U.S.-born population. While that population on average contributed $626 to the program per person in 2011, they drew down just $301 in benefits. This pattern counters what many argue about temporary residents and undocumented immigrants, a group included in the non-citizen contingent examined here: Instead of being a major drain on our healthcare system and our public entitlement programs, they play the most dramatic role subsidizing it.

To understand some of the underlying reasons for the surplus generated by immigrants, we also explored the different ways in which immigrants used Hospital Insurance Trust Fund resources compared to U.S.-born beneficiaries. Nationally, hospital expenditures are on the rise, a major factor contributing to growing healthcare costs.[34] In recent years, health analysts have also identified the Medicare Advantage program, Medicare coverage operated by private insurers, as an area where Medicare can substantially cut back spending and lower consumer costs in the next decade. In 2010, for instance, the Medicare Payment Advisory Commission, a bipartisan Medicare oversight group, found that the government spent about $14 billion more on individuals enrolled in Medicare Advantage programs than they would have if those beneficiaries were enrolled in traditional Medicare. The bulk of these costs were covered by higher premiums charged to all Medicare beneficiaries, including those not in the Medicare Advantage program.[35]

FIGURE 7:

PER CAPITA CONTRIBUTIONS, EXPENDITURES AND NET SURPLUSES TO THE MEDICARE HOSPITAL INSURANCE TRUST FUND, 2011, U.S.-BORN PERSONS, ALL IMMIGRANTS, AND NON-CITIZEN IMMIGRANTS



Looking at how much immigrants have spent from the Hospital Insurance Trust Fund on hospital care, home health care, and the Medicare Advantage program yields some interesting findings. Despite making up 14.4 percent of the population in 2011, immigrants accounted for 10.5 percent of hospitalization expenditures. They also accounted for 12.3 percent of trust fund expenditures on Medicare Advantage premiums. Both their hospitalization expenditures and Medicare Advantage expenditures were substantially lower than their presence in the senior population: An analysis of Current Population Survey data shows that the foreign-born made up roughly 13.4 percent of the country's over 65 population in 2011. The only area where immigrants seemed to have had higher expenditures from the Hospital Insurance Trust Fund than expected was on home health agencies, where they accounted for 19.5 percent of total benefit payments that year. Because of the small sample size behind the home health data, however, that finding should be interpreted cautiously.

As discussed earlier, the SMI trust fund is not financed like the HI trust fund and therefore does not figure into our calculations on the trust fund surplus immigrants generated in the Medicare program. Nonetheless, in order to get a more complete picture of immigrants' Medicare expenditure behavior, we calculated each group's share of SMI Trust Fund spending in 2011 as well. Despite making up 14.3 percent of the U.S. population in 2011 in our sample, and 13.4 percent of the over 65 population that year, immigrants accounted for 11.6 percent of SMI Trust Fund expenditures, including 11.9 percent of Medicare Advantage premiums, 10.7 percent of prescription drug expenditures, and 10.1 percent of physician expenditures. Once again, only in home health care agencies did immigrants appear to account for more spending than expected, as they were responsible for 18.1 percent of total benefit payments that year, a number that should be interpreted cautiously due to the small sample size it was based on. Across all categories of SMI spending, foreign-born residents spent $776 per year from the SMI trust fund on a per capita basis. This figure was $175 lower than annual expenditures by U.S.-born Medicare beneficiaries.[41] The spending among non-citizen immigrants was $622 dollars lower than that spending among the U.S.-born.[42]

PART
V

IMPACT ON DATE OF INSOLVENCY

One key concern of policymakers and the Medicare Trustees has long been the date when the Medicare trust fund is slated to become insolvent. In the lead up to the 2012 election, Rep. Paul Ryan focused on the troubled financial future of the program, saying that Medicare in the future would go "bankrupt" and "won't be there for future generations like my generation" unless the country takes steps to fix it.[36] In more recent years, medical spending has grown slower than was previously expected.[37] Although that has improved the long-term financial picture of Medicare somewhat, the program is expected to lack the resources to remain solvent much beyond the next decade.

Today, Medicare Trustees predict that the Hospital Insurance Trust Fund will become insolvent by 2030, at which time the balance of the fund will be exhausted, leaving primarily incoming tax revenues to cover any costs.[38] Medicare Trustees have already projected that tax revenues alone will not be sufficient to cover all of the services that America's seniors enjoy today.[39] That means that, absent other changes, the government may have to scale back on the services covered or the amount paid for services by Medicare; raise the program's deductibles, premiums, co-pays or eligibility age; or increase the taxes of the more than 100 million working Americans paying into the program after insolvency.

Our research shows that immigrants have already played a valuable role delaying the trust fund insolvency date. If immigrants had not participated in the Medicare program from 1996 to 2011—neither contributing to nor spending funds from the trust fund—Medicare's Hospital Insurance Trust Fund would be rapidly approaching its insolvency date. We find that absent immigrant activity in the Medicare program during those years, the trust fund would be slated to become insolvent by the end of 2027—or 3 years ahead of what is currently predicted by Medicare Trustees.

While our figure is dramatic, it is notable that it is almost certainly an understatement of the real impact immigrants have had on the trust fund's solvency in recent years. Immigrants were not only present in the U.S. population in the period before 1996 and after 2011, but were most likely generating trust fund surpluses in those years as well. Had our calculations taken into account a wider set of years, it's likely the insolvency date could have been reached even earlier than 2027.

It is important to note that when the Medicare Trustees calculate their projections for Medicare insolvency, they produce three main estimates.[40] Because future Medicare expenditures and income depend on a variety of economic and demographic assumptions like the size and composition of the population eligible for benefits, increases in the price for health services, and labor force participation rates, the Medicare Trustees produce three sets of estimates: 'intermediate,' 'high-cost,' and 'low-cost'. The date of insolvency we detail above uses the Medicare Trustees' intermediate cost assumptions. Under the Medicare Trustees' high cost assumptions, the Hospital Insurance Trust Fund would have become insolvent in 2021–if immigrants had neither contributed to nor expended from the trust fund in the 1996 to 2011 period, we find that trust fund would have become insolvent in 2015 – six years earlier than currently predicted. Under the Trustees' low cost assumptions, however, Medicare's core trust fund will accrue surpluses for subsequent years, avoiding insolvency all together in our analysis.

PART
VI

POTENTIAL EXPLANATIONS FOR IMMIGRANTS' ROLE SUBSIDIZING MEDICARE'S CORE TRUST FUND

One factor that contributes to the large surpluses described here is undoubtedly the unique demographic makeup of America's immigrant population. There is currently a far higher proportion of working-age adults among America's foreign-born population than there is for the U.S. population as a whole. Because many immigrants come to America with the intention to work, a larger share of the foreign-born population also participates in the American labor force. In 2010, 57 percent of the U.S.-born population was between ages 20 to 64, compared to 79 percent of the country's foreign-born population.[41] More than 66 percent of the foreign-born population was participating in the labor force in 2012, compared to 63.2 percent of U.S.-born Americans.[42] This preponderance of working age, employed adults leads to a low ratio of elderly beneficiaries to working age adults among the country's foreign-born population—a condition which makes a wider group of tax payers available to subsidize the care of foreign-born Medicare recipients. That large group of foreign-born taxpayers also subsidizes care for immigrant Medicare beneficiaries, a group that may have lower per capita medical expenditures than U.S. born beneficiaries.[43]

In recent years, some demographers have argued that the demographic makeup of immigrants makes them a particularly important part of the U.S. labor force. Immigrants working in healthcare are more likely than the native-born to have roles as physicians, surgeons, and home health aides—all roles projected to be facing shortages as the baby boomers age.[44] Our study indicates that added immigration would also help reduce troubling demographic trends that will strain the finances of the Medicare program in the coming years. Absent any major changes in immigration policy or migration patterns, there will be substantially fewer taxpayers to pay for Medicare beneficiaries in the coming years. Currently, there are about 240 seniors for every 1,000 working-age adults, ages 25-64, in the country. This ratio, which has held relatively constant since 1980, will climb by about 70 percent by 2030, reaching 411 seniors for every 1,000 working-age adults.[45]

The link between immigration and Medicare's finances has long been identified by the Medicare Trustees. The connection is made clear each year in their report on the financial health of the trust fund, where the Medicare Trustees project the year in which the trust fund will become insolvent. In their high-cost projections they assume the country will experience low net annual immigration, while their low-cost estimates assume high levels of net immigration each year. While the Medicare Trustees' assumptions reveal their understanding of the critical role immigrants play in bolstering Medicare's finances, until recently, no published literature demonstrated the magnitude of this effect using empirical data and over an extended time period.

PART VII CONCLUSIONS

Between 1996 and 2011, immigrants played a valuable role in subsidizing Medicare's Hospital Insurance Trust Fund, the core trust fund that pays for hospital and nursing home care for the 50 million Americans currently covered by the Medicare program. During the 16-year period examined in our study, immigrants contributed billions of dollars more to the trust fund than they expended from it to cover their benefits each year, generating a cumulative surplus of $182.4 billion for the program during the 1996 to 2011 time period. Without the large surplus generated by the country's foreign-born population from 1996 to 2011, Medicare's core trust fund would become insolvent as soon as 2027— or three years earlier than currently projected—an event that could lead to a scaling back of Medicare benefits or higher taxes for more than 100 million working Americans.

Our work in this report provides one of the most compelling arguments for Congress to increase the flow of young, working-age immigrants in the near term—a likely result of passing immigration reform. Currently, 89 percent of seniors say they are extremely or somewhat satisfied with their Medicare benefits. More than 60 percent of beneficiaries, however, say they are nervous about changes the program may undergo in the future as politicians look to cut costs.[46] Countless American young people paying into the program also are uncertain whether it will be able to cover their health care costs by the time they reach retirement and are most in need of care.

Our work indicates that passing immigration reform—and welcoming larger numbers of tax paying immigrants into the country—could play a valuable role strengthening the Medicare program. Proposals currently being discussed in the House of Representatives contemplate bringing in as many as 500,000 additional agriculture workers and 90,000 more high-skilled workers per year.[47] Providing a path to citizenship to the estimated 11 million unauthorized immigrants who are currently in the country would also impact Medicare's finances in several ways. While legalization would likely increase the number of immigrants claiming Medicare benefits in the long term, there is also evidence it would reduce "off the books" employment of immigrants and remove some of the barriers keeping them out of higher-paying jobs, potentially leading to far higher payroll tax contributions in the future.[48]

What is outlined here is also more than just a Medicare phenomenon. The argument that immigration helps sustain Social Security is also supported by our findings here, given the similarities between the funding mechanisms and eligibility criteria for Social Security and Medicare. This finding is also consistent with past reports.The Social Security Chief Actuary previously estimated that passing comprehensive immigration reform could result in $276 billion in additional Social Security revenue in the next 10 years, while costing only $33 billion.[49]

APPENDIX

APPENDIX 1 TABLE:

DEMOGRAPHIC CHARACTERISTICS BY NATIVITY STATUS FOR CURRENT POPULATION SURVEY (CPS) AND MEDICAL EXPENDITURES PANEL SURVEY (MEPS) SAMPLES, 2011**

	CPS (N=201,398)		MEPS (N=33,469)	
	Foreign-born (N=29,010) %	U.S.-born (N=172,388) %	Foreign-born (N=6,553) %	U.S.-born (N=26,906) %
AGE				
0-17	7.1*	26.8*	5.7*	26.5*
18-64	80.3	59.6	81.4	59.7
≥65	12.6	13.6	12.8	13.9
GENDER				
Male	49	48.9	47.3	48.9
RACE				
White, non Hispanic	20.9*	70.2*	18.0*	70.8*
Black, non Hispanic	7.4	12.8	7.2	12.7
Hispanic	47.1	11.9	49.2	11.9
Other	24.6	5.1	25.7	4.6
PRIMARY HEALTH INSURANCE				
Private	42.9*	53.8*	46.3*	59.0*
Medicare	8.8	12.1	13.6	16.5
Medicaid/Other government	16.3	19.9	11.1	14.6
Uninsured	33	14.1	29.1	9.9
YEARS IN US				
≤10	27.3	n/a	29.3	n/a
>10	72.7	n/a	70.7	n/a
CITIZEN	49.9	n/a	50.6	n/a

SOURCE: Author's analysis of data from the 2012 Current Population Survey (CPS) and 2011 Medical Expenditure Panel Survey (MEPS).
**p≤ ≤0.05 for comparisons between U.S.-born and Immigrants*
***Percentages weighted to U.S. population*

DATA SOURCES

Current Population Survey

To determine Medicare Health Insurance (HI) Trust Fund contributions, we analyzed data for all ages from the March supplements to the 1997-2012 Current Population Survey (CPS), which included 201,398 respondents in the most recent year (2012). The CPS is a continuous monthly survey (conducted jointly by the Census Bureau and the Bureau of Labor Statistics) that provides detailed income information for the civilian non-institutionalized U.S. population, and is nationally representative.[1] The information contained in each year's survey includes self-reported personal income from the previous calendar year. Therefore, the CPS data included in this study includes respondent income information for 1996-2011. The CPS also provides information on respondent citizenship status and birthplace.

Medical Expenditure Panel Survey

Medicare expenditures were determined using data from the 1996-2011 Medical Expenditure Panel Surveys (MEPS). MEPS is a nationally representative survey of the U.S. civilian non-institutionalized population, and it is conducted by the Agency for Healthcare Research and Quality (AHRQ). Because MEPS provides detailed health care expenditures information broken down by payment source, it allows researchers to isolate Medicare expenditures specifically. Our final 2011 MEPS sample included 33,459 respondents for whom place of birth could be identified.

IMMIGRANT AND CITIZENSHIP STATUS

CPS contains detailed information on immigrant and citizenship status. 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. We considered all participants born outside of the U.S. to be immigrants. A detailed description of our definitions appear in the Appendix to our Health Affairs article from last year.[2,3]

According to our analysis of the Current Population Survey, immigrants made up 14.4 percent of the U.S. population in 2011. They also made up roughly 13.4 percent of the U.S. population age 65 and older that year. Demographic characteristics for the 2012 CPS and 2011 MEPS samples are shown in Appendix Table 1, including age, sex, race/ethnicity, primary health insurance, nativity (U.S. vs. foreign-born), citizenship status, and years in the U.S. Given that these two data sets are nationally representative, demographic characteristics are comparable (as expected) between the two.

CALCULATING CONTRIBUTIONS, EXPENDITURES, SURPLUSES, AND DEFICITS

Contributions to the HI trust fund come primarily from payroll taxes and contributions from Social Security benefit income taxes on higher-income beneficiaries. To calculate payroll contributions to the HI trust fund by immigrants and others, we multiplied wage and salary earnings by 2.9 percent (rate of payroll taxes funding Medicare) as does the Internal Revenue Service. We then added revenue from a tax on some Social Security income. In order to calculate the value of taxes on social security, we used appropriate tax rates obtained from a Congressional Budget Office analysis of both the 2005 Current Population Survey and Statistics of Income data.[4]

To calculate HI trust fund expenditures for individuals covered by Medicare's fee-for-service program, we summed hospitalization expenditures. Expenditures for those covered under Medicare's managed care plans (Medicare Advantage) were estimated by summing Medicare Advantage plans' total payments to providers and inflating them by the inverse of the average Medicare Advantage medical loss ratio (obtained from a 2009 survey of 41 major Medicare Advantage plans[5]), a standard tool used to adjust payments for administrative and other expenditures by health insurance companies. In order to sum up home health care and Medicare Advantage expenditures, we determined the proportion of these expenditures that were financed by the HI trust fund.[6] Prior to 2006, information on the type of Medicare insurance (Advantage vs. fee-for-service) was not available in MEPS. For these years, we assumed that expenditures for foreign-born and U.S.-born individuals insured by Medicare Advantage were proportional to other HI trust fund expenditures. We confirmed that the proportion of Medicare Advantage expenditures and other HI trust fund expenditures on behalf of foreign-born vs. U.S.-born was similar in later years, thus verifying that this was a reasonable assumption.

HI trust fund contribution and expenditure dollar estimates were generated by multiplying each groups' shares of total contributions/expenditures by Medicare Trustees' estimates of total HI trust fund revenues and outlays for each year of analysis.[7] Total net surplus or deficit was calculated for each group (non-immigrants, immigrants overall, and non-citizen immigrants) by subtracting that group's HI trust fund withdrawals from their HI trust fund contributions. CPS data was used for population estimates in calculating per capita figures.

Though not paid for out of HI trust fund funds (and therefore not included in our calculations of net HI Trust Fund contributions), we also report on immigrants' and others' Supplementary Medical Insurance (SMI) Trust Fund spending for outpatient care, prescription drugs, and Medicare Advantage, as detailed elsewhere.[8]

ANALYTIC APPROACH

Estimating Date of Insolvency

To determine when the HI trust fund would have become insolvent if immigrants had neither contributed to nor utilized the HI trust fund between 1996 and 2011, we first determined what the assets would have been at the end of 2013 (the most recent year for which the total surplus or deficit is known) under this scenario. We did this by subtracting the cumulative immigrant surplus from 1996-2011 from the sum of the assets in 2011 plus the deficits incurred during 2012 and 2013. We then estimated each year's projected surplus or deficit by projecting total expenditures, total income (which includes both taxable payroll revenue and other sources of income) for each year from 2014-2030. For 2014-2023, values for total expenditures and total income were provided by the Medicare Trustees.[9] The Trustees do not publish projected expenditures and income for the years after 2023, but they do project annual changes in expenditures and taxable payroll in 2025 and 2030.[10] Therefore, for the years 2024-2030, we estimated expenditures by multiplying the prior year's expenditures by the projected annual change in HI trust fund expenditures in 2025 (for 2024-2025) and in 2030 (for 2026-2030). Similarly, we estimated taxable payroll revenue by multiplying 2023 taxable payroll revenue by the projected change in taxable payroll. For other sources of income, we first determined the average yearly change from 2014-2023 by subtracting taxable payroll from total income in each year. For 2024-2030, we assumed that the average annual change for other sources of income was equal to the average annual change in 2021-2023.[11]

We then estimated the assets at the end of each year if immigrants had neither contributed to nor utilized the HI trust fund from 1996-2011 by determining the difference between the prior years' assets under this assumption and the projected subsidy for that year. When the projected assets for a year fell below zero, we determined that the HI trust fund would have become insolvent in that year if immigrants had neither contributed to nor utilized the HI trust fund from 1996-2011. We created three estimates of insolvency date using the Medicare Trustee's intermediate, low and high cost assumptions.

Statistical Analyses

To determine statistical significance, we used chi-square tests for proportions and linear regressions for dollar estimates (including time trends). As detailed elsewhere[12], sensitivity analyses for some years using alternate regression modeling strategies were performed given the highly skewed nature of expenditure data; these analyses yielded nearly identical results.

The main analyses described here were conducted using SAS software (version 9.3); sensitivity analyses were done using STATA (version 12). This study was exempted from Institutional Review Board (IRB) review by the Cambridge Health Alliance (CHA) IRB.

LIMITATIONS

This study does have several limitations. Even though interest accrues on HI trust fund surpluses from prior years, revenue generated from HI trust fund interest was credited to immigrants in proportion to their tax contributions. Had we credited interest revenue in proportion to past surpluses, this would have raised our estimated immigrant contributions to the HI trust fund, making our approximations conservative. On the other hand, although we do not have data on immigrant contributions from other HI trust fund revenue sources such as general tax revenue and premiums, we assumed their contributions were proportional to revenue from payroll taxes. However, given the small proportions of HI trust fund revenue that these other sources generate (1.4 percent from premium contributions and 0.2 percent from general tax revenues in 2011), any potential overestimates of immigrant contributions from these revenue sources would likely not impact our findings.[13] With regard to immigrant expenditures, we were unable to estimate skilled nursing facility and hospice expenses as they are not included in MEPS data. We assumed that immigrants' share of these expenditures were proportional to their share of expenditures for inpatient care, home health care, and Medicare Advantage, a reasonable but unproven assumption.

The method for determining date of insolvency assumes that changes in total revenue to the HI trust fund are the same as changes to taxable payroll. According to the Medicare Trustees, the relationship between cost increases and taxable payroll increases, which we used in our analysis, is the most meaningful measure of HI cost increases with regard to the financing of the system. In addition, our analysis assumes that immigrants contributed to and utilized the HI trust fund in the years prior to 1996 and after 2011, years for which we have no estimate of immigrant contributions and expenditures. Finally, our assumption that accrual of revenue and expenditures is even across months is an unproven assumption; however variations in month-to-month revenue and expenditure accrual are unlikely to change the outcome significantly.

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FIGURES

Figure 3: Figure adapted from Zallman, L., et al., Appendix to: Immigrants contributed an estimated $115.2 billion more to the Medicare Trust Fund than they took out in 2002-09. Health Aff (Millwood). 32(6): p. 1153-60. Appendix Exhibit 1.

Figure 5: Figure adapted from Zallman, L., et al., Immigrants contributed an estimated $115.2 billion more to the Medicare Trust Fund than they took out in 2002-09. Health Aff (Millwood). 32(6): p. 1153-60. Exhibit 2.

Figure 6: Figure adapted from Zallman, L., et al., Immigrants contributed an estimated $115.2 billion more to the Medicare Trust Fund than they took out in 2002-09. Health Aff (Millwood). 32(6): p. 1153-60. Exhibit 4.

Figure 7: Figure adapted from Zallman, L., et al.: Immigrants contributed an estimated $115.2 billion more to the Medicare Trust Fund than they took out in 2002-09. Health Aff (Millwood). 32(6): p. 1153-60. Exhibit 3.

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