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# Pragmatic Innovations in Post-Acute and Long-Term Care Medicine

Feasible new, practical products or approaches intended to improve outcomes or processes in post-acute or long-term care

## Racial Disparities in COVID-19 Vaccine Acceptance: Building Trust to Protect Nursing Home Staff and Residents



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### ABSTRACT

Vaccines are critical to protect both nursing home residents and staff from COVID-19, but some staff have expressed reservations about being vaccinated. In this brief report, we describe interventions that Genesis HealthCare—one of the largest US long-term care providers—implemented after recognizing midway through vaccinations that racial and ethnic disparities existed in vaccine uptake among employees, with black and Hispanic employees having significantly lower rates of vaccination than their peers. Specifically, Genesis engaged its Diversity, Equity, and Inclusion (DEI) Committee to identify ways to augment its already comprehensive vaccine education campaign in order to build confidence among employees from minority communities. Interventions implemented beginning in late January 2021 included adding DEI representatives to information sessions to facilitate culturally sensitive discussions; holding information sessions at all times of day and night, and inviting employees' family members to join; increasing availability of multilingual educational materials; and featuring DEI representatives in social media campaigns. Between the end of January and beginning of March 2021, we observed statistically significant improvements in the likelihood of black and Hispanic employees being vaccinated relative to white employees, calculated as the relative risk of vaccination, suggesting a reduction in vaccination disparity. Whether these trends are directly related to the organization's efforts, or rather reflect individuals needing longer to become comfortable with the vaccines, is difficult to discern in the absence of a formal pragmatic trial. Still, these findings support the continuation of targeted educational and engagement efforts to improve vaccine uptake among staff, and the critical need to ensure that nursing homes have ongoing access to vaccine supply to continue their vaccination programs.

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### Problem and Significance

Vaccines are critical to protect both nursing home residents and staff from COVID-19. Staff have worked tirelessly to care for residents during the pandemic, while facing significant personal risk. As of mid-June 2021, more than half a million nursing home staff in the United States contracted COVID-19 and more than 1900 have died.<sup>1</sup>

Nursing home staff were prioritized for early vaccination and received direct access at their work sites under the Pharmacy Partnership for Long-Term Care Program, a national vaccination program coordinated by the Centers for Disease Control and Prevention. Yet many staff expressed hesitancy about the vaccines, as evidenced by a *Morbidity and Mortality Weekly Report (MMWR)* report that estimated that as of January 17, 2021, only 37.5% of nursing home staff nationwide were vaccinated.<sup>2</sup> More recent data suggest that staff vaccination rates have improved over time, although as of mid-June 2021, 15 states still had fewer than half of nursing home staff vaccinated.<sup>1</sup>

Genesis HealthCare is one of the largest long-term care providers in the United States. As of the end of January, midway through its

vaccination clinics, Genesis had vaccinated 61% of staff and 84% of residents across nearly 300 centers.<sup>3</sup> However, from vaccination data and conversations with center leaders and direct care staff, organizational leaders identified disparities in staff vaccination rates by race and ethnicity, with Asian employees having the highest rates and black and Hispanic employees the lowest. This mirrored similar patterns reported in the general population, where black and Hispanic adults have reported more often than whites wanting to wait and see how the vaccines affected their peers before deciding to be vaccinated themselves.<sup>4,5</sup> Although many factors contribute to individual decisions regarding vaccination, the systemic historical inequalities and medical mistreatment that many minority communities have faced only further exacerbated concerns and fears around vaccine safety.<sup>6,7</sup>

In this brief report, we describe a series of interventions that Genesis implemented to improve vaccine confidence among employees, particularly black and Hispanic colleagues, along with an initial evaluation of these efforts.

### Innovation and Implementation

Genesis center leaders, with support from senior and regional leadership, started educating residents, staff, and families about COVID-19 vaccination in September 2020, months before the first vaccines were authorized or available. These efforts, prioritized by senior leadership and coordinated by the organization's Vaccine Acceptance Steering Committee, included hosting "Ask a Doc" sessions where staff could ask questions and receive factual information

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from experts; providing multilingual educational materials; and leveraging trusted peer influencers within centers and in local communities. Prior to the emergency use authorizations of the vaccines beginning in mid-December 2020, educational efforts focused on the science behind vaccine development and sought to establish trusted communication channels for information moving forward (Supplementary Table 1). As more detail on safety and efficacy of the specific vaccines became available, this information was also incorporated. Leadership also modified messaging as needed to address common concerns raised by frontline staff, received through direct feedback, or from focus groups and surveys conducted by researchers with whom the organization collaborated.<sup>8</sup>

Vaccination clinics began in mid-December 2020, and each center was scheduled for 3 clinics that lasted through mid-March 2021. By the end of January 2021, when the initial clinics had finished and the second clinics were underway, it became evident that lower vaccine uptake existed among black and Hispanic colleagues. At this point, the Vaccine Acceptance Steering Committee engaged the organization's Diversity, Equity, and Inclusion (DEI) Committee to build additional support for the existing vaccination campaign. The DEI Committee is composed of 20 to 25 employees who are diverse with regard to race, ethnicity, religion, cultural background, sexual orientation, age, disability status, and military service. Committee members reside and work throughout the country.

The Vaccine Acceptance Steering Committee held 4 listening sessions with the DEI Committee between December 2020 and March 2021 to help inform the organization's education strategy. During these sessions, members discussed how individuals from various communities access information, providing insight into some of the factors that influence vaccine uptake. These sessions proved valuable in exploring and developing strategies to reach individuals from diverse backgrounds. From these, the committees identified a set of priority areas for supporting center leaders, and developed specific interventions that the DEI Committee members helped to implement beginning in late January 2021. These are summarized in Table 1.

## Evaluation

Using staff vaccination and demographic data, we examined differences in the proportion of staff who received at least 1 vaccine dose between 2 time points: January 29, 2021 (after the first vaccination clinics had completed), and March 1, 2021 (after the second clinics had completed and roughly 1 month after the DEI Committee's augmented efforts to support vaccinations began) (Supplementary Table 2). Of the roughly 27,000 employees, 47% were white, 21% black or African American, and 7% Hispanic. Other races represented less than 5% of the total. Race and ethnicity data were unavailable for 20% of staff. At the earlier date, vaccination rates were highest among Asian staff (74.5%) and lowest among black staff (45.5%). Vaccination rates increased across race categories between January 29 and March 1, with the largest percentage point gains being among American Indian and Alaskan Native (+8.2%), Hispanic (+6.1%), and black (+5.4%) employees. Vaccination rates among white employees, by comparison, increased by 3.5%. Over the 1-month observation period, we observed statistically significant improvements in the likelihood [ie, relative risk (RR)] of being vaccinated, compared with whites, for black employees (RR 0.68 on January 29 vs 0.72 on March 1,  $P = .004$ ) and Hispanic employees (RR 0.77 vs 0.82,  $P = .04$ ), denoting a reduction in disparity. The likelihood of being vaccinated, compared with whites, also improved for American Indian and Alaskan Native employees (RR 0.80 vs 0.88,  $P = .14$ ), although the difference was not statistically significant, likely because of the small number of individuals in this category. Vaccination rates for staff without demographic data, and staff who were Asian, Pacific Islander, and white, increased similarly between the 2 time periods.

**Table 1**

Key Priority Areas and Specific Interventions Implemented to Improve Vaccine Acceptance Among Staff

### Key Priority Areas for Supporting Center Leaders

- Be attentive to cultural differences among staff that may influence viewpoints and beliefs about vaccines.
- Host conversations to actively listen to the unique needs of staff.
- Communicate with compassion and empathy, respecting points of view that are different from their own.
- Become familiar with historical and cultural events that have generated distrust of government and health care among communities of color.
- Identify key peer influencers on each shift within centers who can help address questions and concerns.
- Identify respected local religious, spiritual, and community leaders to help facilitate culturally sensitive conversations.
- Provide multilingual educational resources for employees to share with their own families and invite employees' family members to join information sessions.
- Publicly recognize and highlight vaccine experiences of trusted coworkers and community leaders via social media and center-specific communications.

### Implementation

- Diversity, Equity, and Inclusion (DEI) Committee representatives were added as copanelists for the "Ask the Doc" information sessions in order to help facilitate culturally sensitive discussions. Where possible, multilingual physicians were also leveraged.
- "Ask the Doc" sessions were hosted throughout the day and night, enabling employees to log in from home and invite members of their family to participate, because the DEI Committee emphasized that family and friends can be influential in black and Hispanic individuals' decisions related to vaccine acceptance.
- DEI Committee members were involved in the #ThisIsOurShot education and social media campaign. This campaign highlighted employees' personal journeys toward vaccine acceptance and gave a voice to the unique decision-making process of individuals from diverse backgrounds.
- A "Vaccine Acceptance" page was added within the company's DEI intranet site. This page, which promotes resources from the Kaiser Family Foundation and the Black Coalition Against COVID, includes a link to a library of more than 50 videos where black and Hispanic health care professionals provide factual information about the COVID-19 vaccines in both English and Spanish. Educational information from the CDC was also made available in multiple other languages.
- Nursing leaders from racially diverse backgrounds visited centers to offer small group discussions and one-on-one conversations with individuals to answer questions on culturally sensitive topics that impact decision making related to vaccine acceptance.

## Comment

One month after initiating targeted efforts to build vaccine confidence among employees from minority communities, augmenting an already comprehensive vaccine education campaign, we observed small, but statistically significant reductions in vaccination disparities for black and Hispanic employees. Whether these trends are directly related to the organization's efforts, or rather reflect individuals needing longer to become comfortable with the vaccines,<sup>4,5</sup> is difficult to discern in the absence of a formal pragmatic trial. Other campaigns to improve vaccine acceptance among the broader public were also gaining more traction beginning in February, which could have influenced vaccine uptake. Still, these findings support the continuation of educational and engagement efforts to improve vaccine uptake among staff. After the completion of the 3 vaccination clinics under the Pharmacy Partnership for Long-Term Care Program, nursing homes across the United States had limited access to additional vaccines for new employees or those who subsequently decided to be vaccinated. In recent weeks, vaccine supply has improved, but it will be critical to ensure that nursing homes have ongoing access to the COVID-19 vaccines to achieve and maintain herd immunity.

Concerns about vaccine safety among black, Hispanic, and Native American communities are deep-rooted in historical inequalities, marginalization, underrepresentation, and medical mistreatment of

these groups.<sup>7,9,10</sup> Examples include the publicly funded 40-year Tuskegee study, which denied treatment to black men with syphilis, and the involuntary state sterilization programs of the early- and mid-20th century, which robbed tens of thousands of Hispanic, Native American, and black women of their reproductive rights. These historical events, coupled with a pandemic that has disproportionately affected communities of color<sup>5</sup> and left many nursing home staff feeling blamed and demoralized,<sup>11</sup> have contributed to some of the systemic mistrust and fears now underlying COVID-19 vaccine hesitancy.

COVID-19 vaccinations are critical interventions to protect nursing home staff and residents from what has been a devastating, once-in-a-generation, public health crisis. To build vaccine confidence, nursing home leaders must listen with empathy, be respectful of people's experiences, answer questions truthfully, maintain transparency, and communicate clearly in order to build trust.

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### Supplementary Data

Supplementary data related to this article can be found online at <https://doi.org/10.1016/j.jamda.2021.07.006>.

### References

1. Nursing Home COVID-19 Public File. Centers for Disease Control and Prevention National Healthcare Safety Network. Published 2021. Available at: <https://data.cms.gov/stories/s/bkwz-xpvg>. Accessed June 30, 2021.
2. Gharpure R, Guo A, Bishnoi CK, et al. Early COVID-19 first-dose vaccination coverage among residents and staff members of skilled nursing facilities participating in the pharmacy partnership for long-term care program - United States, December 2020-January 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:178–182.
3. Genesis Healthcare. Genesis HealthCare announces resident and staff COVID-19 vaccine acceptance rates. Published 2021. Available at: <https://www.genesisihcc.com/happenings/corp/genesis-healthcare-announces-resident-and-staff-covid-19-vaccine-acceptance-rates>. Accessed May 13, 2021.
4. Hamel L, Kirzinger A, Lopes L, et al. KFF COVID-19 Vaccine Monitor: January 2021. Published 2021. Available at: <https://www.kff.org/report-section/kff-covid-19-vaccine-monitor-january-2021-vaccine-hesitancy/>. Accessed February 18, 2021.
5. Ndugga N, Pham O, Hill L, et al. Latest data on COVID-19 vaccinations race/ethnicity. 2021. Available at: <https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-race-ethnicity/>. Accessed May 13, 2021.
6. Berry SD, Johnson KS, Myles L, et al. Lessons learned from frontline skilled nursing facility staff regarding COVID-19 vaccine hesitancy. *J Am Geriatr Soc* 2021;69:1140–1146.
7. Bogart LM, Dong L, Gandhi P, et al. What Contributes to COVID-19 Vaccine Hesitancy in Black Communities, and How Can It Be Addressed? RAND Corporation. Published 2021. Available at: [https://www.rand.org/pubs/research\\_reports/RRA1110-1.html](https://www.rand.org/pubs/research_reports/RRA1110-1.html). Accessed June 1, 2021.
8. Harrison J, Berry S, Mor V, Gifford D. Somebody like me": Understanding COVID-19 vaccine hesitancy among staff in skilled nursing facilities. *J Am Med Dir Assoc* 2021;22:1133–1137.
9. Langer Research Associates. COVID Collaborative Survey: Coronavirus vaccination hesitancy in the black and Latinx communities. Available at: <https://www.covidcollaborative.us/content/vaccine-treatments/coronavirus-vaccine-hesitancy-in-black-and-latinx-communities>. Published November 23, 2020. Accessed June 1, 2021.
10. Morris A. Tribes were often overlooked in COVID-19 vaccine trials, frustrating Indigenous leaders. *Arizona Republic*; May 25, 2021.
11. White EM, Wetle TF, Reddy A, Baier RR. Front-line nursing home staff experiences during the COVID-19 pandemic. *J Am Med Dir Assoc* 2021;22:199–203.

*The pragmatic innovation described in this article may need to be modified for use by others; in addition, strong evidence does not yet exist regarding efficacy or effectiveness. Therefore, successful implementation and outcomes cannot be assured. When necessary, administrative and legal review conducted with due diligence may be appropriate before implementing a pragmatic innovation.*

**Supplementary Table 1**

Educational Areas Addressed Starting in September 2020, Before Any COVID-19 Vaccines Received Emergency Use Authorization

- The history of vaccine safety and the success of vaccination programs in the United States
- The role of center leaders, providers, and clinical staff in promoting vaccine acceptance
- Acknowledging the flood of sometimes conflicting information about vaccines, and establishing trusted communication channels for information going forward
- The research and approval process, related to safety and efficacy
- How vaccines work, including background on mRNA vaccines, to begin to build confidence in the new technology
- The possibility of side effects, and the fact that most of them are simply reflections of a functioning immune system and a favorable vaccine response

**Supplementary Table 2**

Vaccination Rates and Likelihood (ie, Relative Risk) of Vaccination vs White Employees

Race/Ethnicity	% of Total (N=27,729)	Vaccination Rates, %			Relative Risk of Vaccination (vs White)		
		January 29, 2021	March 1, 2021	Difference	January 29, 2021	March 1, 2021	P Value
Asian	3.3	74.5	79.1	4.5	1.12	1.12	.77
Pacific Islander	0.2	71.1	73.3	2.2	1.06	1.04	.88
White	47.3	66.8	70.3	3.5	—	—	—
Not specified	19.6	60.5	65.0	4.5	0.91	0.92	.23
American Indian/Alaskan Native	1.5	53.6	61.8	8.2	0.80	0.88	.14
Hispanic	7.3	51.7	57.8	6.1	0.77	0.82	.04*
Black	21.0	45.5	50.9	5.4	0.68	0.72	.004**

P value of generalized Hausman test shown, indicating whether there was a statistically significant change in relative risk of vaccination (vs white employees) between January 29 and March 1, 2021.

\*P < .05, \*\*P < .01.