



DATA BRIEF

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# Medicare Beneficiaries Who Are Most Unlikely to Get a Flu Shot

DECEMBER 2020

Analysis by ATI Advisory for:

**BETTER MEDICARE**  
ALLIANCE

## Background

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The 2019 Novel Coronavirus (COVID-19) is heightening the importance of the influenza vaccination (flu shot) for Medicare beneficiaries during the 2020-2021 flu season. Now more than ever it is important to understand immunization patterns and identify who does not get a flu shot and their reason for not doing so. The decline in routine health care utilization due to individuals remaining in their homes provides fewer opportunities to offer the vaccine or to inform Medicare beneficiaries of the importance of the vaccine. Additionally, Medicare beneficiaries may experience confusion between media coverage of a COVID-19 vaccination and the annual flu shot.

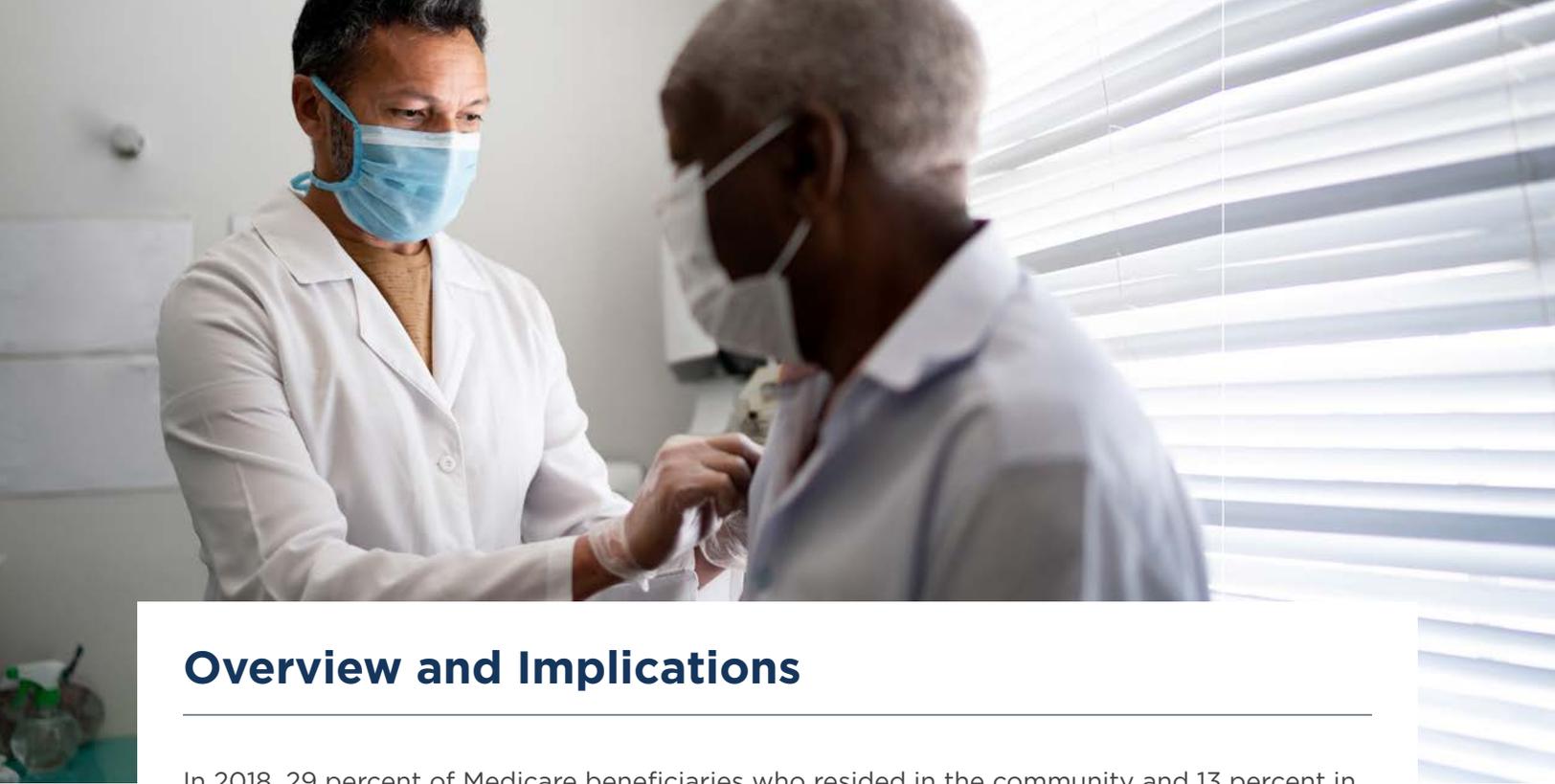
Medicare beneficiaries can receive one flu shot per flu season, typically with no cost sharing. Due to Medicare beneficiaries being at high risk of severe complications from the flu, the flu shot is an important part of the preventive services they receive, even absent the current COVID-19 pandemic. According to the CDC, individuals age 65 and older comprised 57 percent of flu-related hospitalizations and 75 percent of flu-related deaths during the 2018-2019 flu season.<sup>1</sup>

Given the continued prevalence and risk for COVID-19, there is an increased need for education about the importance of the flu shot and efforts to ensure Medicare beneficiaries receive this important preventive service.

This analysis is the fourth in a series of data briefs prepared by [ATI Advisory](#) for Better Medicare Alliance (BMA) during 2020, using the Medicare Current Beneficiary Survey (MCBS) to profile the Medicare population. This current brief provides a detailed look at which Medicare beneficiaries are unlikely to receive the flu shot and their reported reasons why. These insights may be useful as plans are developed to successfully administer COVID-19 vaccines to Medicare beneficiaries.

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<sup>1</sup><https://www.cdc.gov/flu/about/burden/2018-2019.html>



## Overview and Implications

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In 2018, 29 percent of Medicare beneficiaries who resided in the community and 13 percent in assisted living and nursing facilities did not receive a flu shot. Medicare beneficiaries were less likely to receive the flu shot if they were from a racial/ethnic minority, low-income, lower-educated, younger in age, or had no/few chronic conditions. The most common reasons provided for not receiving the shot included concerns with side effects, doubting effectiveness, and forgetting about the shot.<sup>2</sup>

- **Black beneficiaries:**  
*37% did not get a flu shot*
- **Low-income (<100% FPL<sup>3</sup>) beneficiaries:**  
*41% did not get a flu shot*
- **Beneficiaries with less than high school education:**  
*35% did not get a flu shot*
- **Younger beneficiaries (<65):**  
*46% did not get a flu shot*
- **Beneficiaries with fewer (0-2) chronic conditions:**  
*38% did not get a flu shot*

This research aims to equip health plans, providers, and policy makers with additional information on which Medicare beneficiaries are most likely not to receive the flu vaccination and common reasons these beneficiaries report foregoing the vaccination. These data should inform targeted approaches to educating Medicare beneficiaries during the 2020-2021 flu season, as well as potential opportunities for flu shot clinic locations and other approaches to maximize the reach of the flu shot. The data can also inform the COVID-19 vaccine education campaign to assist with identifying and targeting those who usually forgo vaccines.

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<sup>2</sup>The 2018 Community MCBS was updated to include additional detail on Medicare beneficiary receipt of the flu shot and reasons why an individual might forego the shot.

<sup>3</sup>The Federal Poverty Level (FPL) in 2018 was \$12,140 per year for one individual.

## Findings

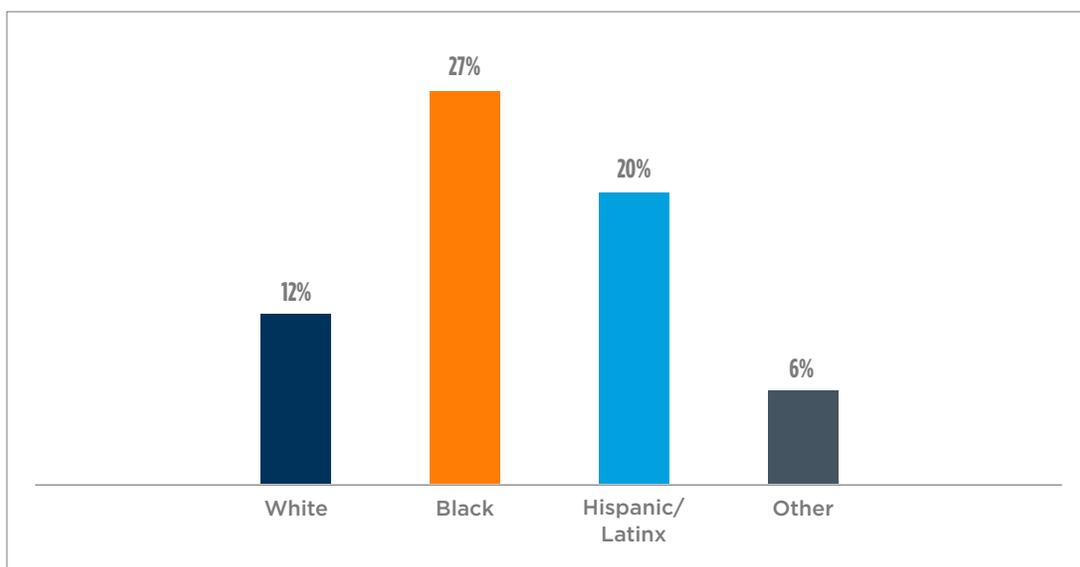
### *Among Facility Residents, Black Medicare Beneficiaries and Those in Rural Communities are Most Likely Not to Receive a Flu Shot<sup>4</sup>*

Residents of long-term care facilities are high risk for hospitalization and death due to influenza.<sup>5</sup> This population is also at higher risk for COVID-19, due to the communal nature of the facilities coupled with the frailty of individuals who live there.

The federal government has made substantial policy efforts to promote flu vaccination in nursing homes, including flu vaccination rates as a measure on Nursing Home Compare. However, 13 percent of assisted living and nursing home residents did not get a flu shot in 2018, with the highest rates occurring among Black beneficiaries and beneficiaries in rural communities. Black residents of assisted living and nursing home are more than twice as likely as white residents not to have received a flu shot in 2018, at 27 percent and 12 percent, respectively (Figure 1). In rural facilities, 23 percent of Medicare beneficiaries did not receive a flu shot compared with 12 percent of beneficiaries in metropolitan facilities (Figure 2).<sup>6</sup>

**Figure 1.**

#### **Rates of Residents in Facilities Not Receiving the Flu Shot by Race, 2018**



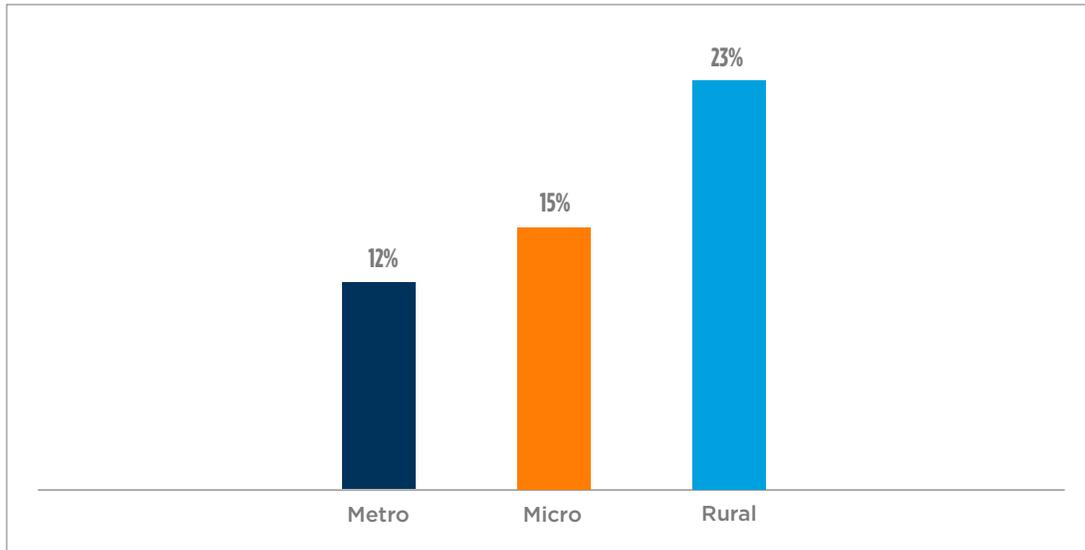
<sup>4</sup>In general, the sample size of beneficiaries included in the MCBS facility survey is limited, with fewer than 900 total unweighted responses included in this study. Other than Figures 1 and 2 in this brief, all graphics are specific to individuals in the community.

<sup>5</sup>Lansbury et al. (2017) "Influenza in long-term care facilities," *Influenza and Other Respiratory Viruses* 11(5):356-366.

<sup>6</sup>Additional detail is not available for the facility MCBS to inform whether these beneficiaries are not well-suited for the flu vaccination, for example high risk of adverse reaction to the vaccination.

**Figure 2.**

**Rates of Residents in Facilities Not Receiving the Flu Shot by Urbanicity, 2018**



***In the Community, Disadvantaged and Racial/Ethnic Minority Medicare Beneficiaries are Most Likely Not to Receive the Flu Shot***

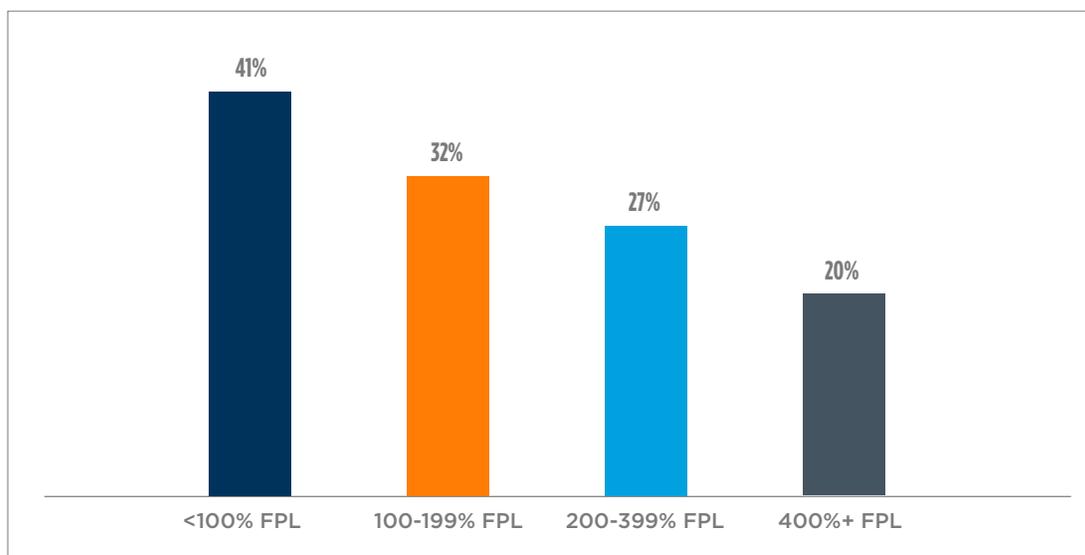
In 2018, 29 percent of Medicare beneficiaries residing in the community reported not receiving a flu shot. This varied substantially across different demographic groups. The **lowest** rates of not receiving the flu shot occurred among beneficiaries aged 75 and older as well as those with three or more chronic conditions, at 20 percent and 24 percent not receiving the shot, respectively (data not shown). Rates of not receiving the flu shot were **highest** among disadvantaged and racial/ethnic minority beneficiaries. Of note, there were not strong differences in rates of receiving the flu shot based on language spoken in the home, number of activities of daily living an individual needs assistance with, or beneficiary sex (data not shown).

## Socioeconomic Differences

Low-income beneficiaries at or below 100% FPL were more than twice as likely as those above 400% FPL not to receive a flu shot, at 41 percent and 20 percent, respectively (Figure 3). Low-income beneficiaries residing in rural communities were particularly at risk, with 48 percent of Medicare beneficiaries under 100% FPL not receiving the flu shot in 2018 compared with 27 percent of beneficiaries over 400% FPL (data not shown). Similarly, those with less than a high school degree were considerably more likely than those with a college degree not to receive a flu shot, at 35 percent and 23 percent, respectively (Figure 4).

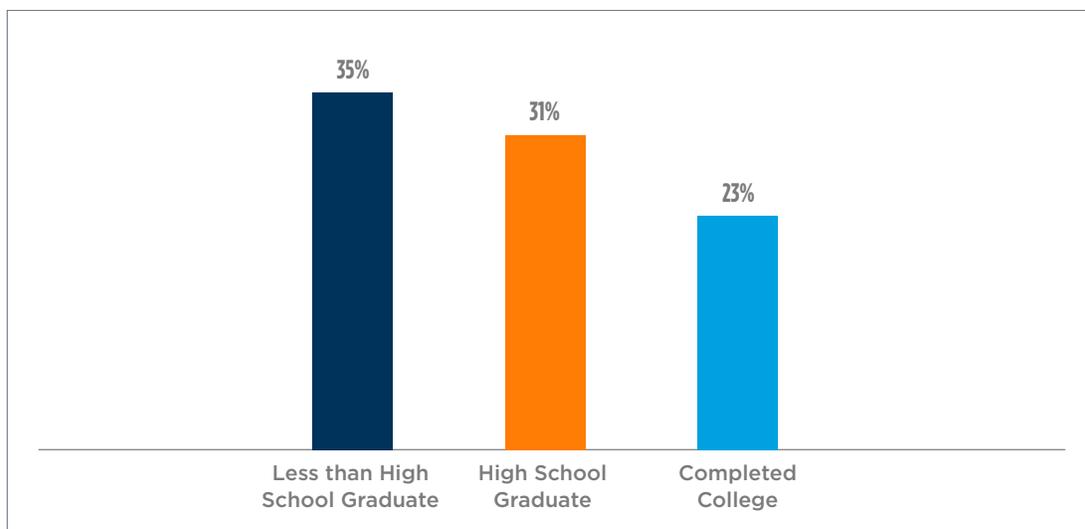
**Figure 3.**

**Rates of Beneficiaries Not Receiving the Flu Shot by Income Level, 2018**



**Figure 4.**

**Rates of Beneficiaries Not Receiving the Flu Shot by Education Level, 2018**

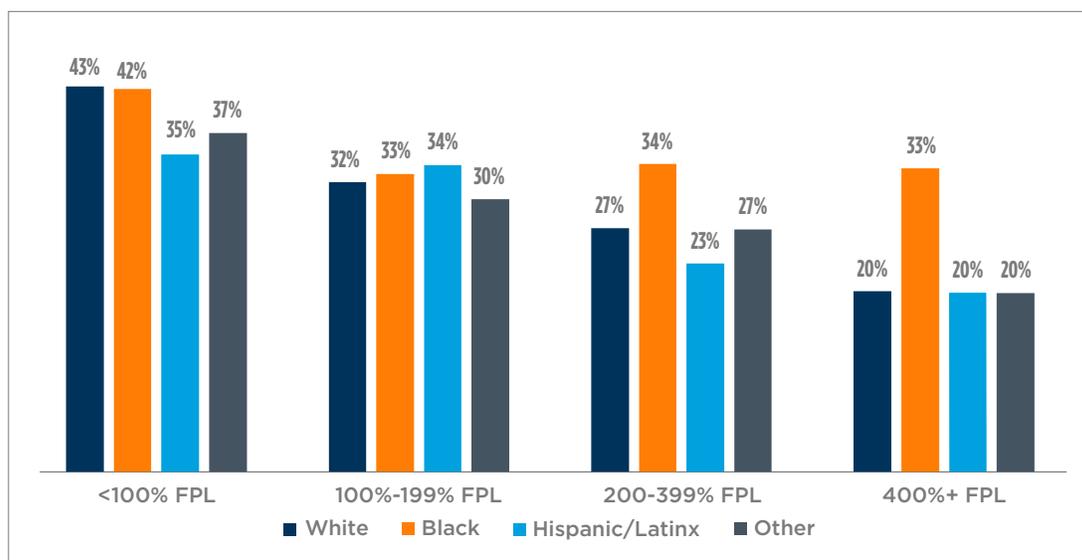


## Race/Ethnicity

Race/ethnicity also played a strong role in flu vaccination rates. In aggregate, 37 percent of Black Medicare beneficiaries compared with 27 percent of white Medicare beneficiaries reported not receiving the flu shot (data not shown). This disparity is influenced by income. Across all income levels, Black Medicare beneficiaries had a high rate of not receiving the flu shot whereas this trend decreased among higher income Medicare beneficiaries of other races (Figure 5). Additionally, Black beneficiaries generally were more likely to be low-income, with 40 percent of Black Medicare beneficiaries at or below 100% FPL, compared with only 15 percent of white Medicare beneficiaries (data not shown). A similar trend was evident across age categories, with higher rates of not receiving the flu shot among Black and Hispanic/Latinx beneficiaries over the age of 75, compared with white Medicare beneficiaries (Figure 6). These differences in vaccination rates are particularly important to address because Black and Hispanic individuals are much more likely to be hospitalized with flu than white individuals.<sup>7</sup>

**Figure 5.**

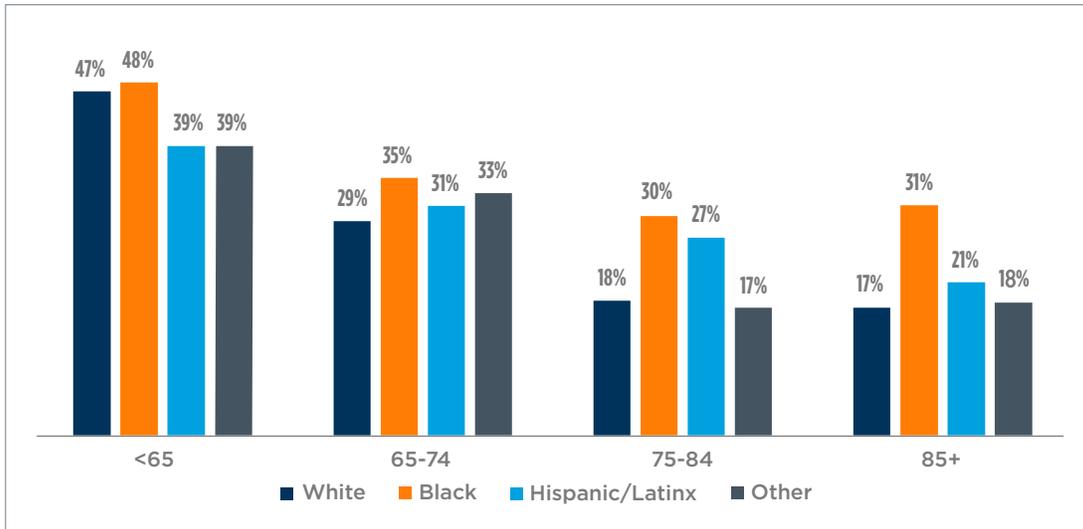
**Rates of Beneficiaries Not Receiving the Flu Shot by Race and Income Level, 2018**



<sup>7</sup><https://www.cdc.gov/flu/highrisk/disparities-racial-ethnic-minority-groups.html>

**Figure 6.**

**Rates of Beneficiaries Not Receiving the Flu Shot by Race and Age, 2018**

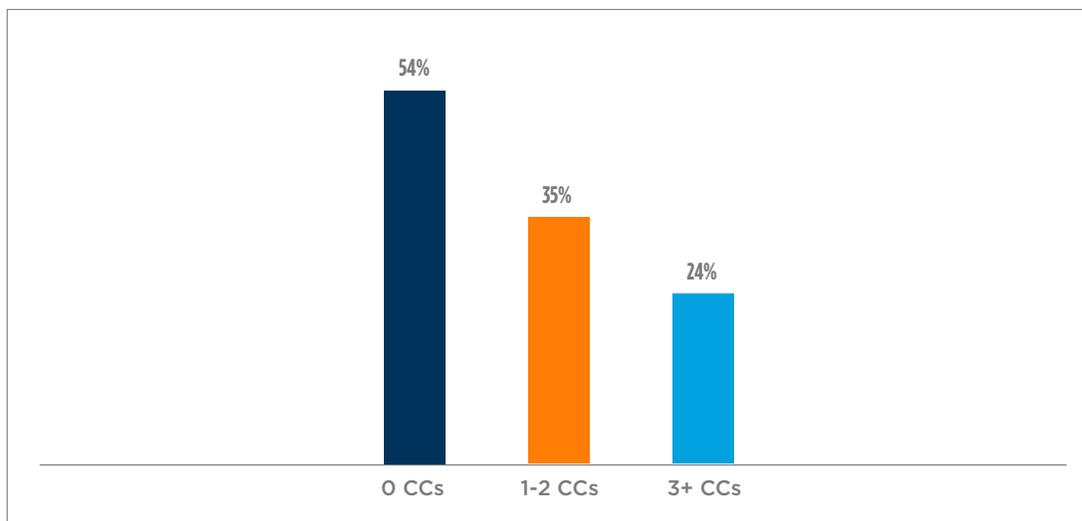


***Beneficiaries with Few or No Chronic Conditions were More Likely Not to Receive the Flu Shot***

More than twice as many Medicare beneficiaries with no chronic conditions reported not receiving the flu shot compared with Medicare beneficiaries with three or more chronic conditions, at 54 percent and 24 percent, respectively (Figure 7). This may reflect a false sense that the flu vaccination was not necessary. Beneficiaries with no chronic conditions were considerably more likely to report they did not know the flu shot was needed and/or that they did not have a risk of catching the flu as reasons for foregoing the shot (data not shown).

**Figure 7.**

**Rates of Beneficiaries Not Receiving the Flu Shot by Number of Chronic Conditions, 2018**



## Beneficiaries Enrolled in Medicare Advantage Were More Likely to Receive the Flu Shot

Beneficiaries enrolled in Medicare Advantage tended to be less likely to forego, or more likely to receive, the flu shot than beneficiaries in Traditional Fee-For-Service (FFS) Medicare across demographic and population cohorts. The most substantial differences between Medicare Advantage and Traditional FFS Medicare experiences existed among beneficiaries below 100% FPL, dual eligibles, beneficiaries under age 65, beneficiaries with lower levels of education, and Black beneficiaries (Figure 8). These differences generally remained when holding income constant (data not shown).

**Figure 8.**

**Rates of Beneficiaries Not Receiving the Flu Shot by Medicare Program, 2018<sup>8</sup>**

Category		Medicare Advantage	Traditional FFS Medicare	Difference*
Race/Ethnicity	White	25%	28%	11%
	Black	34%	40%	17%
	Hispanic/Latinx	30%	32%	4%
	Other	29%	30%	3%
Education	Less Than High School	31%	39%	25%
	High School	29%	32%	10%
	College Graduate	22%	23%	6%
Income	<100% FPL	35%	46%	31%
	100-199% FPL	31%	33%	8%
	200-399% FPL	25%	28%	13%
	400%+ FPL	19%	21%	12%
Medicaid Eligibility	Full Dual	33%	42%	28%
	Partial Dual	33%	44%	31%
	Non-Dual	26%	27%	6%
Age	<65	39%	50%	27%
	65-74	29%	30%	2%
	75-84	20%	20%	-3%
	85+	20%	18%	-6%
<b>Total</b>		<b>27%</b>	<b>29%</b>	<b>8%</b>

*\*Because the focus of this study is beneficiaries who forego the flu shot, "Difference" is the increased likelihood of foregoing the flu shot, for Medicare beneficiaries enrolled in Traditional FFS Medicare compared with Medicare Advantage. For example, white beneficiaries enrolled in Traditional FFS Medicare are 11 percent more likely than white beneficiaries enrolled in Medicare Advantage to forego the flu shot.*

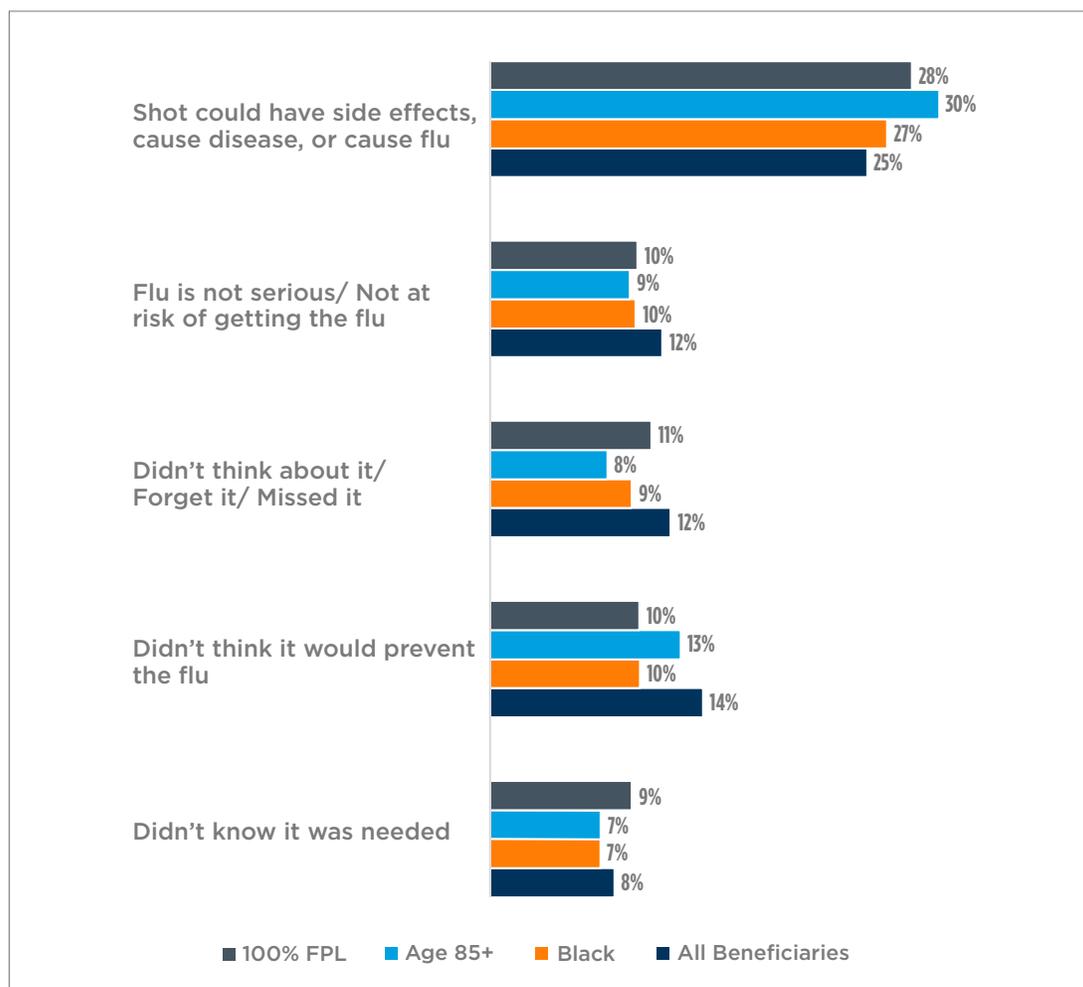
<sup>8</sup>Lower percentages in the "Medicare Advantage" and "Traditional FFS Medicare" columns in Figure 8 are preferable, as they reflect the percent of beneficiaries foregoing the flu shot.

## Medicare Beneficiaries Reported Concerns about Side Effects, Vaccination Effectiveness, and Forgetting as Key Reasons for Not Receiving the Flu Shot

In addition to knowing which Medicare beneficiaries may forego the flu shot, it is important to understand potential reasons why.<sup>9</sup> The primary reasons beneficiaries gave for not receiving the shot are concerns about side effects (including causing the flu) and effectiveness, at 25 percent and 14 percent, respectively (Figure 9). Reasons did not vary substantially by race or age, but Black beneficiaries, low-income beneficiaries, and those age 85 and older were more likely to be concerned about side effects or that the shot could cause the flu. Of note, cost and inability to get to a vaccination location were not commonly reported by Medicare beneficiaries (data not shown), which may reflect the fact that the flu shot is typically free to Medicare beneficiaries and easily accessible at local pharmacies, as well as at the doctor's offices, and clinics.

**Figure 9.**

**Commonly Reported Reasons for Beneficiaries Foregoing the Flu Shot, 2018**



<sup>9</sup> The MCBS community version includes a list of reasons beneficiaries can identify for foregoing the flu shot in 2018, and beneficiaries can choose multiple reasons. This detail is available for the community version of the survey only. Data for beneficiaries in the facility survey address whether an individual received a vaccination, but no additional detail is available regarding why a beneficiary residing in a facility might forego the flu vaccination.

## Discussion

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This data brief provides detail on which Medicare beneficiaries are most likely not to receive the flu shot and key reasons why. The intent is to inform targeted solutions during the 2020-2021 flu season and inform education and administration of the COVID-19 vaccine. Existing efforts to vaccinate Medicare beneficiaries for the flu and for the COVID-19 virus should be augmented to reach the following beneficiary groups at high risk of not receiving the vaccine:

- Racial/ethnic minorities, particularly Black beneficiaries
- Low-income beneficiaries
- Rural residents
- Beneficiaries who perceive themselves at lower risk due to younger age or fewer chronic conditions

Disparities in vaccination rates are compounded among individuals with attributes in multiple categories, for example, **52 percent of Black Medicare beneficiaries in rural communities** and **51 percent of Medicare beneficiaries who are both under age 65 and under 100% FPL** did not receive the flu shot in 2018. These disparities are of particular concern during COVID-19, with many of the same Medicare beneficiary groups at high risk for hospitalization and adverse outcomes due to the virus. For example, dual eligible Black beneficiaries are nearly eight times more likely than white, non-dual Medicare beneficiaries to be hospitalized due to COVID-19.<sup>10</sup>

Additionally, Medicare Advantage is performing better than Traditional FFS Medicare, but there remains room for improvement. Innovative approaches have started to emerge to tackle the 2020-2021 flu season, for example at least one large Medicare Advantage Organization is sending packages containing Tamiflu and coronavirus tests to the most vulnerable beneficiaries, and another organization is creating local “pop-up clinics” in minority communities to expand access to flu vaccinations.<sup>11</sup> The data in this brief can inform continued use of these and other innovative, targeted approaches.

As federal, state and local public health entities, providers, health plans, aging service agencies, and other stakeholders seek to improve vaccination rates for the flu during the current 2020-2021 flu season, this data brief serves as a roadmap for targeting efforts to the Medicare population. In addition, as policymakers develop broad-based educational and distribution efforts for the COVID-19 vaccine, these findings will be useful in achieving success for the most vulnerable beneficiaries.

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<sup>10</sup>CMS Preliminary Medicare COVID-19 Data Snapshot, claims through September 12, 2020.

<sup>11</sup><https://www.nytimes.com/2020/10/24/health/Covid-flu-elderly-Medicare.html>

## Methodology

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Using the 2018 Medicare Current Beneficiary Survey (MCBS), ATI Advisory examined flu vaccination experiences in the Medicare population. Beneficiaries without data for this variable were excluded from analysis. Unless otherwise noted, analyses were limited to Medicare beneficiaries residing in the community.

Additional details available at:

[https://atiadvisory.com/wp-content/uploads/2020/12/2018-MCBS-Analysis\\_Research-Methods\\_December-2020.pdf](https://atiadvisory.com/wp-content/uploads/2020/12/2018-MCBS-Analysis_Research-Methods_December-2020.pdf)



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