

Understanding the Numbers

COVID-19 Vaccination Rates and Risk Factors Among **HUD-Assisted Families**

HUD Office of Policy Development and Research

Janet Li and Veronica Helms Garrison October 27, 2021



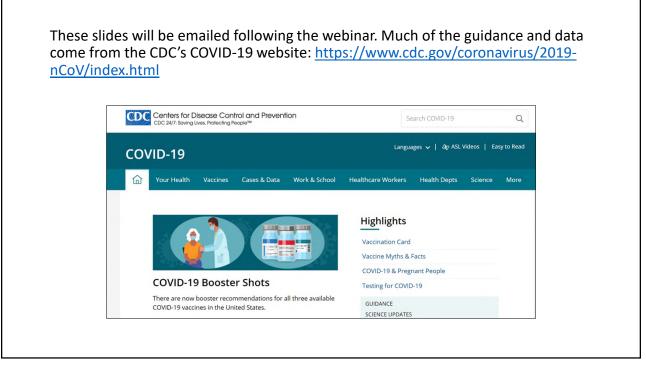


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Where are we now?

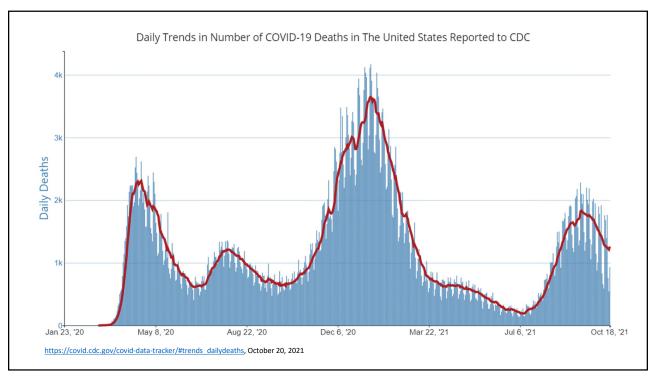
As of October 20: over **45,000,000** cases and over **728,000** deaths

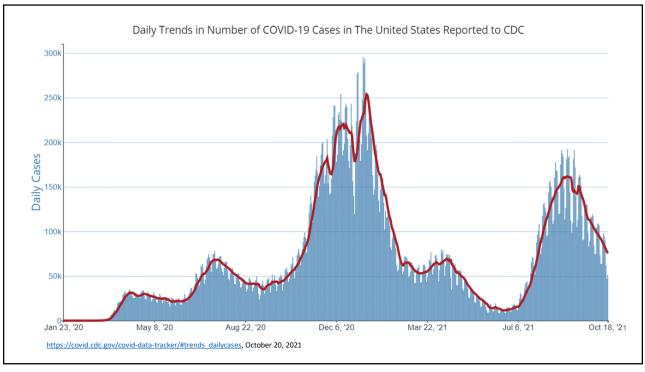
67.2 percent of those aged 12 or older are fully vaccinated.

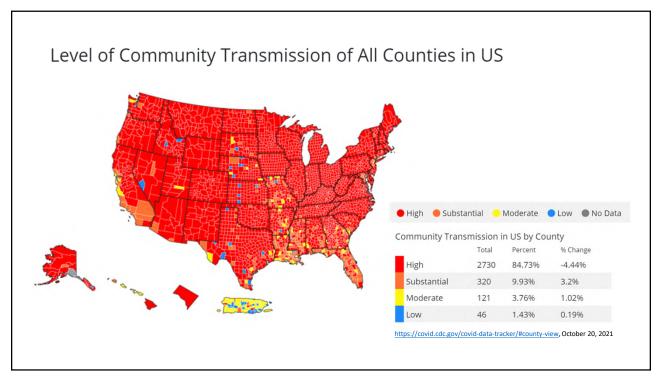
77.6 percent have at least one dose.

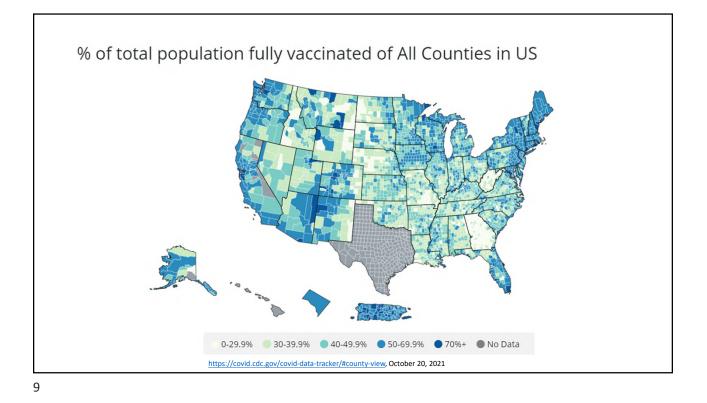
84.7 percent of those aged 65 or older are fully vaccinated.

96.3 percent have at least one dose.

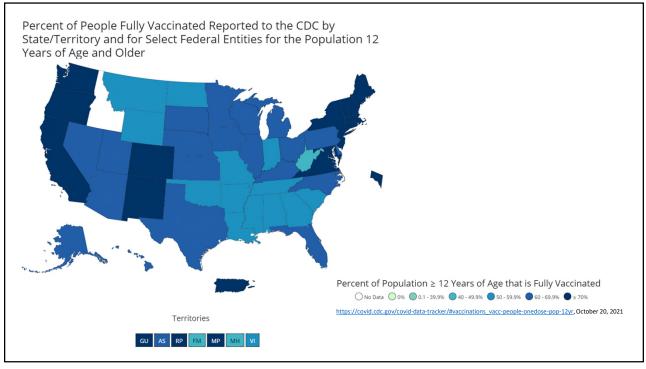


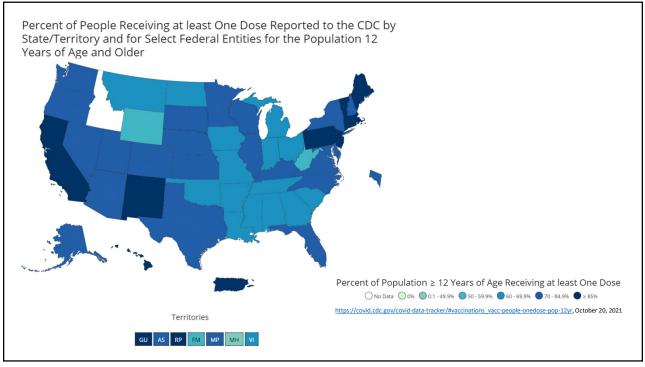






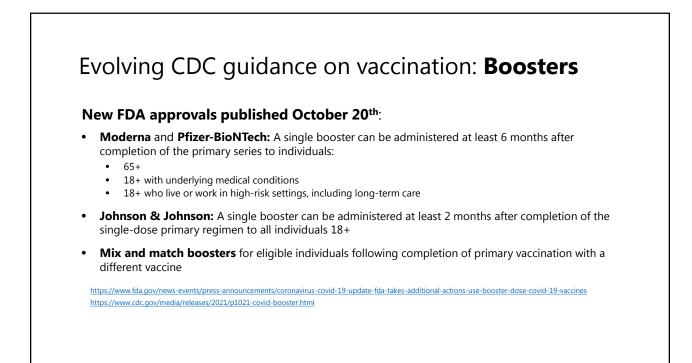
% of total population with at least one dose of All Counties in US







Evolving CDC guidance on vaccination

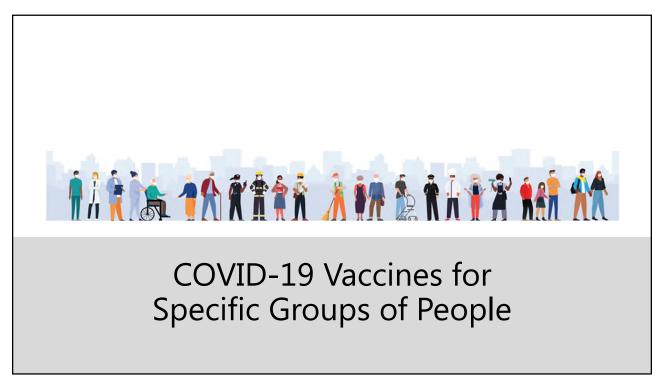


Evolving CDC guidance on vaccination: **Children 5 to 11**

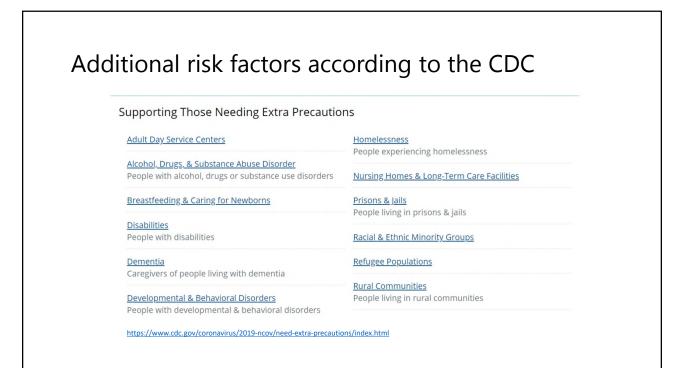
On October 20, the White House announced operational planning for COVID-19 vaccinations for kids ages 5 to 11. The WH is preparing for possible authorization after the **October 26** FDA's independent advisory committee meeting and the **November 2-3** CDC's independent advisory committee.

FACT SHEET: Biden Administration Announces Update on Operational Planning for COVID-19 Vaccinations for Kids Ages 5-11 (October 20, 2021) https://www.whitehouse.gov/briefing_ room/statements-releases/2021/10/20/fact-sheet-biden-administration-announces-update-onoperational-planning-for-covid-19-vaccinations-for-kids-ages-5-11/



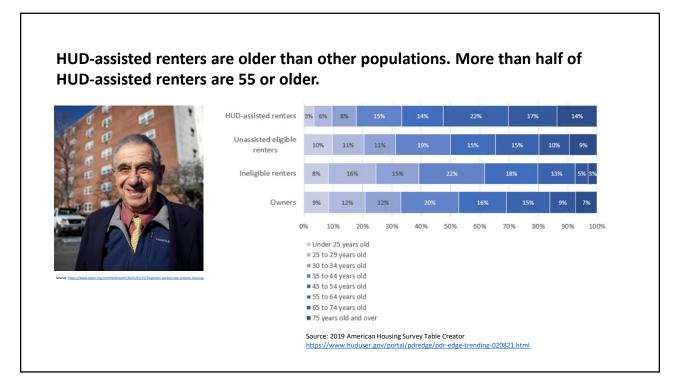


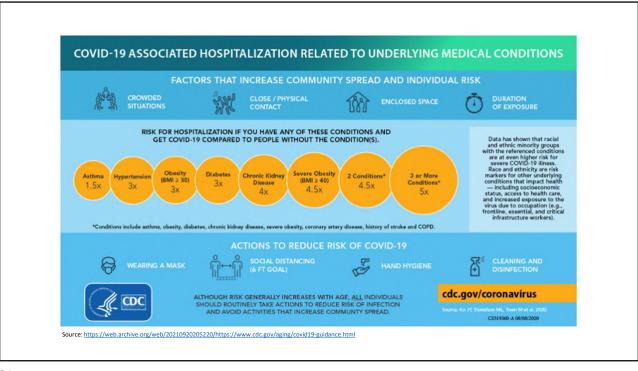
At Increased Risk for Severe Illness	~
 Some people are more likely than others to become set 	verely ill.
• Severe illness means that a person with COVID-19 may ventilator to help them breathe or they may even die.	need: hospitalization, intensive care, a
 People at increased risk, and those who live or visit with themselves from getting COVID-19. 	them, need to take precautions to protect
Older Adults	
People with Medical Conditions	
Pregnant People	



Rate compared to 18-29 years old ¹	0-4 years old	5-17 years old	18-29 years old	30-39 years old	40-49 years old	50-64 years old	65-74 years old	75-84 years old	85+ years old
Cases ²	<1x	1x	Reference group	1x	1x	1x	1x	1x	1x
Hospitalization ³	<1x	<1x	Reference group	2x	2x	4x	5x	9x	15x
Death ⁴	<1x	<1x	Reference group	4x	10x	30x	90x	220x	570x
Il rates are relativ ccounted for the l compared with 18- hose who are 85 y ategory.) pdated Sep. 9, 2021. Sourc	argest cumu to 29-year-c ears and old	lative numbo olds, the rate ler. (In the ta	er of COVID-1 of death is fo ble, a rate of	9 cases com our times hig 1x indicates	pared to oth her in 30- to no difference	er age group 39-year-olds e compared	s. Sample in s, and 570 tir to the 18- to	terpretation nes higher ir 29-year-old	: n age







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Underlying M Conditio		Prevalence of Condition among General Population (Helms 2017)	Estimated Number of HUD Tenants with Condition	
Age 62+	24.2%	20.9%	1,263,724	
Age 85+	4.0%	1.8%	208,880	
Male	26.2%	48.3%	1,368,164	
Asthma	16.3%	8.7%	851,186	
Cardiovascular D	isease 19.8%	12.8%	1,033,956	
COPD	13.1%	6.1%	684,082	
Hypertension	37.9%	26.5%	1,979,138	
Diabetes	17.6%	9.5%	919,072	
Obese 1 (BMI 30-	35) 21.1%	18.0%	1,101,842	
Obese 2-3 (BMI 3	5+) 19.9%	12.2%	1,039,178	
Smoker	34.0%	22.0%	1,775,480	

Certain racia COVID-19 i		•	ave higher r tion, and dea	
Rate ratios compared to White, Non-Hispanic persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non- Hispanic persons	Black or African American, Non- Hispanic persons	Hispanic or Latino persons
Cases ¹	1.7x	0.7x	1.1x	1.9x
Hospitalization ²	3.5x	1.0x	2.8x	2.8x

* Race and ethnicity are risk markers for other underlying conditions that affect health, including socioeconomic status, access to health care, and exposure to the virus related to occupation, e.g., frontline, essential, and critical infrastructure workers.

2.4x

1.0x

2.0x

2.3x

Updated Sep 9, 2021. https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

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Black and Hispanic individuals make up a large share of HUD-assisted renters.

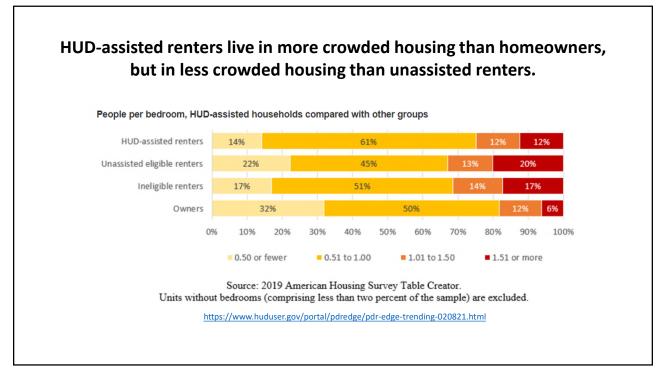
	HUD-assisted renters	Renters eligible for HUD assistance but not assisted	Renters not eligible for HUD assistance	Owners
Race* (head of household)				
Black	45.8 %	21.1 %	16.4 %	9.3 %
Hispanic	19.1 %	23.7 %	15.3 %	10.5 %
Asian	2.7 %	4.9 %	7.8 %	4.8 %

Note: Percentages represent the percent of households or heads of households reporting the characteristic for each group. *Only minority racial and ethnic groups with sufficient reporting for all groups are included.

Source: 2019 American Housing Survey Table Creator.

Death³





Name	Code	State	Subsidized units available	% Occupied	Number of people per unit	Number of people: total	% 2+ adults with children	% 1 adult with children	% 0 - 1 bedrooms:	% 2 bedrooms	% 3+ bedrooms
Housing Authority of the City of Sainte Genevieve	M0191	MO	30	100	3.1	92	-1	70	-1	67	33
HRA IN AND FOR THE CITY OF BLOOMINGTON	MN152	MN	551	94	3.2	1624	13	35	39	27	34
OLMSTED COUNTY HRA	MN151	MN	707	91	3.1	2233	14	46	18	44	38
RICE COUNTY HRA	MN193	MN	352	70	3.7	847	9	48	25	36	39
Donna Housing Authority	TX177	ΤХ	414	88	3.1	1154	8	61	24	37	39
HOUSING AUTHORITY OF THE CITY OF DEERFIELD BEACH	FL081	FL	507	80	3.1	1321	4	62	17	42	40
Housing Authority of the City of Laredo	TX011	ΤХ	2452	97	3.1	7023	11	49	27	32	41
Edcouch Housing Authority	TX202	ΤХ	88	93	3.3	277	19	59	17	40	43
Tulare County Housing Authority	CA030	CA	3682	95	3.2	11348	27	37	21	35	44
Starr County Housing Authority	TX396	ΤХ	292	77	3.1	696	15	53	24	30	46
The Housing Authority of the County of Cass IL.	IL102	IL	50	94	3.4	160	34	53	-1	51	49

3.6

3.1

MN172 MN

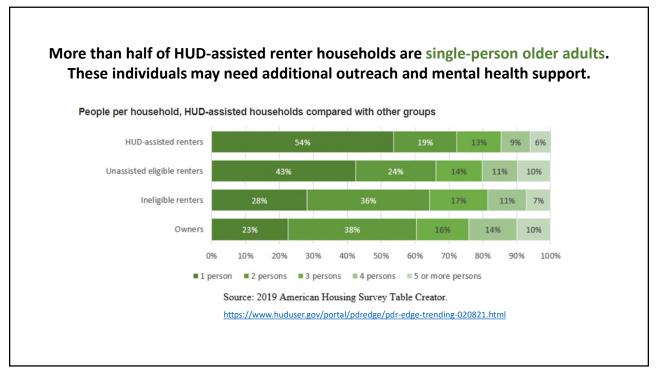
RI012 RI

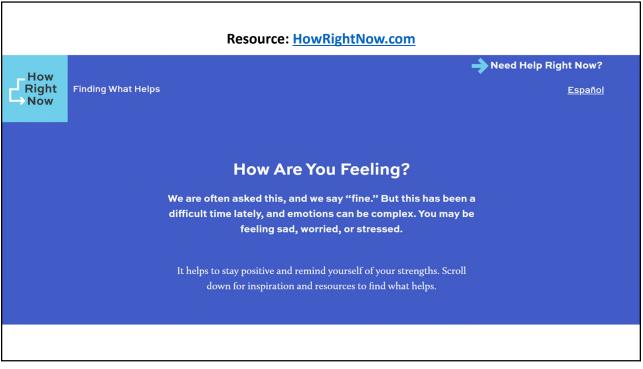
There are 13 PHAs reporting more than 3 people per unit on average.

Source: Picture of Subsidized Households, 2020 Note: -1 means missing.

STEARNS COUNTY HRA

South Kingstown Housing Authority







HUD-assisted renters have less infrastructure to access vaccine registration and healthcare.

Access factor	Percent of households	Percent of Public Housing households	Percent of Voucher households	Percent of Multifamily households
Information and com	munication	technologies		
Lack of paid high- speed internet subscription faster than dial-up	56.9%	59.2%	50.9%	64.4%
Lack of desktop or laptop computer	55.8%	59.0%	49.0%	63.7%
Lack of landline	77.1%	78.7%	77.7%	75.2%
Lack of cell phone	14.5%	13.9%	12.2%	18.4%
Transportation				
Health care services not accessible by walking	91.6%	87.2%	93.9%	91.4%
Health care services not accessible by public transportation	26.5%	21.2%	30.4%	24.6%
Lack of private vehicle (car/truck/ van)	44.6%	49.8%	38.1%	50.8%

Access factor	Percent of households	Percent of Public Housing households	Percent of Voucher households	Percent of Multifamily households
Disability				
Any disability	40.6%	38.3%	37.8%	46.5%
Mental Disability	17.2%	18.0%	16.1%	18.5%
Physical Disability	28.1%	25.1%	25.8%	33.6%
Go-outside- home Disability	17.2%	16.2%	16.5%	19.1%

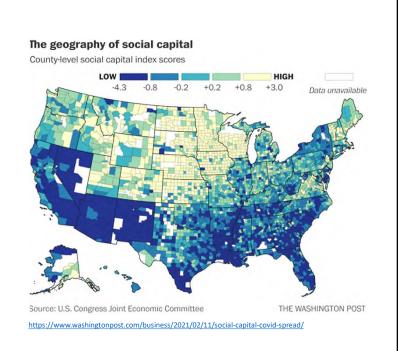
Sources: American Housing Survey 2013 Table Creator; Picture of Subsidized Households 2020; PD&R 2016, Digital Inequality and Low-Income Households. Evidence Matters. https://huduser.gov/portal/periodicals/em/fall16/highlight2.html



Social capital

- Social capital includes "features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit"
- Controlling for other factors, places with higher social capital have experienced lower rates of COVID-19 infections and deaths on average

Source: Makridis, C. A., & Wu, C. (2021). How social capital helps communities weather the COVID-19 pandemic. PloS one, 16(1), e0245135.

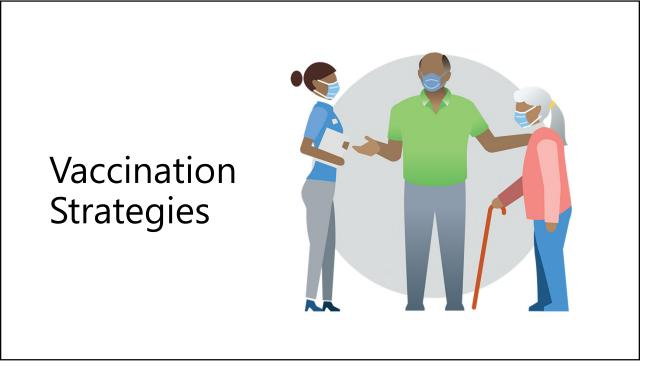


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Being new to the area could make households less resilient because they may not have established strong social networks to share information and offer support.

There are 14 PHAs where the majority of households had moved in the last year.

Rank	Name	Code	State	Subsidized units available	% Occupied	% moved in past year	Number of people per unit	Number of people: total
1	Low Rent Housing Agency Of Onawa	IA014	IA	62	95	83	1.2	14
2	Regional HA of Lawrence Cullman & Morgan Counties	AL187	AL	156	99	76	2.9	182
3	Pike County Housing Authority	AR045	AR	62	97	69	1.7	243
4	Carrfour Supportive Housing Inc.	FL881	FL	180	56	63	1.8	230
5	Mechanicville Housing Authority	NY015	NY	180	62	61	1.8	488
6	Housing Authority of McLean	TX157	ТХ	12	100	58	2	24
7	Nelson Housing Authority	NE082	NE	16	81	54	1.8	23
8	McKenzie County Housing Authority	ND036	ND	33	52	53	1.8	34
9	HRA of PIPESTONE MINNESOTA	MN049	MN	155	83	52	1.7	220
10	Dickey/Sargent Counties	ND052	ND	104	74	51	1.5	116
11	Hanover Housing Authority	KS013	KS	18	100	50	1.3	24
12	Housing Authority of O'Donnell	TX549	ТΧ	20	90	50	2.1	37
13	Housing Authority of the City of Beebe	AR106	AR	40	95	50	1.8	68
14	Nelson County Housing Authority	ND058	ND	25	72	50	1.3	23





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Factors that Build Vaccine Intention	Assessment of Factors (they = communities of focus)	YES	IF NO: Questions/Considerations	Recommended Strategies
COVID-19 Susceptibility	Do they believe that they are at high risk of getting the disease?		What do they think? Why do they think that? How can these perceptions/beliefs be changed?	Risk communication Outreach through relevant communication
COVID-19 Severity	Do they understand that the disease can be very serious for them and those around them?		Who can influence them to reconsider their perceptions/ beliefs?	channels/forums Address misinformation
Vaccine Risks	Is their understanding of vaccine risks accurate?		*If vaccination isn't a norm yet, how can influencers be convinced to get vaccinated to serve as role models?	Strengthen HCP & institutional recommendations
Vaccination Norms	Do they think their family, friends, and neighbors are getting vaccinated? Do they think their coworkers are getting vaccinated?		Are there examples of individuals in their communities who accepted the vaccines after initially being hesitant? Profiling these cases can signal that it's OK to change your mind even if you said no initially.	Education, encouragement, and example through trusted messengers/influencers
Vaccine Benefits	Do people understand the protective benefit that COVID-19 vaccines may have against developing severe disease? Do they understand that vaccination along with non-pharmaceutical interventions such as mask wearing and distancing can help get back to work, school, gatherings, and entertainment sooner?		Does your communication highlight the benefits that matter most to them? How do you know? If you're not sure, how can you get a better understanding of what matters most to them? Is there evidence that people may not be adhering to mitigation measures after vaccination (e.g., wearing masks) because they believe they are protected from COVID-19 transmission? How can this be addressed?	Align messaging with motivations/values and deliver through influencers

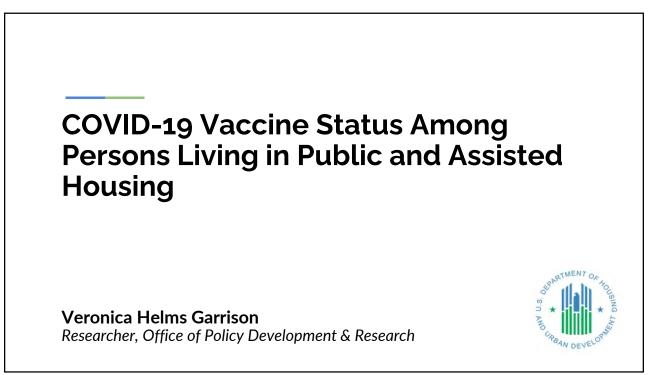
Factors that Build Vaccine Intention	Assessment of Factors (they = communities of focus)	YES	IF NO: Questions/Considerations	Recommended Strategies
Vaccine Recommendation	Are they aware it is recommended for them?		Why not? What are the best ways to reach them with this information?	HCP & institutional Recommendations (including CDC/ACIP Guidance)
Vaccine Availability	Are they aware it is available to them or when it will be? Is supply sufficient to meet demand?		If there is high demand and people can't get appointments, they may become trustrated. How can you address frustration or redirect people to do other things until they get vaccinated?	Outreach through relevant communication channels/forums
Vaccine Safety	Do they believe the vaccines are safe?		What questions/concerns do they have (in the short and long term)? Are concerns primarily about side effects or the speed of vaccine development (e.g., cutting corners)?	Clear communication about vaccine development process, safety data and monitoring, efficacy data
Vaccine Efficacy	Do they believe the vaccines are effective in protecting them from getting sick?		How did they hear about these concerns? What information do they need? What would ease their concerns? Who are the trusted sources for this information? How can you increase their trust in information from your organization?	Address misinformation Outreach through relevant communication channels Education through trusted sources
Trust in Vaccination Institutions	Do they trust the institutions involved in the vaccination process? • Manufacturers/pharma • Approvers/recommenders and safety monitors (FDA/CDC) • Vaccinators (HCPs) • Program implementors (state/ local health departments)		Why don't they trust the institution? Have there been issues in the past? What has been done to try to (re)build trust? What would they need to know to increase trust? Who are the best people to deliver that information?	Clear communication about the vaccine development and approval process Address misinformation Acknowledgement of past issues and explanation of how they are being addressed Engagement of trusted sources

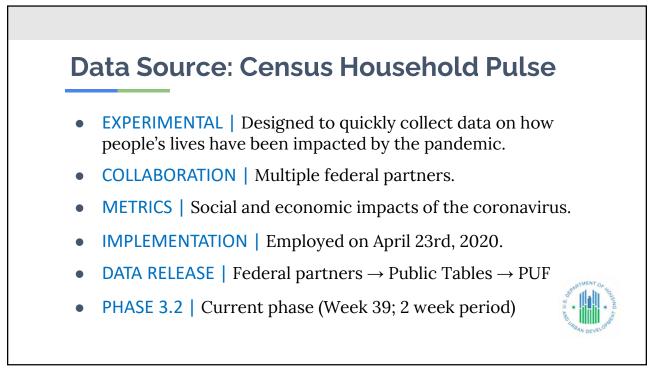
Factors Related to Getting Vaccinated	Assessment of Factors	YES	IF NO: Questions/Considerations	Recommended Strategies
Appointment Scheduling	Do they know where to go to get vaccinated? Do they know how to schedule an appointment? Is it easy and quick to do?		Why not? What are the challenges? Are challenges different for specific populations? (e.g., for persons 65+ or those people who do not speak English or who live far from vaccination sites)	Outreach for appointment scheduling Provide appointment reminders and phone calls
Appointment Cost	Do they know that doses are free even if they don't have insurance?		Are there any specific challenges for obtaining the doses? How can challenges and costs be minimized?	Employer on-site vaccination or community vaccination sites
Appointment Logistics	Can they make arrangements to get to/from the appointment?		Are there innovative partnerships that could be leveraged to help address access issues?	
Appointment Time	Can they afford to spend the time to be at the appointment? (considering employment, childcare, etc.)			
Factors During Vaccination	Assessment of Factors	YES	IF NO: Questions/Considerations	Recommended Strategies
Convenience	Is the vaccination process convenient?		Why not? How can the experience be improved? How can you capture patient perspectives on their journey to vaccination?	COVID-19 safety measures Disability accommodations
Accessibility	Is the vaccination site physically accessible?		How can they be better prepared for post-vaccination so they know what to expect and do?	Healthcare personnel and staff training
Safety	Do they feel safe from COVID-19 risks during the vaccine administration? Do they feel their medical information will be confidential?			Educational materials
Communication	Are their questions answered at the time of vaccination?			

Factors Post Vaccination	Assessment of Factors	YES	IF NO: Questions/Considerations	Recommended Strategies
Experience Between Doses	Are they easily able to get an appointment for doses? Are they returning for doses?		How are patients recalled for doses? How can this pro- cess be made easier? What concerns or barriers are they facing in getting the doses? How can these be addressed? Are they experiencing or hearing about side effects and adverse events?	Provide appointment reminders and phone calls Follow up with patients to understand and address Education regarding common side effects and how adverse events are monitored
Adverse Event Monitoring	Are vaccine recipients registered in v-safe? Were they made aware of vaccine safety information during the visit?		How can you improve communication about vaccine safety monitoring and encourage people to sign up for v-safe? Can people reach out to a specific hotline or point of contact to report an adverse event following immunization (AEFI)? If so, what happens once they file a report?	Educational materials posted in vaccination and waiting rooms on v-safe and adverse event monitoring Set up hotline or other point of contact to report AEFIs
Positive Reinforcement	Are they sharing their vaccination experiences with others?		How can you facilitate positive reinforcement? How can you make vaccination a positive and visible social norm?	Positive norms campaign Incentives Appreciation/celebration

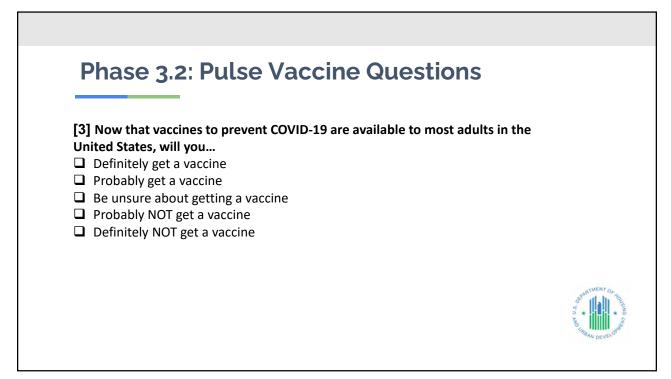


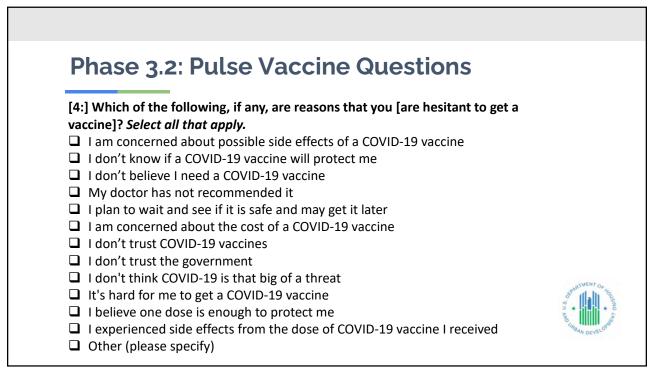
How is HUD doing on vaccination?





"The next set of questions a	sk about COVID-19 vac	cination."	
[1] Have you received at □ □ Yes	east one dose of a C	OVID-19 vaccine?	
No			
[2] Did you receive (or do Yes, received all required of		all required doses?	
Yes, plan to receive all req			





Pulse Linked to HUD Administrative Data

Pulse Phase 3.2: "Weeks" 35-37

• Data collection period: August 4th, 2021, to September 13th, 2021

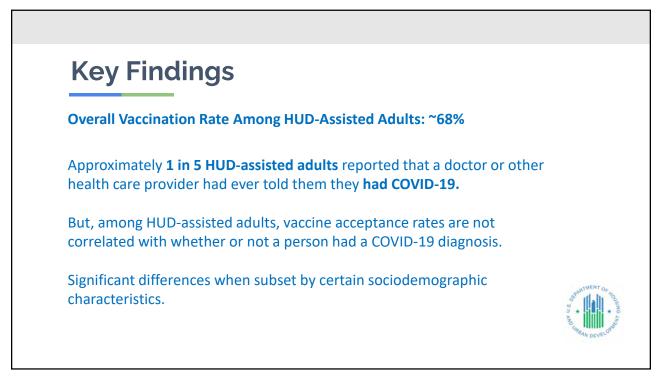
"Active" households in 2020 PIC/TRCS

- Public housing
- Multifamily housing
- Housing choice vouchers

Sample of approximately 3,000 adults

• Characteristics of pulse sample similar to universe of HUD administrative data (for example, income, program distribution, gender, etc.)



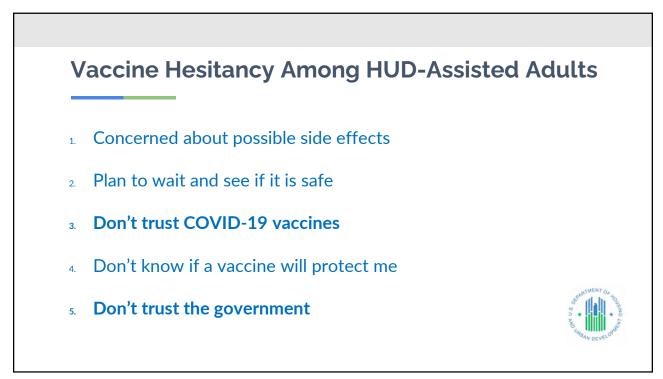


Key Findings

Several significant factors impact vaccine acceptance among HUD-assisted:

- Age
- Income
- Education level
- Health insurance status
- Employment status
- Household size





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