

## OBSERVATIONS: BRIEF RESEARCH REPORTS

## COVID-19-Related Care for Hispanic Elderly Adults With Limited English Proficiency

**Background:** Hispanic persons with limited English proficiency (LEP) have low rates of COVID-19 testing and high rates of COVID-19 infection and death (1). About 8% of Medicare enrollees have LEP, and the Centers for Medicare & Medicaid Services has identified improving their care as a priority (2). Anecdotal reports suggest that LEP may pose a barrier to COVID-19 vaccination (3, 4), a safe and effective preventive measure, but little is known about the willingness of older persons with LEP to be vaccinated or about factors that might impede vaccination acceptance.

**Objective:** To assess language-based differences in concerns about and willingness to receive COVID-19 vaccination among Medicare enrollees and differences in COVID-19 testing, symptom severity, whether medical care has been sought,

and perceptions regarding COVID-19's contagiousness and lethality.

**Methods and Findings:** We analyzed data from the Medicare Current Beneficiary Survey COVID-19 Fall Supplement, a nationally representative, cross-sectional telephone survey of Medicare beneficiaries. We classified respondents taking the survey in Spanish as LEP and those taking the survey in English as English proficient (EP). On the basis of self-reported ethnicity, we compared Hispanic beneficiaries with LEP to both Hispanic and non-Hispanic beneficiaries with EP. The survey, which was conducted before the roll-out of COVID-19 vaccines, asked respondents how likely they were to get vaccinated when vaccination became available. We categorized respondents answering "definitely" or "probably" as likely and those answering "probably not," "definitely not," or "not sure" as hesitant. Among vaccine-hesitant respondents, we report the prevalence of the 2 most common concerns about the vaccine.

Testing for COVID-19 was self-reported. Among respondents who tested positive, we report severity of symptoms (moderate/severe vs. none/mild), and whether medical care was

**Table 1.** Characteristics of Medicare Beneficiaries With and Without LEP, by Hispanic Ethnicity, Fall 2020\*

| Characteristic                                     | Hispanic With LEP<br>(n = 438) | Hispanic With EP<br>(n = 533) | Non-Hispanic With EP<br>(n = 8713) |
|--|--------------------------------|-------------------------------|------------------------------------|
| <b>Population estimate (weighted), n (million)</b> | 1.8                            | 2.8                           | 50.7                               |
| <b>Age group</b>                                   |                                |                               |                                    |
| <65 y  | 19.1 (15.0-23.9)               | 28.2 (23.5-33.4)              | 20.1 (19.0-21.3)                   |
| 65-74 y  | 44.8 (39.6-50.0)               | 46.2 (40.3-52.2)              | 48.1 (46.9-49.4)                   |
| ≥75 y  | 36.2 (32.1-40.5)               | 25.6 (21.0-30.9)              | 31.7 (30.6-32.8)                   |
| <b>Income group</b>                                |                                |                               |                                    |
| <\$25 000  | 80.5 (74.1-85.7)               | 41.4 (35.8-47.2)              | 29.7 (28.4-31.1)                   |
| ≥\$25 000  | 19.5 (14.4-26.0)               | 58.6 (52.8-64.2)              | 70.3 (68.9-71.6)                   |
| <b>Gender</b>                                      |                                |                               |                                    |
| Male   | 40.8 (35.3-46.6)               | 45.6 (41.1-50.2)              | 45.2 (43.9-46.5)                   |
| Female   | 59.2 (53.4-64.7)               | 54.4 (49.8-58.9)              | 54.8 (53.5-56.1)                   |
| <b>Region</b>                                      |                                |                               |                                    |
| Northeast  | 19.7 (15.0-25.4)               | 13.6 (9.5-19.2)               | 18.1 (17.1-19.1)                   |
| Midwest  | 7.2 (3.8-13.4)                 | 9.8 (6.3-14.8)                | 23.2 (21.9-24.6)                   |
| South  | 37.5 (29.1-46.7)               | 27.4 (19.2-37.4)              | 38.9 (37.2-40.6)                   |
| West   | 35.6 (25.7-46.8)               | 49.2 (39.1-59.5)              | 19.9 (18.2-21.7)                   |
| <b>Any source of medical care</b>                  |                                |                               |                                    |
| Yes  | 93.7 (89.5-96.3)               | 95.6 (92.5-97.4)              | 95.4 (94.6-97.1)                   |
| No   | 6.3 (3.7-10.5)                 | 4.4 (2.6-7.5)                 | 4.6 (3.9-5.4)                      |
| <b>Medicare Advantage plan enrollment in 2019</b>  |                                |                               |                                    |
| None   | 32.5 (26.6-39.1)               | 50.5 (44.0-56.9)              | 62.1 (60.1-64.0)                   |
| Partial  | 4.9 (2.8-8.3)                  | 5.4 (3.0-9.5)                 | 3.4 (2.9-4.1)                      |
| Full   | 62.6 (56.3-68.4)               | 44.2 (38.2-50.3)              | 34.5 (32.7-36.3)                   |
| <b>Medicare-Medicaid dual eligibility in 2019</b>  |                                |                               |                                    |
| Full Medicaid                                      | 47.8 (41.5-54.2)               | 17.1 (12.9-22.2)              | 7.9 (7.1-8.7)                      |
| Noneligible  | 39.1 (33.5-45.1)               | 74.2 (69.0-78.8)              | 86.9 (85.7-88.0)                   |
| Partial  | 5.0 (2.7-9.0)                  | 4.2 (2.7-6.5)                 | 2.9 (2.5-3.3)                      |
| QMB† only  | 8.1 (5.9-10.9)                 | 4.5 (2.8-7.3)                 | 2.3 (1.8-3.0)                      |

EP = English proficiency; LEP = limited English proficiency; QMB = Qualified Medicare Beneficiary.

\* Data from the Centers for Medicare & Medicaid Services, Medicare Current Beneficiary Survey COVID-19 Fall Supplement Public Use File, 2020. Data are reported as percentages (95% CIs), unless otherwise indicated. Unknown, refused, or missing data: 433 for income, 5 for region, 5 for Medicare Advantage enrollment in 2019. Any source of medical care is based on the question, "Ever go to a particular place for medical care?" and had 15 missing data. LEP was categorized by language of interview and excludes 2 non-Hispanic individuals with LEP. Non-Hispanic with EP includes persons of Black, White, and other/unknown ethnicity.

† Program for low-income seniors who get coverage for Medicare part A and B premiums.

**Table 2.** COVID-19 Care Among Medicare Beneficiaries With and Without LEP, by Hispanic Ethnicity, Fall 2020\*

| Variable  | Weighted Proportion (95% CI) |                            |                                 | Hispanic With LEP vs. Hispanic With EP |                       | Hispanic With LEP vs. Non-Hispanic With EP |                       |
|---|------------------------------|----------------------------|---------------------------------|--|-----------------------|--|-----------------------|
|   | Hispanic With LEP (n = 438)  | Hispanic With EP (n = 533) | Non-Hispanic With EP (n = 8713) | Unadjusted RD (95% CI)                 | Adjusted RD† (95% CI) | Unadjusted RD (95% CI)                     | Adjusted RD† (95% CI) |
| <b>COVID-19 vaccine uptake perceptions</b>                    |                              |                            |                                 |  |                       |  |                       |
| Likely‡ (n = 8453)  | 46.7 (40.1 to 53.4)          | 52.9 (46.5 to 59.2)        | 59.4 (57.5 to 61.2)             | -6.2 (-16.1 to 3.7)                    | 0.7 (-9.5 to 10.9)    | -12.6 (-19.4 to -5.9)                      | -5.8 (-13.6 to 2.0)   |
| Concern about vaccine side effects§ (n = 1232)                | 62.6 (49.6 to 74.0)          | 41.6 (28.6 to 55.9)        | 41.2 (37.1 to 45.4)             | 21.0 (2.2 to 39.8)                     | 17.0 (-1.9 to 35.6)   | 21.4 (8.9 to 34.0)                         | 22.4 (7.7 to 37.1)    |
| Government distrust about vaccine§ (n = 1232)                 | 49.6 (39.0 to 60.3)          | 56.0 (40.1 to 70.8)        | 40.8 (36.6 to 45.1)             | -6.4 (-24.8 to 12.0)                   | -15.9 (-32.3 to 0.04) | 8.8 (-2.2 to 19.9)                         | 3.5 (-9.3 to 16.4)    |
| <b>COVID-19 testing and medical care</b>                      |                              |                            |                                 |  |                       |  |                       |
| Positive result among those tested   (n = 2132)               | 17.9 (12.4 to 25.2)          | 5.0 (2.0 to 12.2)          | 4.2 (3.0 to 5.7)                | 12.9 (4.2 to 21.6)                     | 10.6 (0.3 to 20.9)    | 13.7 (7.1 to 20.3)                         | 12.7 (4.3 to 21.1)    |
| Positive result among whole sample   (n = 9684)               | 5.3 (3.6 to 7.8)             | 1.1 (0.5 to 2.7)           | 0.9 (0.7 to 1.3)                | 4.2 (1.6 to 6.8)                       | 3.9 (0.07 to 7.1)     | 4.4 (2.2 to 6.5)                           | 4.4 (1.5 to 7.2)      |
| Moderate to severe COVID-19 symptoms¶ (n = 124)               | 57.0 (25.1 to 84.0)          | 38.0 (13.2 to 71.3)        | 55.2 (44.6 to 65.4)             | 19.0 (-34.4 to 72.3)                   | 26.9 (-34.5 to 88.3)  | 1.8 (-34.1 to 37.7)                        | 2.4 (-43.7 to 48.5)   |
| Sought medical care for COVID-19** (n = 255)                  | 60.1 (35.7 to 80.3)          | 50.5 (21.7 to 78.9)        | 42.2 (33.6 to 51.4)             | 9.6 (-34.5 to 53.8)                    | -4.5 (-51.7 to 42.6)  | 17.9 (-7.4 to 43.1)                        | 12.5 (-19.8 to 44.8)  |
| <b>General COVID-19 perceptions and precautions</b>           |                              |                            |                                 |  |                       |  |                       |
| Agree COVID-19 is more contagious than influenza†† (n = 7893) | 92.8 (88.3 to 95.7)          | 91.3 (87.6 to 93.9)        | 84.0 (82.7 to 85.3)             | 1.5 (-2.7 to 5.8)                      | 1.1 (-3.7 to 5.9)     | 8.8 (5.0 to 12.5)                          | 7.9 (3.5 to 12.3)     |
| Agree COVID-19 is deadlier than influenza†† (n = 7963)        | 95.5 (90.5 to 98.0)          | 89.7 (84.7 to 93.3)        | 83.4 (82.0 to 84.7)             | 5.8 (0.1 to 11.5)                      | 4.9 (-1.8 to 11.5)    | 12.1 (8.4 to 15.9)                         | 10.6 (5.8 to 15.4)    |
| Wore face mask‡‡ (n = 9569)                                   | 98.9 (97.1 to 99.6)          | 99.0 (97.6 to 99.6)        | 98.1 (97.7 to 98.5)             | -0.1 (-1.7 to 1.4)                     | 0.2 (-1.2 to 1.5)     | 0.7 (-0.5 to 2.0)                          | 1.1 (0.0 to 2.2)      |
| Avoided gatherings‡‡ (n = 9565)                               | 97.3 (94.8 to 98.6)          | 95.7 (92.6 to 97.5)        | 93.0 (92.1 to 93.8)             | 1.6 (-1.0 to 4.1)                      | 1.1 (-1.8 to 4.0)     | 4.2 (2.0 to 6.5)                           | 3.6 (0.8 to 6.4)      |

EP = English proficiency; LEP = limited English proficiency; RD = risk difference.

\* Data from the Centers for Medicare & Medicaid Services, Medicare Current Beneficiary Survey COVID-19 Fall Supplement Public Use File, 2020. LEP was categorized by the language of the interview and excludes 2 non-Hispanic individuals with LEP. Non-Hispanic with EP includes persons of Black, White, and other/unknown ethnicity. Vaccine uptake question based on 8453 respondents and likely to get vaccine defined as "definitely" and "probably." Concern for vaccine side effects (yes/no) and distrust of the government about vaccines (yes/no) based on 1232 individuals who only answered "probably not" or "definitely not" to vaccine uptake question. Results of COVID-19 test based on self-reported positive result (n = 124) among those tested for COVID-19 (n = 2132), which excludes 64 individuals whose result was pending and among the whole study sample (n = 9684). For severity of COVID-19 symptoms (n = 124) and if sought medical care for COVID-19 (n = 255), respondents were asked if they were ever told they likely had or tested positive (swab or antibody) for COVID-19. Questions comparing COVID-19 with influenza contagiousness (n = 7893) and deadliness (n = 7963) defined as agree if answered "agree" or "strongly agree." Use of face masks (n = 9569) and avoided gatherings (n = 9565) were answered yes/no. All RDs are reported as a percentage and calculated using logistic regression with marginal standardization. Stata/MP Version 16.1 was used with procedures that account for complex sample design, and weights to generate national estimate. Stata/MP command: svy brr, fay(.3).

† RDs were adjusted for sex, region, income, and Medicare-Medicaid dual eligible status and Medicare Advantage enrollment.

‡ Reference group is "hesitant," defined as answering "probably not," "definitely not," or "not sure" to getting the vaccine.

§ Reference groups for vaccine side effects and for distrust are "no."

|| Reference group is self-reporting a negative result of COVID-19 test.

¶ Reference group is no/mild COVID-19 symptoms.

\*\* Reference group is "no."

†† Reference group is "disagree," defined as "neither agree nor disagree," "disagree," and "strongly disagree."

‡‡ Reference groups for wore face mask and avoided gatherings are "no."

sought (yes/no). Respondents were considered to agree that COVID-19 is more contagious or deadly than influenza (referred to as "the flu" in the survey) if they answered "agree" or "strongly agree" and to disagree if they answered otherwise. We assessed COVID-19 precautions on the basis of responses to questions about 2 precautions that are the most practicable, effective, and widely advocated by public health experts. For all

of these variables, we categorized "don't know," "refused," or "inapplicable" responses as missing.

We used logistic regression with marginal standardization to compare Hispanic respondents with LEP with both comparison groups and report unadjusted risk differences (RDs) and RDs adjusted for sex, income, census region, Medicare-Medicaid dual eligibility, and Medicare Advantage enrollment. We used Stata/MP

V16.1 (StataCorp), procedures that account for the complex sample design and weights to generate national estimates. Cambridge Health Alliance's Institutional Review Board exempted this study from review.

**Results:** The sample included 438 Hispanic adults with LEP, 533 Hispanic adults with EP, and 8713 non-Hispanic adults with EP. Hispanic adults with LEP were more often female, older ( $\geq 75$  years), lower-income, residents of the South or West, enrolled in Medicare Advantage, and lacking a source of care (Table 1).

Hispanic Medicare enrollees with LEP were less likely to anticipate getting vaccinated (unadjusted RD,  $-12.6\%$  [95% CI,  $-19.4$  to  $-5.9$ ]) than non-Hispanic adults with EP (Table 2), a difference that was attenuated in the adjusted analysis (RD,  $-5.8$  [CI,  $-13.6$  to  $2.0$ ]), primarily due to income differences. Among vaccine-hesitant older respondents, those who were Hispanic with LEP were more likely to be worried about vaccine side effects than non-Hispanic adults with EP ( $62.6\%$  vs.  $41.2\%$ ; adjusted RD,  $22.4$  [CI,  $7.7$  to  $37.1$ ]).

Hispanic adults with LEP reported high rates of COVID-19 test positivity ( $17.9\%$  of those tested [CI,  $12.4\%$  to  $25.2\%$ ] and  $5.3\%$  overall [CI,  $3.6\%$  to  $7.8\%$ ]) and, in adjusted analyses, were more likely than non-Hispanic adults with EP to recognize that COVID-19 is more contagious and deadly than influenza and to report avoiding large gatherings (Table 2).

**Discussion:** Among Medicare enrollees, persons with LEP were less likely to intend to get vaccinated, despite being insured and having higher test positivity rates and knowledge of the seriousness of COVID-19. Concern about side effects was a major driver of vaccine hesitancy. Although reduced health literacy, which is more common among persons with LEP, may influence vaccine hesitancy, we lacked data to explore this. Adjustment for sociodemographic differences (most importantly, income) attenuated the language-based disparity in vaccine hesitancy, suggesting that lower income among adults with LEP (which LEP may cause) explains at least some of this disparity.

Our findings support efforts by Medicare and Medicare Advantage plans to communicate the risks and benefits of COVID-19 vaccines to this high-risk group through linguistically and culturally appropriate outreach and engagement in care (5). Clinicians, public health officials, and Spanish-language news media also have roles to play in overcoming vaccine hesitancy in the older population with LEP.

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