





ORIGINAL RESEARCH

Examining The Relationship Between Discriminated Medical Care and Telehealth Use in the United States

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Abstract

Introduction: Discrimination in healthcare can lead to reduced trust in the system and reluctance to seek care. Telehealth and other digital health technologies might have the potential to reduce inequality and bias within the healthcare system. This is because the virtual space might minimize the implicit social and cultural biases that can influence face-to-face interactions in the traditional in-person healthcare delivery settings. However, amidst a growing body of literature on how different racial and ethnic groups use telehealth services, the extent to which discrimination in medical care drives the use of telehealth in the United States has remained largely uncharacterized. We address this gap by examining the relationship between experiences of racial or ethnic discrimination in healthcare and telehealth use in the United States.

Methods: The Health Information National Trend Survey (HINTS: cycle 6) was the primary data source. As a nationally representative survey, HINTS was conducted between March and November 2022. The analytic sample included 5,437 participants 18 years of age and older. Logistic regression was used to examine the relationship between medical care discrimination and telehealth utilization among different racial/ethnic groups, controlling several potential confounders.

Results: The findings reveal that individuals who experienced racial or ethnic discrimination during medical care had significantly higher odds of telehealth use compared to those who did not (odds ratio [OR] = 1.45, 95% confidence interval [CI] = 1.03–2.05). Factors such as p = education, health status, and age were also associated with telemedicine utilization.

Conclusions: The findings highlight the potential of telehealth to address racial discrimination in healthcare by offering an alternative to in-person care among U.S. adults. However, structural factors such as insurance coverage, digital literacy, and access to technology might limit its effectiveness in improving and increasing access to healthcare.

Plain Language Summary

The authors investigated whether people who experience discrimination due to their race or ethnicity had significantly higher odds of using telehealth instead of going for an in-person medical visit. There were 5,437 adults 18 years and older in the U.S. who completed a national survey administered by the National Cancer Institute in 2022. This survey asked if people felt they were treated unfairly by a healthcare provider due to their race or ethnicity. They were also asked if they had used telehealth through video, audio, or both in the past 12 months. Approximately, 43% reported using telehealth. Those who have experienced discrimination had, significantly, 1.5 times higher odds of using telehealth than those who did not report discrimination. Other groups with significantly higher odds of using telehealth include participants between 35 and 49 years and those who have health insurance. Participants who self-reported having excellent and very good health, males, and high school graduates had significantly lower odds of using telehealth. The results suggest that people who feel discriminated against during in-person medical care have telehealth as an alternative to receiving care.

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The United States is an increasingly diverse country and certain groups may experience discrimination, which can contribute to adverse health outcomes for patients. Discrimination in healthcare is defined as negative and inconsiderate actions certain groups or individuals face due to a biased or unjustified opinion.¹ It is vital to bear in mind that individuals do not have to be members of a group that is mistreated to experience discrimination. Furthermore, discrimination can exist without harming the individual. People can be discriminated against for several reasons in healthcare due to their socioeconomic status, race, ethnicity, disability, sexual orientation, spoken language, and *p* = identity.¹ Other groups that experience discrimination in healthcare include people who use drugs.² Previous research reveals that individuals who use drugs often face stigma within healthcare settings, which can lead to delays or complete avoidance in seeking healthcare.²

There is ongoing dialogue about how the U.S. health system can understand and respond to widening health disparities and inequities.³ Factors, including physician bias, patient-clinician discordance, and daily discriminatory experiences, are linked to inequities in medical care, health outcomes, and mortality.⁴ In a 2020 study,⁴ it was estimated that more than one in five adults in the U.S. experienced discrimination at least once during medical care.

The most prevalent types of discrimination reported were based on race.⁴ Others included education or income levels, weight, gender, and age.⁴ People who encounter discrimination while seeking medical care might lose trust in the healthcare system and be hesitant to seek needed medical care.⁵

Telehealth provides the opportunity to provide healthcare at a distance and has been touted for its potential to eliminate care-seeking barriers.⁶⁻⁹ Telehealth uses various information and communication technologies to deliver clinical services in real-time or asynchronously, or facilitate communication between clinicians when the parties are physically separated.⁸ In addition to bridging geographical barriers to medical care and enhancing patient outcomes,^{6,7,10} prior research⁹ suggests that telehealth and other digital health technologies might have the potential to reduce inequality and bias within the healthcare system because the virtual space might minimize the implicit social and cultural biases that can influence face-to-face interactions in the traditional in-person healthcare delivery settings.⁹ As a result, individuals facing discrimination during in-person healthcare delivery might have a preference for other forms of healthcare, such as telehealth modality, over in-person care.

However, amidst a growing body of literature on how different racial and ethnic groups use telehealth services,¹¹ the extent to which discrimination in medical care drives

the use of telehealth in the U.S. is largely uncharacterized. While previous research examined telehealth's potential to address health disparities among specific groups, the primary focus has been on healthcare access expansion.¹²⁻¹⁵ Accordingly, this study fills this gap in the literature by using a nationally representative sample to empirically examine the relationship between racial or ethnic discrimination in medical care and telehealth use among adults in the United States.

Methods

This cross-sectional study used data from the Health Information National Trend Survey (HINTS: cycle 6), conducted between March and November 2022. HINTS is a nationally representative survey designed to capture information from non-institutionalized civilians within the United States. It regularly evaluates the public's knowledge of cancer and health information and services. The survey is essential for monitoring changes in health communication practices, identifying emerging health needs, and testing new theories in the field of health communication.¹⁶ Cycle 6 included 6,252 respondents, who completed at least 50% of the survey. The final response rate for HINTS 6 was 28.07%.¹⁶

The sampling strategy for the survey employed a two-stage design. A stratified sampling approach was used in the first stage. Residential addresses were selected from four strata: high minority urban, low minority urban, high minority rural, and low minority rural. In the second stage, one adult was randomly chosen from each selected household using the "next birthday" method. Respondents had the option to complete the survey either online or on paper. Participants in one arm were initially offered the chance to respond online, with paper surveys sent later. In the other arm, respondents could choose between the two modes. Both survey modes were available in English and Spanish.¹⁶

To account for the complex sampling design of HINTS, address nonresponse and noncoverage biases and ensure the validity of inferences from the respondents to the populations, weighting procedures are applied during data analysis.¹⁶

Primary Outcome Variable

The outcome variable of interest in this study was telehealth use. Telehealth in the context of this study refers to the delivery of clinical services via telecommunication between a healthcare provider and a patient. It was measured by the response to this question: "In the past 12 months, did you receive care from a doctor or health professional using telehealth?" It was measured in the survey as a categorical variable with the following responses: yes, by video; yes, by phone call (voice only with no video); yes, some by video and some by phone call and no

telehealth visits in the past 12 months. This variable was recoded into two categories—Yes (by any modality) and No telehealth visits in the past 12 months.

Independent Variables

The key independent variable in this study was racially discriminatory medical care, measured by the binary response (yes or no) to the following question: “Have you **ever** been treated unfairly when getting medical care because of your race or ethnicity?”

Confounders

The selection of confounders was based on existing literature and expert opinion. Specifically, studies conducted by Braveman and colleagues³ and Nong and colleagues⁴ guided the inclusion of key demographic and socioeconomic variables. In addition, we included other relevant covariates based on our expertise, such as health insurance status, general health status, marital status, employment status, and rural versus urban designation. These variables were selected based on their potential influence on both discrimination and telehealth use.

The study controlled for health insurance status (insured vs. not insured) and general health, measured by a 5-point Likert scale ranging from excellent to poor. Other assessed variables included age (18–34, 35–49, 50–64, 65–74, and 75+ years), gender (male vs. female), marital status (married vs. not married), household income (less than \$20,000; \$20,000 to <\$35,000; \$35,000 to <\$50,000; \$50,000 to <\$75,000; and ≥\$75,000), educational level (less than high school; high school graduate; some college; and college graduate or more), employment status (employed vs. unemployed), race/ethnicity (non-Hispanic White; non-Hispanic Black or African American; Hispanic; non-Hispanic Asian; and non-Hispanic other), and U.S. Department of Agriculture rural/urban designation.

Data Analysis

After deleting respondents with missing information on the study’s key variables and restricting our sample to only individuals who had received healthcare apart from at the emergency room in the past 12 months, the analytical sample included 5,437 survey respondents. Descriptive statistics, including cross-tabulations and bivariate analyses using chi-square tests, were conducted to describe the study sample. Both unadjusted and adjusted multivariate logistic regression models were used to estimate the relationship between racial discrimination in medical care and telehealth utilization in the study population, adjusting for relevant covariates. All analyses were weighted to account for the complex sampling design of HINTS 6 and to ensure nationally representative parameter estimates. The threshold for

statistical significance was set at a p -value < 0.05. All analyses were conducted in R version 4.4.2.

Results

The majority of the 5,437 respondents were female participants (53.6%), non-Hispanic White (64.5%), and aged 50 through 64 years (28.4%). Approximately 46% reported an income of \$75,000 and above, and 39.1% reported having some college degree. The majority resided in urban counties (87.5%), were employed (57.3%), reported being married (53%), and had insurance coverage (92.6%) (Table 1).

Factors Associated With Telehealth Use

Approximately 43% of the respondents reported receiving telehealth services in the past 12 months. In the bivariate analysis, compared to participants who had not received telehealth in the past 12 months, a higher proportion of respondents who reported receiving telehealth were female (58.3% vs. 49.6%; $p = 0.001$), aged 35 to 49 years (29.1% vs. 21.8%; $p = 0.007$), had some college education (38.3% vs. 39.6%; $p = 0.034$), and had health insurance (94.4% vs. 91.3%; $p = 0.016$) (Table 1).

After adjusting for potential confounding factors (Table 2), past experience of racially discriminated medical care was found to be independently associated with telehealth use (Adjusted OR [AOR] = 1.45, 95% confidence interval [CI] = 1.03–2.05, $p = 0.04$). Participants who experienced discriminated medical care on the basis of race and ethnicity had approximately 1.5 times higher odds of using telehealth compared to those who did not.

Other factors positively and significantly associated with telehealth use included being in the age group of 35–49 relative to 75 and older (AOR = 1.87, 95% CI = 1.33–2.64, $p = 0.001$).

Factors negatively and significantly associated with telehealth use included excellent general health relative to poor health status (AOR = 0.31, 95% CI = 0.14–0.68, $p = 0.005$), very good health relative to poor health status (AOR = 0.44, 95% CI = 0.21–0.90, $p = 0.03$), being male relative to female (AOR = 0.69, 95% CI = 0.53–0.90, $p = 0.007$), and having a high school diploma relative to a college degree or higher (AOR = 0.72, 95% CI = 0.53–0.98, $p = 0.04$).

Discussion

Key Results

This study examined the relationship between experience of racial or ethnic discrimination in medical care and telehealth utilization, drawing from a large, nationally representative U.S. sample. The results indicate that individuals who reported experiencing discrimination during medical care had significantly higher odds of using telehealth services. Other variables significantly associated with

Table 1. Sociodemographic characteristics of participants: *N* = 5,437

Demographics	Total (<i>N</i> = 5,437) weighted %	Received telehealth = Yes (<i>n</i> = 2,384) weighted %	Did not receive telehealth = No (<i>n</i> = 2,933) weighted	<i>P</i> -value
Gender				0.001
• Female	53.6	58.3	49.6	
• Male	46.4	41.7	50.4	
Age group (years)				0.007
• 18–34	23.3	22.0	24.1	
• 35–49	25.1	29.1	21.8	
• 50–64	28.4	27.9	28.9	
• 65–74	13.9	12.7	15.0	
• 75+	9.3	8.3	10.2	
Marital status				0.208
• Married	53.0	54.7	51.9	
• Not Married	47.0	45.3	48.1	
Employed				0.885
• Yes	57.3	57.4	57.7	
• No	42.7	42.6	42.3	
Rural-urban designation				0.114
• Urban	87.5	88.7	86.5	
• Rural	12.5	11.3	13.5	
Race/ethnicity				0.269
• Non-Hispanic White	64.5	63.3	66.0	
• Non-Hispanic Black or African American	11.0	9.7	11.7	
• Hispanic	15.0	16.9	13.6	
• Non-Hispanic Asian	5.1	5.3	5.0	
• Non-Hispanic Other	4.4	4.8	3.7	
Income				0.148
• <\$20,000	13.3	12.7	13.2	
• \$20,000 to < \$35,000	10.9	9.8	11.6	
• \$35,000 to < \$50,000	11.6	11.7	11.6	
• \$50,000 to < \$75,000	18.0	16.0	19.6	
• \$75,000 or More	46.2	49.8	44.1	
Education				0.034
• Less than High School	5.7	4.6	6.5	
• High School Graduate	20.9	19.1	22.2	
• Some College	39.1	38.3	39.6	
• College Graduate or More	34.2	38.0	31.7	
General health				<0.001
• Excellent	10.8	9.1	12.2	
• Very good	35.9	34.4	37.3	
• Good	37.0	36.8	37.4	
• Fair	14.3	17.1	11.5	
• Poor	2.1	2.6	1.6	
Health insurance				0.016
• Yes	92.6	94.4	91.3	
• No	7.4	5.6	8.7	

Table 2. Unadjusted and adjusted binomial logistic regression of telehealth utilization

	Unadjusted OR	Adjusted OR
Discriminatory medical care	1.488* (1.071, 2.068)	1.450* (1.027, 2.048)
Education (Ref: College Graduate or More)		
• High school graduate	0.717** (0.570, 0.903)	0.719* (0.529, 0.976)
• Less than high school	0.597 (0.348, 1.024)	0.607 (0.269, 1.368)
• Some college	0.809 (0.633, 1.033)	0.801 (0.595, 1.079)
Male (Ref: Female)	0.704** (0.568, 0.874)	0.690** (0.532, 0.895)
Race/Ethnicity (Ref: Non-Hispanic Whites)		
• Hispanic	1.299 (0.984, 1.715)	1.295 (0.903, 1.858)
• Non-Hispanic Asian	1.095 (0.583, 2.058)	0.911 (0.513, 1.618)
• Non-Hispanic Black or African American	0.865 (0.627, 1.192)	0.722 (0.510, 1.024)
• Non-Hispanic Other	1.350 (0.813, 2.242)	1.146 (0.679, 1.933)
• Rural/Urban Designation (Ref: Rural)	1.231 (0.944, 1.606)	1.166 (0.873, 1.559)
Employed (Ref: No)	0.986 (0.805, 1.207)	0.880 (0.666, 1.162)
Age Group (Ref: 75+)		
• 18–34 years	1.126 (0.815, 1.556)	1.361 (0.887, 2.086)
• 35–49 years	1.645*** (1.225, 2.210)	1.874*** (1.330, 2.641)
• 50–64 years	1.187 (0.890, 1.583)	1.348 (0.957, 1.900)
• 65–74 years	1.045 (0.765, 1.426)	1.137 (0.787, 1.643)
Income (Ref: \$75,000 or more)		
• \$20,000 to < \$35,000	0.749 (0.549, 1.021)	0.767 (0.506, 1.162)
• \$35,000 to < \$50,000	0.892 (0.629, 1.264)	0.973 (0.644, 1.470)
• \$50,000 to < \$75,000	0.724 (0.523, 1.002)	0.723 (0.508, 1.030)
• Less than \$20,000	0.853 (0.623, 1.166)	0.844 (0.566, 1.258)
Marital status (Ref: Not married)	1.118 (0.935, 1.337)	1.045 (0.869, 1.256)
General health (Ref: Poor)		
• Excellent	0.447* (0.235, 0.851)	0.313** (0.144, 0.681)
• Very good	0.555 (0.306, 1.006)	0.437* (0.211, 0.904)
• Good	0.594 (0.312, 1.129)	0.491 (0.231, 1.044)
• Fair	0.900 (0.459, 1.765)	0.710 (0.319, 1.580)
Health insurance (Ref: No)	1.601* (1.069, 2.398)	1.591 (0.892, 2.838)

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

telehealth use include age, gender, education, and general health status.

Interpretation

In general, the findings align with ongoing dialogue on telehealth's potential to minimize discrimination in medical care and expand access for underserved and minority population groups.^{14,15,17} Similar to the findings of this study, a previous study using a nationally representative survey, Health, Ethnicity and Pandemic (HEAP), conducted in October 2020 during the COVID-19 pandemic, found that individuals who perceived higher racial discrimination were more inclined to opt for telehealth services.¹⁸

Prior research suggests that individuals who experience discrimination may encounter barriers to seeking traditional in-person healthcare services.⁴ These barriers can contribute to delayed care, decreased trust in the healthcare system, and overall dissatisfaction with conventional

healthcare delivery.⁴ Following the COVID-19 pandemic, telehealth has emerged as an alternative of comparable value to in-person care, with most patients reporting favorable perceptions of this mode of healthcare delivery.¹⁹ Compared to in-person care, telehealth has been associated with shorter wait times, high perceived value, and comparable patient quality ratings.²⁰ Thus, by opting for telehealth, patients who have previously experienced discrimination may minimize human touchpoints, potentially reducing the risk of perceived discriminatory encounters—without trading quality.

Telehealth is also effective in improving patient satisfaction. A study by Donelan et al.²¹ reported a high level of satisfaction among patients and clinicians, reduced communication misunderstandings, positive perceptions of visit quality, and willingness to recommend telehealth services.²¹ To enhance patient-centeredness, clinicians should be trained on “websites” manners, the digital

equivalent to bedside manners, which focuses on relationship-centered care in virtual settings.²² Additionally, Hall and McGraw²³ reported that improving privacy protections and building trust through the implementation of encryption technologies are essential strategies to increase the willingness of patients to engage in telehealth services.

Consistent with previous studies, this study also revealed associations between certain demographic factors and socioeconomic status and telehealth utilization. Younger, female, and educated adults with better health outcomes had significantly higher odds of using telehealth. A prior study found that participants in younger age groups had higher use of telehealth than participants 65 years or older.²⁴ Similarly, previous studies confirm that female participants,¹⁸ and those more educated,^{25,26} have higher odds of using telehealth, while better health outcomes,¹⁸ have been linked with lower telehealth utilization.

Collectively, the findings of this study suggest that the potential of telehealth is not without constraints. While the convenience and accessibility associated with telehealth have the potential to improve access and health outcomes for marginalized populations, disparities in digital literacy and access to technology may reduce telehealth's full potential, particularly for socioeconomically disadvantaged groups.²⁷ Factors associated with lower utilization of telehealth services, such as age, gender, socioeconomic status, and health status, have previously been associated with digital health literacy.²⁷ Together with digital literacy, researchers caution that additional factors that can impact one's ability to navigate telehealth platforms and use telehealth services, such as poor internet connection and lack of access to technology,^{28,29} might potentially widen healthcare inequalities.^{28,29}

Limitations

This study has several limitations. Firstly, the cross-sectional design of HINTS limits the ability to establish a causal relationship between previous experience of racial or ethnic discrimination in medical care and telehealth use. Additionally, the HINTS data did not clarify whether participants could choose or decline a telehealth consultation, which might have influenced responses, particularly among those with excellent health.

The survey also lacked a clear definition of telehealth or specifications of services categorized as telehealth, which introduces the potential for response bias as participants may have interpreted the term differently. Similarly, the intent of collecting the information on telehealth was not clearly stated, which could influence how respondents understood and answered related questions. Furthermore, the survey did not indicate whether telehealth was provided as part of health insurance coverage, which is an important factor that influences access. This limits the interpretation regarding access to telehealth services.

The reliance on self-reported survey responses introduces the potential for recall bias. In addition, we recoded the different modes of telehealth delivery (audio, video, and both) into a single category due to sample size considerations. This might have overlooked differences in accessibility, particularly for phone-only consultations that do not require an Internet connection. The data set did not include information on digital literacy and language barriers, which might have affected participants' influence to use telehealth. Moreover, the data collection for HINTS 6 occurred during the COVID-19 pandemic, when telehealth consultations might have been mandated in some cases rather than voluntarily selected, limiting the ability to assess preference.

In addition, as a secondary data analysis, this study was limited by the variables available in the dataset and could not fully understand the context of individuals' discriminatory experiences or account for other potential confounding variables.

Impact on Policy and Practice

The findings from this study suggest telehealth could play a role in addressing discrimination in healthcare delivery. However, to maximize its potential, it is necessary that there are policies that promote digital equity, including broadband access, availability of smart devices, and digital literacy training, especially for underserved populations. It is also necessary to encourage healthcare providers to offer telehealth as a viable, routine care option when appropriate, without assuming it replaces the need for in-person care, given its possibility to increase access and satisfaction for individuals with prior discriminatory experiences.

Generalizability and Future Recommendations

This study is generalizable to the adult U.S. population given the use of a nationally representative dataset. To address the limitations of this study, future research could employ a longitudinal design to examine the causal relationship between racial or ethnic discriminatory experiences in medical care and telehealth use. Additionally, future surveys should clearly define telehealth, specify the types of services included, and clarify whether telehealth visits were elective or mandatory. Survey instruments should also collect information on whether telehealth services were covered by insurance, as this is a critical factor influencing access.

Lastly, primary data collection efforts focused on understanding patients' lived experiences of discrimination in healthcare would allow for more in-depth understanding of the context and mechanisms by which these experiences influence subsequent health-seeking behaviors, including telehealth use. Future research may consider incorporating mixed approaches, combining

quantitative survey data with qualitative insights. This would allow for a more comprehensive investigation of the complexities surrounding discrimination in medical care.

Conclusion

The findings reveal a positive significant relationship between experiences of racial or ethnic discrimination in medical care and telehealth use, highlighting the potential of telehealth to enhance health care access. Additionally, sociodemographic factors such as age, $p =$ education and general health status were also associated with telehealth use. While telehealth has the potential to improve access and reduce barriers in healthcare delivery, structural factors such as insurance coverage, digital literacy, and access to technology must be addressed to ensure its widespread use.

These results contribute to a growing knowledge of how experiences of discrimination shape healthcare behaviors and choices, particularly in the context of digital health service use.

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Conflicts of Interest

The authors declare no potential conflicts with respect to research, authorship, and/or publication of this article.

Authors' Contribution

Conceptualization: JEA, STO, BAA, and WAM; data curation: JEA and STO; methodology: JEA and STO; formal analysis: JEA, and STO; interpretation: JEA, STO, BAA, and WAM; writing: original draft preparation, JEA; writing, review, and editing: JEA, STO, BAA, and WAM; final approval of the version published: JEA, STO, BAA, and WAM. All authors read and agreed to the published version of the manuscript.

Data Availability Statement (DAS), Data Sharing, Reproducibility, and Data Repositories.

The data used for this study, HINTS 6 dataset, is publicly available at this website- <https://hints.cancer.gov/data/download-data.aspx#H6>

Application Of Ai-Generated Text Or Related Technology

It was used to generate article keywords.

References

1. Togioka BM, Duvivier D, Young E. Diversity and discrimination in healthcare (Internet). Bethesda, MD: National Library of Medicine (US); 2023 [cited 2025 Jun 02]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK568721/>
2. Meyerson BE, Russell DM, Kichler M, et al. I don't even want to go to the doctor when I get sick now: healthcare experiences and discrimination reported by people who use drugs, Arizona 2019. *Int J Drug Policy*. 2021;93:103112. <https://doi.org/10.1016/j.drugpo.2021.103112>
3. Braveman P, Egerter S, Williams DR. The social determinants of health: coming of age. *Annu Rev Public Health*. 2011;32:381–98. <https://doi.org/10.1146/annurev-publhealth-031210-101218>
4. Nong P, Raj M, Creary M, et al. Patient-reported experiences of discrimination in the US healthcare system. *JAMA Netw Open*. 2020;3(12). <https://doi.org/10.1001/jamanetworkopen.2020.29650>
5. Rivenbark JG, Ichou M. Discrimination in healthcare as a barrier to care: experiences of socially disadvantaged populations in France from a nationally representative survey. *BMC Public Health*. 2020;20(31). <https://doi.org/10.1186/s12889-019-8124-z>
6. Price JC, Simpson DC. Telemedicine and health disparities. *Clin Liver Dis (Hoboken)*. 2022;19(4):144–7. <https://doi.org/10.1002/cld.1171>
7. Andino JJ, Eyrich NW, Boxer RJ. Overview of telehealth in the United States since the COVID-19 public health emergency: a narrative review. *mHealth*. 2023;9. <https://doi.org/10.21037/mhealth-23-15>
8. Shaver J. The state of telehealth before and after the COVID-19 pandemic. *Prim Care*. 2022;49(4):517–30. <https://doi.org/10.1016/j.pop.2022.04.002>
9. Bitomsky L, Pfitzer EC, Nißen M, et al. Advancing health equity and the role of digital health technologies: a scoping review protocol. *BMJ Open*. 2024;14:e082336. <https://doi.org/10.1136/bmjopen-2023-082336>
10. Chauhan V, Galwankar S, Arquilla B, et al. Novel coronavirus (COVID-19): leveraging telemedicine to optimize care while minimizing exposures and viral transmission. *J Emerg Trauma Shock*. 2020;13(1):20–4. https://doi.org/10.4103/JETS.JETS_32_20
11. Haimi M. The tragic paradoxical effect of telemedicine on healthcare disparities—a time for redemption: a narrative review. *BMC Med Inform Decis Mak*. 2023;23:95. <https://doi.org/10.1186/s12911-023-02194-4>
12. Grieco-Page H, Black CJ, Berent JM, et al. Beyond the pandemic: leveraging rapid expansions in US telemental health and digital platforms to address disparities and resolve the digital divide. *Front Psychiatry*. 2021;12. <https://doi.org/10.3389/fpsy.2021.671502>
13. Knudsen KE, Willman C, Winn R. Optimizing the use of telemedicine in oncology care: post pandemic opportunities. *Clin Cancer Res*. 2021;27(4):933–6. <https://doi.org/10.1158/1078-0432.CCR-20-3758>
14. Magnus M, Edwards E, Dright A, et al. Development of a telehealth intervention to promote care-seeking among trans= women of color in Washington, DC. *Public Health Nurs*. 2020;37:262–71. <https://doi.org/10.1111/phn.12709>
15. Waad A. Caring for our community: telehealth interventions as a promising practice for addressing population health disparities of LGBTQ+ communities in health care settings. *Del J Public Health*. 2019;5(3):12–15. <https://doi.org/10.32481/djph.2019.06.005>
16. National Cancer Institute. Health information national trends survey. 2023 [cited 2024 Apr 12]. Available from: <https://hints.cancer.gov/>

17. Gonzales G, Henning-Smith C. Barriers to care among trans= and p= nonconforming adults. *Milbank Q*. 2017;95(4):726–48. <https://doi.org/10.1111/1468-0009.1229>
18. Zhang D, Shi L, Han X, et al. Disparities in telehealth utilization during the COVID-19 pandemic: findings from a nationally representative survey in the United States. *J Telemed Telecare*. 2024;30(1):90–7. <https://doi.org/10.1177/1357633X211051677>
19. Kodjebacheva GD, Culinski T, Kawser B, et al. Satisfaction with telehealth services compared with non-telehealth services among pediatric patients and their caregivers: systematic review of the literature. *JMIR Pediatr Parent*. 2023;6. <https://doi.org/10.2196/41554>
20. Hoi KK, Brazina SA, Kolar-Anderson R, et al. A longitudinal comparison of telemedicine versus in-person otolaryngology clinic efficiency and patient satisfaction during COVID-19. *Ann Otol Rhinol Laryngol*. 2022;131(11):1177–84. <https://doi.org/10.1177/00034894211055349>
21. Donelan K, Barreto EA, Sossong S, Michael C, Estrada JJ, Cohen AB, Schwamm LH. Patient and clinician experiences with telehealth for patient follow-up care. *Am J Manag Care*. 2019;25(1):40–4.
22. Modic MB, Neuendorf K, Windover AK. Enhancing your webside manner: optimizing opportunities for relationship-centered care in virtual visits. *J Patient Exp*. 2020 Dec;7(6):869–77. <https://doi.org/10.1177/2374373520968975>
23. Hall JL, McGraw D. For telehealth to succeed, privacy and security risks must be identified and addressed. *Health Aff (Millwood)*. 2014;33(2):216–21. <https://doi.org/10.1377/hlthaff.2013.0997>
24. White-Williams C, Liu X, Shang D, Santiago J. Use of telehealth among racial and ethnic minority groups in the United States before and during the COVID-19 pandemic. *Public Health Rep*. 2023;138(1):149–56. <https://doi.org/10.1177/00333549221123575>
25. Villarroel MA, Lucas JW. Telemedicine use in children aged 0–17 years: United States, July–December 2020. *Natl Health Stat Report*. 2022;170:1–11. <https://doi.org/10.15620/cdc:115433>
26. Karimi M, Lee EC, Couture SJ, et al. National survey trends in telehealth use in 2021: disparities in utilization and audio vs. video services. *ASPE: Issue Brief*; February 22, 2022.
27. van Kessel R, Wong BLH, Clemens T, Brand H. Digital health literacy as a super determinant of health: more than simply the sum of its parts. *Internet Interv*. 2022 Feb 7;27:100500. <https://doi.org/10.1016/j.invent.2022.100500>
28. Shaw J, Brewer LC, Veinot T. Recommendations for health equity and virtual care arising from the COVID-19 pandemic: narrative review. *JMIR Form Res*. 2021;5(4):e23233. <https://doi.org/10.2196/23233>
29. Husain L, Greenhalgh T, Hughes G, Finlay T, Wherton J. Desperately seeking intersectionality in digital health disparity research: narrative review to inform a richer theorization of multiple disadvantage. *J Med Internet Res*. 2022;24(12):e42358. <https://doi.org/10.2196/42358>

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