Who are the elderly poor and how much are they helped by social and health policies?

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Background

Since 2011, the US Census Bureau has published reports based on the Supplemental Poverty Measure (SPM), a measure that improves on Census' Official Poverty Measure (OPM) in many respects. One major improvement is including Federal non-cash, in-kind benefits in family income or "resources." In-kind benefits such as food and housing assistance help low-income families meet their basic needs, and poverty in the US is intended to measure the size of the population unable to meet their basic needs.

Health care is a critical "basic need" for the older population. The US federal and state governments largely meet that need by spending over $1 trillion annually on health care through the public insurance programs Medicare and Medicaid. Yet the SPM does not consider health insurance a basic need and it does not count health insurance as benefits that help meet that need. Instead, the SPM subtracts from family income all medical out-of-pocket expenditures (MOOP) on both insurance and care. The SPM then designates a family as poor if the remaining resources are not enough to meet their non-health needs, specifically, Food, Clothing, Shelter and Utilities. The assumption underlying this approach is that MOOP expenditures are "non-discretionary," like taxes, and, therefore, reduce income available for necessities.

There are several drawbacks to the SPM approach to health insurance and care. First, by excluding both health care/insurance needs from the threshold and health insurance benefits from resources, the SPM may misclassify persons by poverty status. Those who have enough resources to meet their non-health needs but who receive no public or private insurance

benefits could be classified as non-poor by the SPM even though they lack sufficient resources to meet their basic insurance needs (e.g., by purchasing insurance privately). Second, to the extent that health care or insurance choices, and therefore MOOP expenses, are partly discretionary, the SPM can misclassify as poor some persons who are able to meet their basic health and non-health needs. For example, many middle- and upper-income people save throughout their working lives in order in retirement to purchase higher-quality supplemental health insurance. Yet these poverty measures do not count savings (wealth) as resources (Hurd and Rohwedder 2006; Meyer and Sullivan 2010). If greater wealth allows older persons to purchase more and better insurance, more wealth (all else the same) can *increase* MOOP expenses and *increase* poverty, as measured by the SPM.

Thus, these misclassifications by the SPM can distort the poverty rate and the demographic composition of the impoverished population. The comparison between the over-65 and under-65 populations is especially distorted, because uninsurance rates are much lower over age 65 due to the Medicare program. Third, because the SPM includes no explicit "need" for health care or insurance, it cannot measure the direct impact on poverty of health insurance benefits. The SPM can only measure how health insurance benefits reduce poverty by reducing out-of-pocket spending. The SPM also cannot show how health insurance benefits help fill the *poverty gap*: the amount by which the resources of the poor fall short of the poverty threshold.

The 2019 National Academy of Sciences Committee Report, *A Roadmap to Reducing Child Poverty*, recognized the problems of using the SPM to measure child poverty and especially the impact of Medicaid. Based on a report by Korenman, Remler and Hyson (2017) the Committee recommended that US Government agencies (BLS, Census, HHS and OMB) "move expeditiously

to evaluate a health-inclusive poverty measure (HIPM)" (Recommendation 9-8, p. 9-12 National Academy of Sciences 2019). The limitations of the SPM for measuring the impact of health insurance policy apply equally to the older population.

Measure

We developed a Health Inclusive Poverty Measure (HIPM) which captures health needs and resources and can measure the direct impact on poverty of health insurance benefits such as Medicare (Korenman and Remler 2016; Remler, Korenman and Hyson 2017). The HIPM builds on the SPM by adding a basic health insurance need to the SPM poverty threshold and by counting health insurance benefits as resources that help meet that need. (A table comparing the definition and construction of the HIPM to the SPM and official poverty measure is in Appendix.) Our prior research focused on the under-65 population and the impacts of the ACA.

What is the basic health insurance need?

For those under age 65, we designated the second-low-cost "silver" plan the basic health insurance need. The ACA intended to make that sliver plan affordable to all through premium subsidies. If one has other health insurance benefits such as Medicaid or employer insurance benefits, the health insurance resource value added to income is the unsubsidized cost of the silver plan, minus any required premium payments, up to the applicable out-of-pocket limit.

For those over 65, the basic health insurance need is the full cost, including government contribution, of the lowest-priced Medicare Advantage Prescription Drug (MA-PD) plan in their

area of residence. While people can and do purchase more expensive plans, the basic health need is intended to represent the health insurance portion of a politically/socially determined minimally adequate standard of living. The HIPM adds to resources a value for net health insurance benefits received equal to the full cost of the MA-PD plan minus out-of-pocket premium payments, capped at the out-of-pocket premium for the lowest cost plan. To reflect that health insurance benefits cannot be spent on non-health necessities like food, we do not allow the value of health insurance benefits in resources to exceed the health insurance need in the threshold.

To address the need to pay for cost-sharing, the HIPM modifies the SPM and subtracts from resources out-of-pocket payments on only care (not on insurance premiums or over-the-counter medications). In general, the HIPM approach limits this deduction to the cap on cost-sharing expenditures available to the person or family, which depends on their health insurance type. For example, for most of those under-65 this deduction is limited to the maximum out-of-pocket cap available in the second lowest cost Silver plan. Federal legislation also limits the maximum out-of-pocket expenditure on medical care for Medicare Advantage plans. However, formally, there is no cap on prescription drug expenditures in MA-PD or Part D plans. Therefore, we do not now cap MOOP expenditures on care for most Medicare beneficiaries. We plan to explore modified approaches in future work. Those eligible for both Medicare and Medicaid—"dual eligibles"—have much lower cost-sharing, because Medicaid pays for such cost-sharing. Therefore, for dual eligibles, we limit the deduction to the out-of-pocket maximum available to Medicaid beneficiaries, usually zero.

We estimate impacts of Medicare and other health and social programs using a common accounting approach employed in the P60 reports from Census (e.g., Fox 2018, Table A6). In this approach, counterfactual poverty rates in the absence of a benefit or resource are compared to actual poverty rates. Counterfactual poverty rates are calculated by subtracting an income source from a household's total resources and therefore do not estimate behavioral or feedback effects. The impact of the benefit or program on the poverty rate is the difference between the actual and counterfactual poverty rates.

Data

We use Data from the 2016 CPS ASEC, which the Census Bureau uses for SPM and OPM poverty rates. For the HIPM, we supplement CPS data with health plan information from CMS for Medicare recipients, and from the Robert Wood Johnson HIX compare database for non-Medicare recipients under age 65. The CPS is a household survey, so it does not represent the institutionalized older population living in nursing homes or skilled-nursing facilities, approximately 3% of those 65 and older and nearly 10% of those 85 and older.[1]

Analyses

Comparing poverty measures: Poverty rates and the demography of the poor

We compare poverty rates for those aged 65 and older between the official poverty measure (OPM), SPM, and HIPM. We also describe the demographic characteristics of the older poor

[1] ACS, 2016. downloaded February 8, 2019 from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk

population according to these three measures, taking two approaches. First, we compare the demographic composition of the poor population allowing the rate of poverty to vary among the three measures. Second, we compare the demographic composition of the poorest 13.7% of the population according to the three measures. The second approach holds fixed the level of poverty to show how the three measures classify different populations as poor, abstracting from the measures' different rates. This provides evidence on the comparative face validity of the measures: which measure classifies more persons as poor who have characteristics associated with poverty, such as low educational attainment, and unmarried status (Meyer and Sullivan 2012)? Characteristics include: gender, educational status, race, Hispanic identification, immigration status, Veteran status, marital status and living arrangements, medical out-of-pocket expenditures, participation in social assistance programs, and housing tenure.

How much do health insurance benefits and other social programs reduce poverty?

We show how Medicare and other benefits reduce poverty rates and poverty gaps among the older population. For this analysis, we use only the HIPM, because other poverty measures cannot measure the direct impacts of health benefits. We use the counterfactual estimate approach employed by the Census Bureau in its poverty reports (e.g., Fox 2018, Table A6). We calculate the counterfactual poverty rate in the absence of a particular benefit by subtracting the value of that benefit from resources, and estimate the benefit's impact as the difference between the counterfactual rate, without the benefit, and the actual rate. The resulting impact is not a causal estimate of program impact because it does not incorporate behavioral changes, such as later retirement, that could result from the elimination of the program. We compare

the impact of Medicare on HIPM poverty to the impacts of other social benefits, including Social Security and other social insurance programs and means-tested benefits.

Results

The HIPM poverty rate for those 65+ was 11.8% in 2015, between the OPM rate (8.8%) and the SPM rate (13.7%); Table 1. The MOOP subtraction raises the SPM poverty rate enormously, from 8% to 13.7%: the treatment of health by the SPM is crucial. The HIPM is lower than the SPM because those over 65 are relatively well insured and because the HIPM caps the MOOP subtraction for insurance premiums. Among persons under age 65 (see right three columns of Table 1), the HPIM is higher than the SPM (by 1.6% points) because of unmet health insurance needs: younger people are more likely to be HIPM poor as a result of being uninsured. Among those 65+, the HIPM is lower than the SPM, except among Hispanics for whom both rates are equal to 24.7%. The higher HIPM rate among older Hispanics reflects their lower receipt of Medicare (66% compared to 78% overall) and being more likely to be uninsured (3.5% compared to 1.1% overall). These results show how much poverty rates vary under different treatments of health needs, resources and expenditures.

Medicare and social insurance programs (particularly Social Security) reduce HIPM poverty greatly among those 65+: Medicare, by about 25 percentage points, and Social Security by nearly 38 percentage points (Figure 1). These impacts are large for Hispanics, non-Hispanic blacks and non-Hispanic whites.

The impact of Medicaid in Figure 1 reflects the benefits of that program to the population covered in the CPS, and so excludes persons in nursing homes and skilled nursing facilities, understating the full impact on the US population. While the overall impact in the household population is smaller than that of Medicare, Medicaid reduces the poverty rate by 3.3 percentage points overall, and by 6.2 percentage points among non-Hispanic Blacks and nine percentage points among Hispanics.

Although the overall impact of Medicaid may be small in comparison to Medicare or Social Security, its impact on the HIPM poverty rate of the small number of persons covered by Medicaid alone is very substantial, 48 percentage points (not shown).

These programs greatly increase the resources of those who would be poor based on their market incomes alone; the poverty gap after all transfers is only about 4% among the 65+ population, compared to about 13% among both 55-64 year olds and children (Figure 2). Among those 65+, transfers nearly fill the poverty gap of all racial/ethnic groups, although among Hispanics and non-Hispanic blacks, gaps of about 6 to 7% remain.

Finally, the demographic characteristics of the poor depend on the poverty measure used. In order to compare the three measures on an equal basis, we hold the poverty rate fixed at 13.7% (the SPM poverty rate) by choosing the "poorest" 13.7% of the population aged 65+ according to each measure (i.e., we selected the population with the lowest 13.7% of the distribution of the ratio of family resources to the poverty threshold, according to each measure). According to the figures presented in Table 2, the SPM poor appear the least socially disadvantaged and the OPM poor appear the most disadvantaged, judging by sociodemographic characteristics generally associated with disadvantage (e.g., education level); the HIPM falls between the SPM and OPM. For example, only 15.0 and 15.9 percent of the OPM

poor and HIPM poor have graduated college, compared to 17.4 percent of the SPM poor. According to the SPM, 61.0% of the poor are non-Hispanic whites, compared to 55.7% and 58.3% of the OPM and HIPM poor. The HIPM poor are more like to be immigrants (including imputed undocumented) than either the SPM or OPM poor. The SPM poor are less likely to participate in means-tested assistance programs and more likely to receive Social Security retirement benefits than the HIPM poor and especially the OPM poor.

The differences in average characteristics in Table 2 between the SPM and HIPM poverty are driven by the populations classified differently by the two measures. Table 3 shows poverty rates for four groups: those classified as poor by both the SPM and HIPM (the first column), those classified as non-poor by both the SPM and HIPM (the fourth column), those classified as poor by the SPM only (third column) and those classified as poor by the HIPM only (third column). Like Table 2, the rates have been equalized at 13.7% to eliminate any differences in characteristics that might result simply from difference in poverty rates.

Comparing the second and third columns, the differences in the characteristics of those who are SPM-poor only and those who are HIPM-poor only appear stark. The SPM-poor (only) are far less likely to be uninsured (0.0% uninsured vs. 10.9%) and far more likely to be covered by Medicare (72.2% vs. 60.8%). They have higher average out-of-pocket expenses (13,181 vs. 2,882) and are older, on average. The two groups have similar non-health-insurance resources, but the HIPM-only poor have higher SPM and HIPM “needs” thresholds reflecting their larger average family sizes (see the rows for household structure: living alone or as a couple alone).

The HIPM-only poor are more likely to be Hispanics (20.3% vs. 8.0%), Non-Hispanic Blacks (16.2% vs. 12.6%) and non-citizens (11.7% vs. 3.0%). They are also much more likely to receive SNAP benefits and less likely to receive Social Security old age or survivor benefits. The SPM-only poor are nearly twice as likely as the HPM-only poor to have a college degree (21.4% vs. 11.3%).

In sum, most comparisons suggest that, when the two measures differ, the HIPM classifies a more economically and socially disadvantaged population as poor than the SPM.

Discussion and Implications

Poverty rates and the composition of the poverty population vary substantially with the treatment of health needs, resources and expenditures. The HIPM treats health insurance as a need and counts health insurance benefits as resources meeting that need. As a result, the HPM is uniquely capable of assessing the direct impacts of health insurance benefits such as Medicare and Medicaid on poverty. HIPM results show that Medicare reduces poverty by nearly as much as the Social Security program. Medicaid has smaller effects than Medicare overall, but very large effects on the poverty of those who depend on it. Finally, because the SPM subtracts all out-of-pocket expenditures on premiums and care from resources, it appears to classify a less-needy segment of the population as poor than the HIPM.

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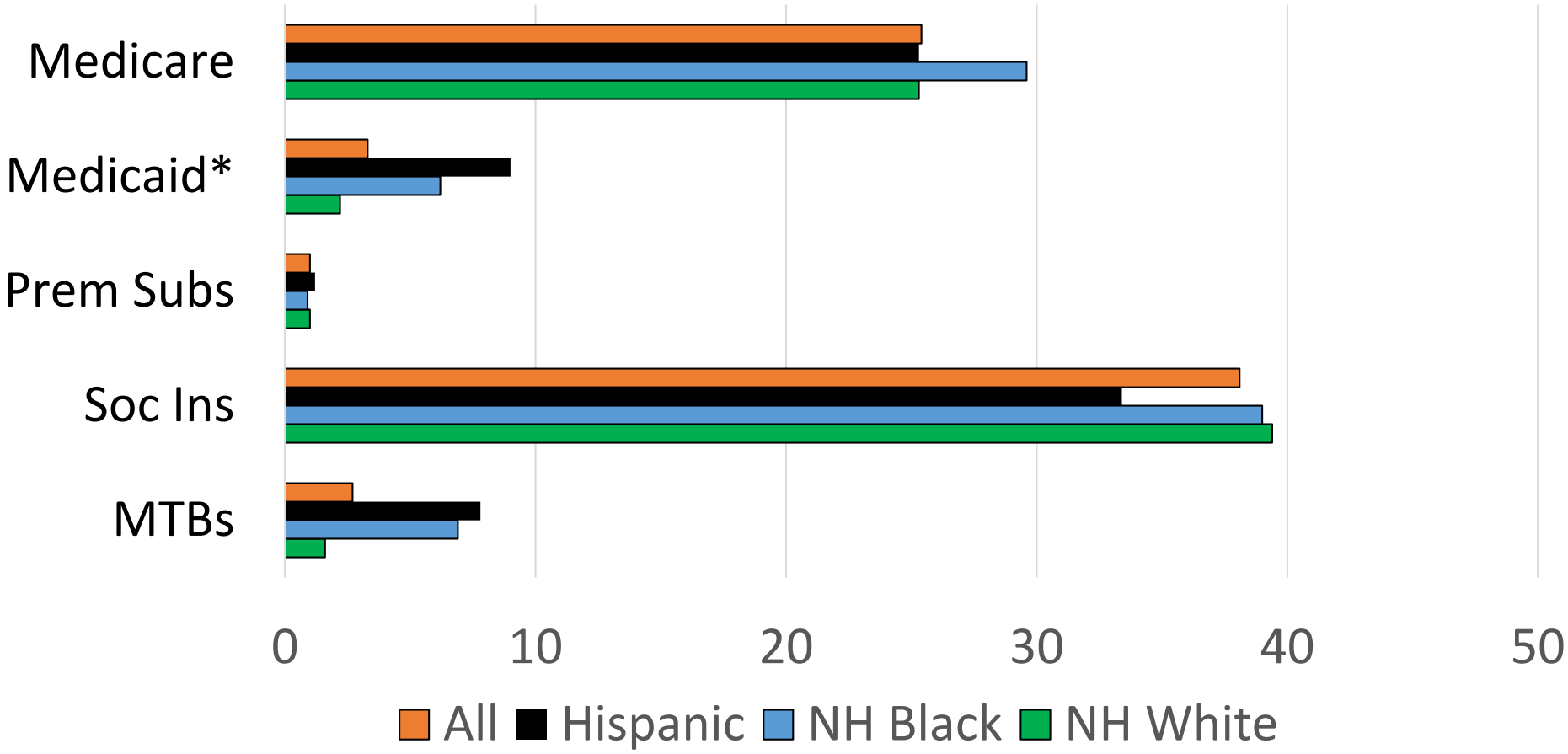
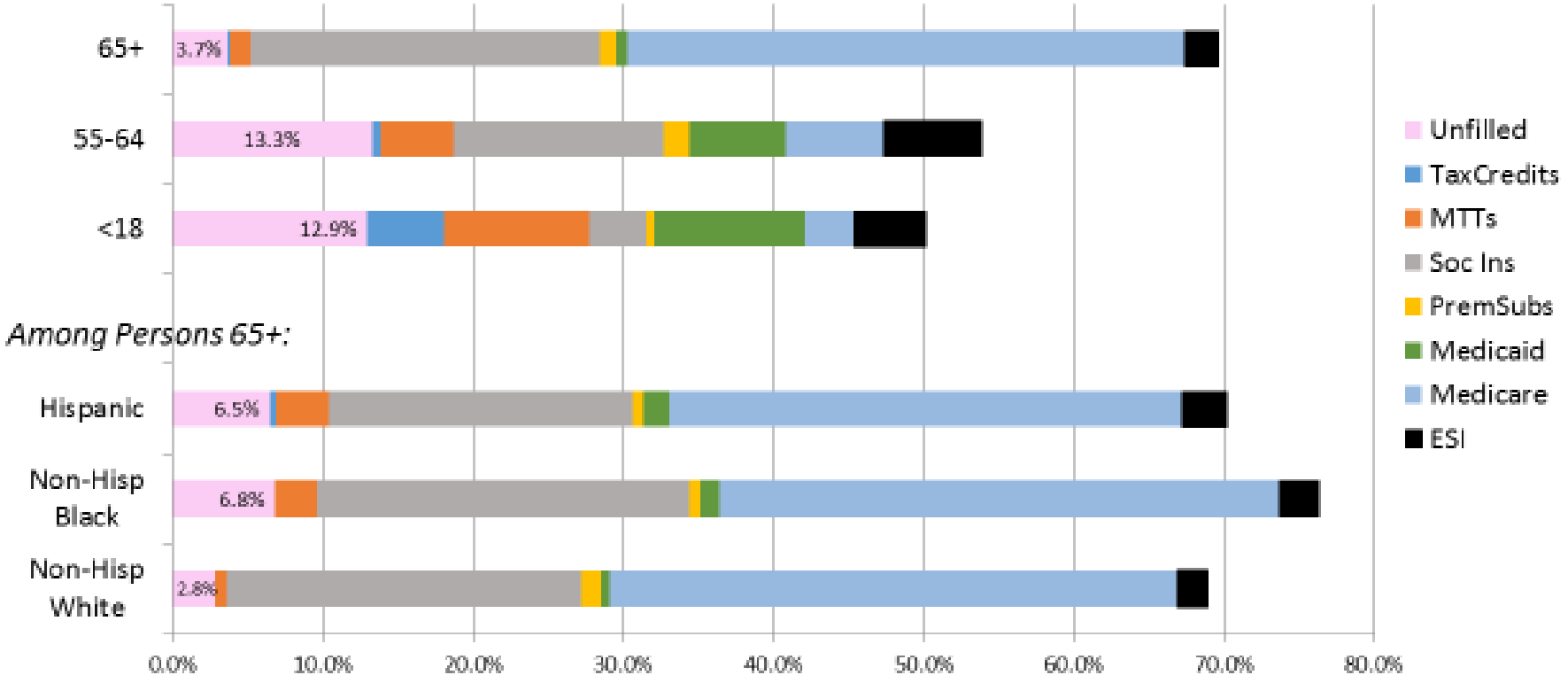
Fig 1. Impact of Each Program on HIPM Poverty Rate, Age 65+ (% points)



Notes: MTBs: Means-Tested Benefits. *Medicaid effect includes “dual eligibles.”

Fig 2. Filling the Health-Inclusive Poverty Gap , Age 65+



Notes:
ESI: Employer-Sponsored Insurance; MTTs: Means-Tested Transfers
Baseline gap is based on private cash income net of taxes and some work and childcare expenses.

TABLES

Table 1 Poverty rates by poverty measure and demographic characteristics, 2015

	Ages 65 and Over								Under Age 65		
Poverty Measure	**All**	**Hispanic and racial identification**			**Age**		**Household Structure**				
		Hispanic	**Black-NH**	**White-NH**	**Age 65-74**	**Age 75+**	**Lone**	**Couple**	**<65**	**55-64**	**<18**
OPM	8.8	17.5	18.2	6.6	8.0	10.0	16.0	4.4	14.4	10.3	19.5
SPM	13.7	24.7	24.2	10.8	12.1	15.8	19.6	9.3	14.6	13.0	16.4
SPM, no MOOP subtraction	8.0	18.0	16.0	5.6	7.4	8.9	11.7	4.8	11.4	9.3	12.9
HIPM	11.8	24.7	21.1	8.9	10.8	13.2	15.9	7.2	16.2	13.9	18.2

Source: Authors' calculations from the Current Population Survey ASEC File for 2015. Weighted

Table 2: Demographic Composition of the Poorest 13.7% of the Population Aged 65+: Official (OPM), Supplemental (SPM) and Health-Inclusive Poverty Measure (HIPM), 2015

(%, unless otherwise indicated)

Demographic Characteristics	Poverty Measure		
	OPM	SPM	HIPM
Aged 65-74	53.3	52.5	53.4
Aged 75+	46.7	47.5	46.6
Hispanic/Racial Identity			
Hispanic	17.0	14.7	16.5
Non-Hispanic White	55.7	61.0	58.3
Non-Hispanic Black	17.1	15.6	16.1
Non-Hispanic Asian	8.1	6.7	7.0
Education			
< HS Grad	33.4	27.9	29.6
College Graduate or higher	15.0	17.4	15.9
Household structure			
Single Person	51.1	42.4	40.8
Couple	18.6	27.8	24.8
Immigration/Naturalization Status			
Citizen by birth	74.9	77.4	75.6
Naturalized Cit.	16.4	15.1	15.6
Non-citizen	8.7	7.5	8.8
Imputed Undocumented	1.8	1.7	2.3
Program Participation			
SNAP	27.7	16.4	17.8
SSI	11.8	6.3	6.3
Social Sec. (Old Age and Survivors)	64.3	67.0	63.3
Disability Insurance	14.3	9.7	9.9
Housing Assistance (any)	14.4	5.5	5.7
Total Medical Out of Pocket Spending for SPM unit ($)	2,858	5,950	4,435
Total Health Insurance Resources, SPM unit ($)	16,189	15,823	15,498
Sample Size	3245	3245	3244

Source: Authors' calculations from the Current Population Survey ASEC File for 2015. Weighted.

Table 3: Characteristics of the Population 65+ by SPM and HIPM Poverty Status, 2015

(% unless otherwise indicated)

Demographic Characteristics	**HIPM & SPM Poor**	**SPM Poor only**	**HIPM Poor only**	**Not HIPM or SPM Poor**
Health insurance coverage				
Uninsured	3.4	0.0	10.9	0.6
Medicaid & Dual-Eligibles	13.0	10.2	9.7	4.3
Medicare	69.0	72.2	60.8	79.4
Employer	8.1	5.3	4.0	10.2
Individual Purchase	6.4	11.9	14.6	5.3
Resources and Needs				
Non-health-insurance resources, SPM unit ($)	13,213	24,387	24,469	62,821
Total MOOP Spending for SPM unit ($)	4,689	13,181	2,882	6,214
Total Health Insurance Resources, SPM unit ($)	15,677	16,662	14,402	17,415
SPM Threshold ($)	16,612	15,142	19,500	16,222
HIPM Threshold ($)	34,864	33,833	39,880	36,579
Age				
Aged 65-74	53.0	49.6	55.5	59.8
Aged 75+	47.0	50.4	44.5	40.2
Hispanic/Racial Identity				
Hispanic	15.9	8.0	20.3	6.9
Non-Hispanic White	58.6	74.4	56.8	80.0
Non-Hispanic Black	16.1	12.6	16.2	7.7
Non-Hispanic Asian	7.4	2.7	4.7	4.1
Education				
< HS Grad	28.8	22.8	34.4	12.2
College Graduate or higher	16.7	21.4	11.3	30.0
Household structure				
Single person	42.9	39.5	28.3	28.2
Couple	26.2	36.8	16.0	43.2
Immigration/Naturalization Status				
Citizen by birth	75.7	87.2	75.2	88.8
Naturalized citizen	16.0	9.8	13.1	8.6
Non-citizen	8.3	3.0	11.7	2.6
Imputed undocumented	2.0	0.4	4.6	0.3
Program Participation				
SNAP	16.5	15.5	25.3	5.6
SSI	6.5	5.1	4.7	2.2
Social Security, Old Age & Survivors	63.0	89.7	67.0	84.7
Disability Insurance	9.9	8.5	10.1	7.3
Housing Assistance	5.2	7.6	8.7	3.4
Sample size	2,782	463	462	19,981

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Figure 1: Overview of Poverty Measures: Official, Supplemental and Health Inclusive

	Official Poverty Measure (OPM)	Supplemental Poverty Measure (SPM)	Health Inclusive Poverty Measure (HIPM)
Needs Threshold	3X Basic Food Needs in in 1960s, updated for inflation with CPI	33rd percentile of spending on Food, Shelter, Clothing, and Utilities, plus a bit	33rd percentile of spending on Food, Shelter, Clothing, and Utilities, plus a bit
Resources	Pre-tax cash income	After-tax cash income + tax-credits + in-kind benefits (non-health	After-tax cash income + tax-credits + in-kind benefits (non-health
Subtractions from Resources		- Work & childcare expenses - out-of-pocket expenditures on care (non-premium MOOP) - out-of-pocket expenditures on insurance (premium MOOP)	- Work & childcare expenses - **capped** out-of-pocket expenditures on care (non-premium MOOP)

This table is based on one constructed by Dr. Sayeh Nikpay for a discussion of our paper at the 2018 ASHEcon conference; it includes information from similar tables in Korenman and Remler (2016, Table 1), and Short (2013, page 3). Appendix Figure 1 provides a more detailed description of these measures.