VANDERBILT UNIVERSITY
MEDICAL CENTER

Effectively Communicating Science: Centering Diverse Needs and Engendering Trust

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President's Council of Advisors on Science and Technology
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April 2020
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COVID-19 Health Equity Workstream

Consuelo H. Wilkins, Elisa Friedman, André L. Churchwell, Tiercy Fortenberry, Amber Humphrey, Pam Jones, Sunil Kripalani, Larry Prisco, Jill Pulley, Terrell Smith

SUB-STREAM	OBJECTIVES
Effective Communication	Effectively communicate COVID-19 risks and preventative strategies to: • Individuals at risk for health inequities – minoritized racial/ethnic groups, socioeconomically disadvantaged, people w preferred language not English • Employees: including nutrition, maintenance, environmental services
Equitable Testing	• Provide/facilitate timely testing • Report aggregate test results by key demographics including age, gender, race/ethnicity, preferred language, and ZIP code
Equitable Care	• Provide high quality care that does not vary by race/ethnicity, gender, SES • Effectively communicate post-discharge and facilitate transitions of care • Report aggregate outcomes by age, gender, and race/ethnicity, ZIP
Inclusivity in Clinical Trials	• Increase awareness of importance of clinical research for COVID-19 given there is no proven effective therapy • Engage/enroll racial/ethnic minorities, others socially disadvantaged
Inclusive Implementation of Telehealth	• Effectively use telehealth to provide care for patients including those with limited health literacy, English proficiency, internet access • Increase adoption of telehealth among racial/ethnic minorities, patients with, limited English proficiency, and underserved rural communities

NEJM Catalyst | Innovations in Care Delivery

ARTICLE

A Systems Approach to Addressing Covid-19 Health Inequities

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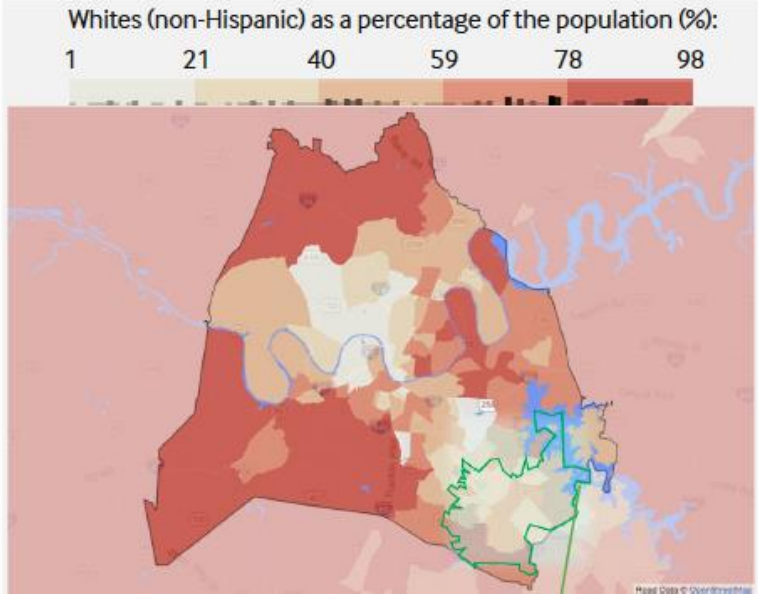
Most Covid-19 Cases at Vanderbilt University Medical Center (as of July 1, 2020)



Socioeconomic Data of ZIP Code with Highest Number of Covid-19 Cases Compared with Nashville Metropolitan Area		
	ZIP Code 37013	Nashville, TN Metro Area
Population	97,819	1,932,099
Vanderbilt Covid-19 cases (7.1.20)	381	2,470
Black/African American	35%	15%
Hispanic/Latino	16%	7%
Asian/Asian American	4%	3%
High school or equivalent	87.2%	89.5%
Language other than English spoken at home	30.3%	10.3%
Foreign born	25%	8%
Median home value	$167,900	$217,500
Household size	2.8	2.6
Adults employed	73.1%	67.6%
Per capita income	$25,568	$33,606
Persons below poverty line	15.7%	12.4%

Source: Socioeconomic data from Census Reporter. 2020. Accessed November 14, 2020. https://censusreporter.org/profiles/86000US37013-37013/ and https://censusreporter.org/profiles/31000US34980-nashville-davidson-murfreesboro-franklin-tn-metro-area/. Map from Statistical Atlas. Demographics. 2020. Accessed November 14, 2020. https://statisticalatlas.com/county/Tennessee/Davidson-County/Race-and-Ethnicity#data-map/tract

VUMC SARS CoV-2 Tests by Race, Ethnicity, Language – 1.12.2022

	Population	SARS-Cov-2		(+)SARS CoV-2		Within-group (+)	*Within group + through 7.1.21*
	% Nashville MSA population total: 1,933,860	n (% of 340,645)		n (% of 49,180)			
RACE/ETHNICITY							
White	76.7%	225,767	(66.3%)	28,699	(58.4%)	12.7%	*10.1%*
Black/African American	15.2%	41,249	(12.1%)	6,157	(12.5%)	14.9%	*9.6%*
Hispanic / Latino	7.6%	19,686	(5.8%)	2,840	(5.8%)	14.4%	*11.8%*
Asian	3.0%	6,340	(1.9%)	879	(1.8%)	13.9%	*13.0%*
American Indian	0.2%	666	(0.2%)	95	(0.2%)	14.3%	*10.8%*
Other	2.4%	10,568	(3.1%)	1,411	(2.9%)	13.4%	*9.9%*
Unknown Race	N/A	56,055	(16.5%)	11,939	(24.3%)	21.3%	*18.7%*

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Data includes all patients tested for SARS-CoV-2 at Vanderbilt University Medical Center from March 9, 2020 – January 12, 2022.
Total tested 340,645; total positive tests 49,180,. *Population demographics for Nashville metropolitan area includes Davidson, Williamson, and Rutherford Counties. Data from American Community Survey 2019. https://censusreporter.org/profiles/31000US34980-nashville-davidson-murfreesboro-franklin-tn-metro-area/

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Preferred Language					
English	88.3%	322,576 (94.7%)	46,161 (93.9%)	14.3%	*11.2%*
All Languages other than English (102)	11.7%	16,749 (4.9%)	3,019 (6.1%)	18.0%	*14.3%*
Spanish	6.4%	10,482 (3.1%)	1,632 (3.3%)	15.6%	*13.8%*
Arabic	1.0%	3,472 (1.0%)	660 (1.3%)	19.0%	*15.0%*
Nepali	< 1%	334 (0.1%)	93 (0.2%)	27.8%	*29.3%*
Unknown language	N/A	1,320 (0.4%)	246 (0.5%)	18.6%	*10.7%*

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Working with Trusted Community Partners to Deliver COVID-19 Information

NHD

Nashville Health Disparities Coalition

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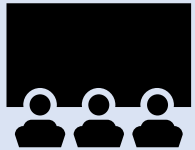
COVID-19 Community-Led Communications

Elmahaba Center:

"COVID-19: Pregnancy & Newborns" Livestream in Arabic



June 18, 2020

13.2k views

28 shares

46 comments

Conexión Américas:

"What is Telehealth?" Video in Spanish

April 27, 2020

9.7k views

165 likes

20 shares

MVA, Nashville Health Disparities Coalition:

"COVID-19: Fe y Salud" Livestream in Spanish

June 4, 2020

15.2k views

133 likes

22 shares

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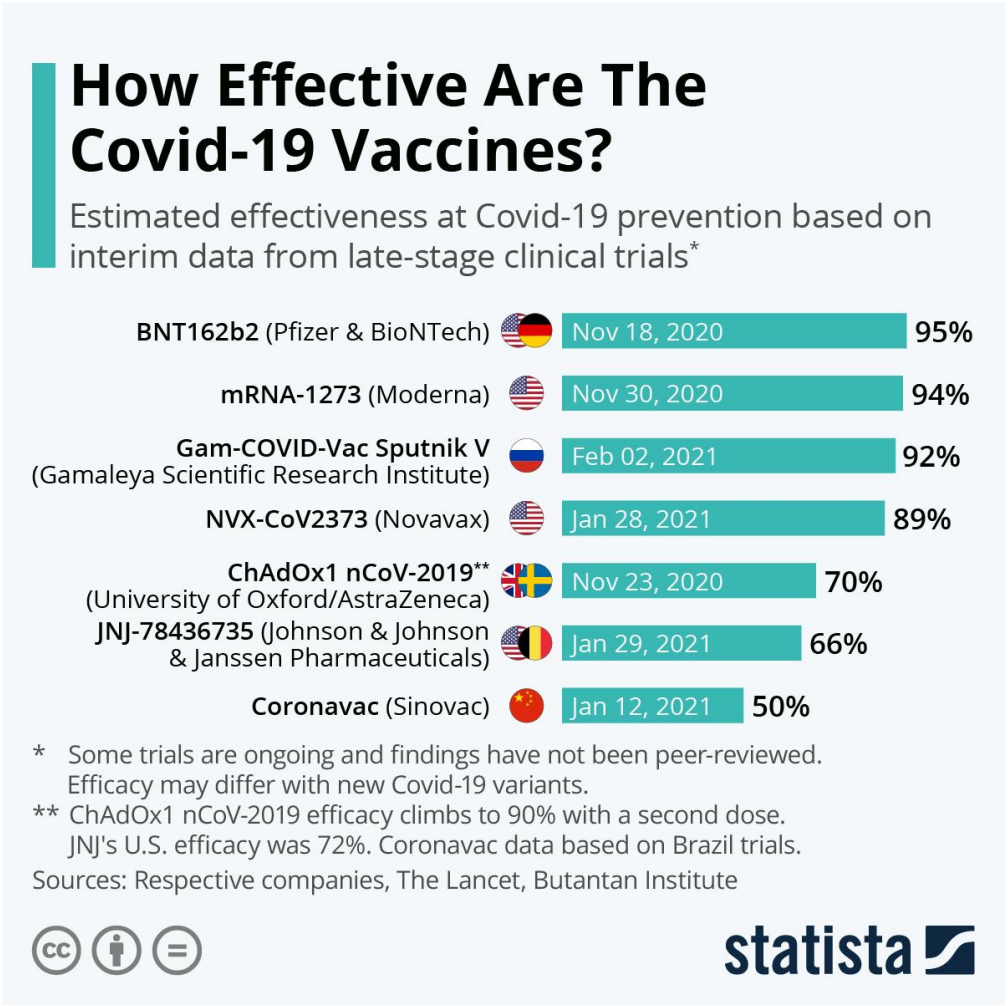
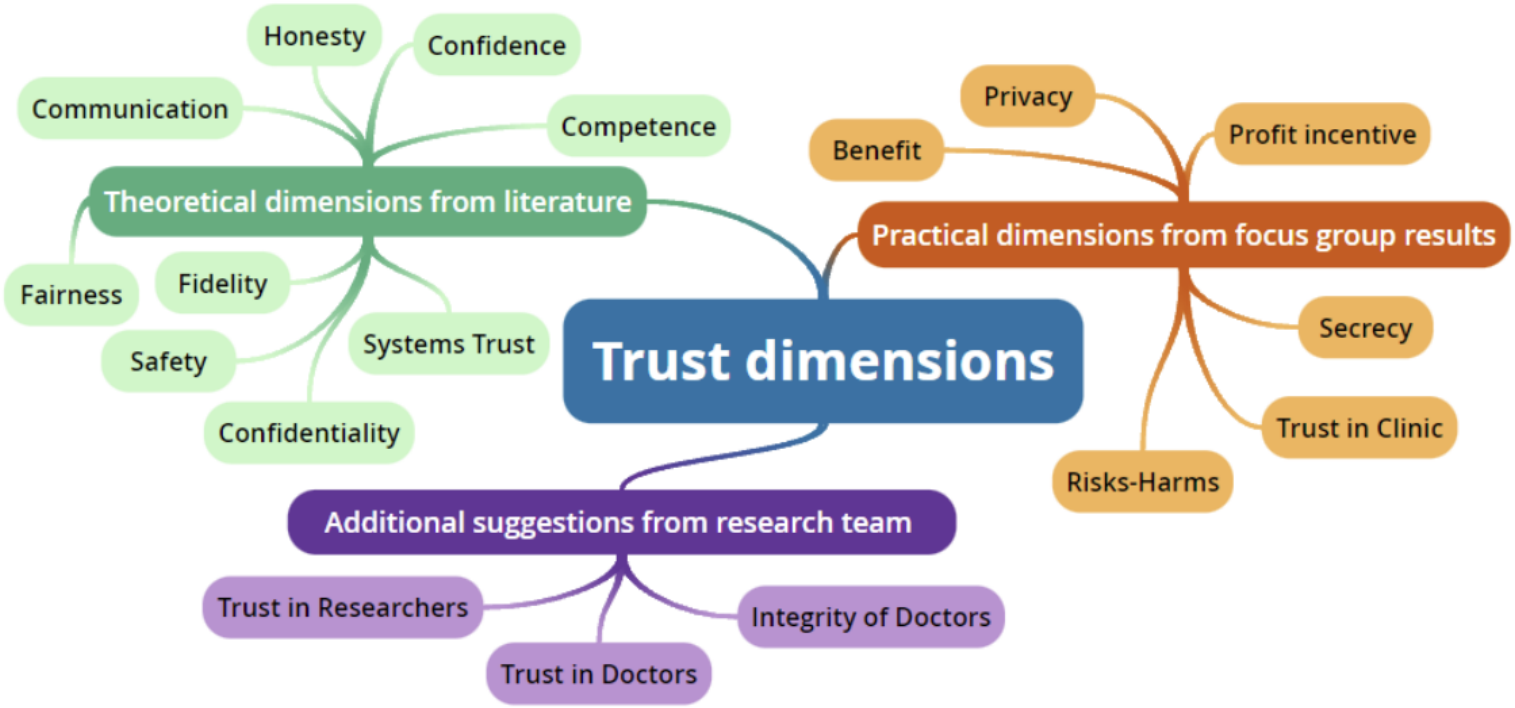


How might you interpret this data?


Trust dimensions
Theoretical dimensions from literature
Honesty
Confidence
Communication
Competence
Fairness
Fidelity
Safety
Systems Trust
Confidentiality
Practical dimensions from focus group results
Privacy
Benefit
Profit incentive
Secrecy
Trust in Clinic
Risks-Harms
Additional suggestions from research team
Trust in Researchers
Integrity of Doctors
Trust in Doctors

Scale items mapped to trust dimensions with item mean differences by race/ethnicity category			
	Theoretical Dimensions from Literature	**Practical Dimensions from Focus Group Data**	**Item Mean Differences by Category** B = Black; H/L = Hispanic/Latino; W = white; CI confidence interval
Trust Subscale			
1. Medical researchers tell people everything they need to know about being in a research study.	Honesty, Communication	Secrecy	H/L < W: -0.361 (95% CI -0.646, -0.077)
4. Medical researchers would never give someone something that would hurt them, just to study how it works in people.	Honesty, Fidelity		B < W: -0.391 (95% CI -0.654, -0.129)
7. Participation in medical research benefits society.		Benefit	B < W: -0.247 (95% CI -0.369, -0.125)
10. Medical researchers only do research on people who know it is happening.	Fidelity, Safety	Risk/Harms	H/L < W: -0.591 (95% CI -0.880, -0.302)
14. My physician would not ask me to be in a medical research study if he/she thought it would hurt me.	Confidence, Fidelity, Safety	Risk/Harms	B < W: -0.425 (95% CI -0.630, -0.220)
Distrust Subscale			
8. Medical research is secretly designed to give diseases to minority groups.	Fairness, Systems Trust, Safety	Risk/Harms, Secrecy	H/L > W: 0.413 (95% CI 0.183, 0.644) B > W: 0.560 (95% CI 0.376, 0.745)
12. Medical researchers would lie to people to convince them to be in a research study.	Honesty		B > W: 0.425 (95% CI 0.210, 0.641)
16. Medical researchers will share my personal info with anybody else they want to, even if I don't tell them they can do that.	Confidentiality	Privacy	B > W: 0.362 (95% CI 0.168, 0.557)

Table 1: Race/Ethnicity of Participants in Pfizer-BioNTech and Moderna COVID-19 Vaccine Clinical Trials			
	Total US Population Age 16+	**Pfizer-BioNTech***	**Moderna**
Total	**258 million**	**40,277**	**27,817**
Race			
White	73.6%	81.9%	79.4%
Black	12.3%	9.8%	9.7%
Asian	5.9%	4.4%	4.7%
American Indian/Alaska Native	0.8%	0.6%	0.8%
Native Hawaiian or Other Pacific Islander	0.2%	0.2%	0.2%
Ethnicity			
Hispanic	17.6%	26.2%	20.0%
Non-Hispanic	82.4%	73.2%	79.1%

NOTES: *Pfizer-BioNTech data are for all participants globally; of which 76.7% are in the United States. Pfizer results provided for Phase 2/3 trial, Moderna results for Phase 3 trial. The Pfizer trial included those ages 16 and older. The Moderna trial included those ages 18 and older.

SOURCES: Racial/ethnic distribution of total population age 16 or older based on KFF analysis of 2019 American Community Survey data; FDA, Briefing Document: Pfizer-BioNTech COVID-19 Vaccine, December 10, 2020; FDA, Briefing Document: Moderna COVID-19 Vaccine, December 17, 2020

Vaccine Readiness: Effectively Communicate and Engender Trust

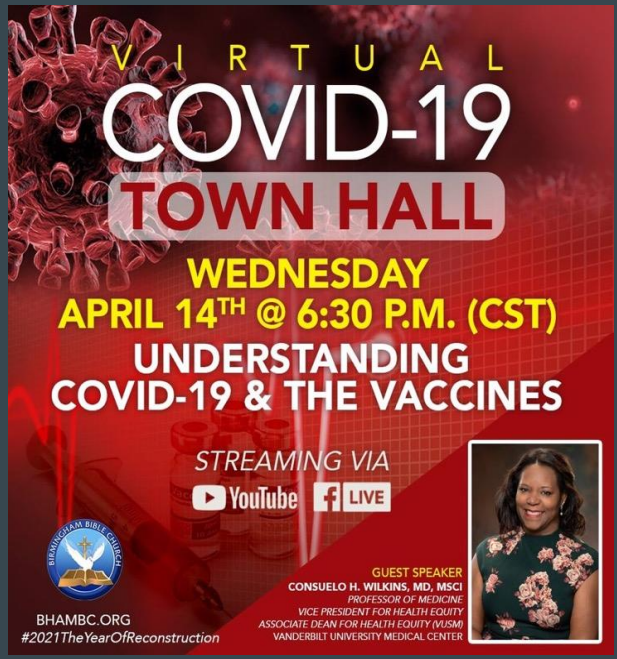
Effective Communication:

- Share accurate information from trustworthy sources
- Use clear, concise, plain language
- Deliver messaging using different modes- print, video, infographics, in-person, social media
- Provide information in multiple languages
- Develop FAQs, update based on feedback
- Use visuals reflecting authentic diversity

Vaccine Readiness: Effectively Communicate and Engender Trust

Engender Trust:

- Acknowledge fears, concerns, historical injustices
- Be transparent about side effects and unknowns
- Use messengers experienced effectively communicating with diverse audiences
- Dispel myths with facts, without being critical of individual or group beliefs
- Partner with trusted leaders to share information
- Allow people to see themselves - "someone like me"



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Recommendations for Improving Science Communication

One-size-fits-all approaches do not work; may widen inequities

Who? Require diversity of research teams and stakeholders
Provide mechanisms to fund trusted messengers
Community orgs, faith leaders, community health providers
Train scientists in effective communication + cultural humility

What? Scientific information considers context and lived experiences

How? Use multiple modes -video, social media, radio
Multiple languages – Transcreate
Multiple versions – different images and settings

Image from democracyandme.org

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