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Barry W. Rovner
Thomas Jefferson University

Robin J. Casten
Thomas Jefferson University

Anna Marie Chang
Thomas Jefferson University

Judd E. Hollander
Thomas Jefferson University

Kristin Rising
Thomas Jefferson University

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Running Head: **Mistrust and Telehealth Use in African Americans**

Barry W. Rovner, MD[a] (barry.rovner@jefferson.edu)

Robin J. Casten, PhD[a] (robin.casten@jefferson.edu)

Anna Marie Chang, MD, MSCE[a] (annamarie.chang@jefferson.edu)

Judd E. Hollander, MD (judd.hollander@jefferson.edu)

Kristin Rising, MD, MSHP[a] (kristin.rising@jefferson.edu)

[a] Sidney Kimmel Medical College of Thomas Jefferson University

Philadelphia, PA

Corresponding Author:

Barry W. Rovner, MD

Jefferson Hospital for Neuroscience

900 Walnut Street, Suite 200

Philadelphia, PA 19107

E-mail address: barry.rovner@jefferson.edu

(T): 215-503-1243; (F): 215-503-1992

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Abstract

We explored the relationship between trust in physicians and telehealth use during the COVID pandemic in 162 African Americans with diabetes. Over 90% of patients had internet-capable devices and internet service but only 61 patients (39%) had a telehealth visit. Compared to the latter, participants with no telehealth visits had less trust in physicians' ability to diagnose COVID, less trust in physicians' ability to treat via telehealth, and resided in more deprived neighborhoods. There were no differences in age, sex, education, nor literacy. For African Americans with diabetes, health disparities may increase unless fundamental issues such as trust are addressed.

Introduction:

The COVID-19 pandemic unmasked substantial health disparities, including the use of telehealth to deliver care.[1] Prior to the COVID pandemic, telehealth use was lower in African Americans than whites (30.1% vs. 38.6%, respectively), and the racial disparity widened during the pandemic (40.1% vs. 60.7%, respectively) and contributed to worse health outcomes in African Americans with diabetes.[2-4] Health and computer literacy (e.g., lack of internet connectivity and devices) may contribute to the disparity, but the patient-physician construct may also play a role. This study explored the relationship between trust in physicians, neighborhood deprivation, and telehealth use during the pandemic in African Americans with diabetes.

Methods:

From March to April 2020, race-concordant community health workers (CHWs) phone-interviewed a convenience sample of African Americans with diabetes (N=162) who were participating in diabetes-related research projects (ClinicalTrials.gov NCT03393338 and NCT03466866). The CHWs assessed whether participants had: a telehealth visit with their provider since the pandemic; an internet-compatible device (e.g., smart-phone); internet availability; knowledge of COVID prevention practices (e.g., wear face mask, social distancing) and COVID symptoms (e.g., fever, difficulty breathing); trust in physicians' ability to diagnose COVID; and trust in physicians' ability to treat (any condition) via a video visit. Trust items were rated from 1 (not at all) to 10 (extremely). IRB approval was obtained and all participants provided verbal informed consent. Previously collected data included demographic characteristics, health literacy (Literacy Assessment for Diabetes), depressive symptoms (Patient Health Questionairre-9), cognition (short-Montreal Cognitive Assessment), and hemoglobin A1c level. Participants' home addresses were used to generate the Area Deprivation Index score, which represents a neighborhood's relative deprivation or privilege based on income, employment, education, and housing quality. Statistical tests included one-way analysis of variance (ANOVA) for continuous data, and cross tabulations for categorical variables.

Results:

Of 157 participants, 145 (93%) had smartphones; 142 (92%) had internet service; and 136 (87%) could use a smartphone for video calls. Despite this high level of potential access, only 61 participants (39%) had a telehealth visit. Participants with no telehealth visits had lower mean trust scores in physicians' ability to diagnose COVID (7.7 [95% CI 7.2, 8.3] vs. 8.6 [95% CI 8.0, 9.1]), respectively [$F=4.25$ (1,156), $p < 0.04$]; lower trust in physicians' ability to treat any condition via a video visit (6.9 [95% CI 6.4, 7.5] vs. 7.9 [95% CI 7.4, 8.5]), respectively [$F= 6.32$ (1,156), $p < 0.03$]; and higher (worse) Area Deprivation Index scores (8.3 [95% CI 7.9, 8.7] vs. 7.5 [95% CI 6.8, 8.2]), respectively [$F=4.86$ (1,156), $p < 0.03$] than participants who had telehealth visits. (Table). There were no differences in age, sex, education, literacy, hemoglobin A1c, nor knowledge of COVID prevention or COVID symptoms.

Discussion:

In this sample of African Americans with diabetes, physician mistrust and neighborhood deprivation were associated with low telehealth use, and not associated with demographic characteristics, health literacy, glycemic control, depression, nor cognition. Access to telehealth-enabled devices was not an obstacle, as over 90% of participants had internet-capable devices and internet service and 87% knew how to use smartphones for video calls. Together, these data suggest that telehealth use by African Americans is more nuanced than having access to the necessary technology, and implicate aspects of the physician-patient relationship.

This exploratory study is limited by the small sample, uncertain generalizability, and lack of comparable data in whites. Nevertheless, the findings indicate that physician mistrust may be a determinant of telehealth use in underprivileged African Americans and that it needs to be better understood. Telehealth has the potential to increase or reduce healthcare inequities. For African Americans with diabetes, health disparities may increase unless fundamental issues such as trust are addressed.

Conclusion:

Physician mistrust and neighborhood deprivation are associated with low telehealth use in African Americans with diabetes. Health disparities may increase unless fundamental issues such as trust are addressed in this high risk population.

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Table. Comparison of Participants With and Without Telehealth Visits

	No Telehealth Visit (n = 96)	Telehealth Visit (n = 61)	*P* Value
Age, years [a]	60.4 (58.2, 62.6)	59.9 (58.6, 62.1)	.75
Sex, (n, %), female	65 (67.7%)	43 (70.5%)	.71
Education, years [a]	13.0 (12.6, 13.3)	13.3 (12.8, 13.8)	.33
Area Deprivation Index [a, b]	8.3 (7.9, 8.7)	7.5 (6.8, 8.2)	.03
Literacy [a, c]	49.1 (47.3, 50.9)	50.9 (48.9, 52.9)	.19
PHQ-9 [a, d]	7.7 (6.6, 8.7)	7.9 (6.5, 9.2)	.84
s-MoCA [a, e]	9.8 (9,3, 10.4)	10.1 (9.5, 10.7)	.51
Hemoglobin A1c [a]	8.6 (8.1, 9.0)	8.5 (7.9, 9.0)	.77
Trust in Physician Ability to Diagnose COVID [a, f]	7.7 (7.2, 8.3)	8.6 (8.0, 9.1)	.04
Trust in Physician Ability to Treat via Video Visits [a, f]	6.9 (6.4, 7.5)	7.9 (7.4, 8.5)	.01
Knowledge of COVID Symptoms [a, g]	5.8 (5.5, 6.0)	6.1 (5.9, 6.3)	.09
Knowledge of COVID Prevention [a, h]	6.9 (6.7, 7.1)	7.0 (6.6, 7.3)	.75

[a] Mean (95% Confidence Interval)
[b] Pennsylvania State Decile Score. Scores range from 1 to 10, with higher scores indicating greater disadvantage.
[c] Literacy Assessment for Diabetes. Scores range from 0 to 60, with higher scores indicating better literacy.
[d] PHQ-9 (Patient Health Questionnaire-9). Scores range from 0 to 27, with higher scores indicating more depressive symptoms.
[e] s-MoCA (Short-Montreal Cognitive Assessment). Scores range from 0 to 16, with higher scores indicating better cognitive function.
[f] Rated from 1 (not at all) to 10 (extremely).
[g] Rated from 0 to 7, with higher scores indicating greater knowledge.
[h] Rated from 0 to 8, with higher scores indicating greater knowledge.