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American Journal of Public Health

Black Women Organized for Wellness (B.WOW): A Bundled Approach to Enhance the Health of Black Women With HIV

 Shakeila A. Lewis-Chery, MPH,  Corliss D. Heath, PhD, MPH, MDiv,  Xiyuan Zhang, MPH, Vanessa Ayafor, MD, MPH,  Melissa Beaupierre, MPH, CPH, and  Serena Rajabiun, PhD, MA, MPH

In the more-than-40-year HIV epidemic, the health care needs of Black women have been overlooked, with few interventions for their care. The B.WOW intervention in Atlanta, Georgia, used a bundled intervention of mobile health technology and peer-patient navigation to improve antiretroviral adherence, care retention and address socioeconomic determinants. In 12 months, viral suppression improved from 37% to 73%, mental health services connection increased from 71% to 83%, and there was a significant reduction in stigma and improved resilience. These findings highlight the effectiveness of tailored interventions for Black women with HIV. (*Am J Public Health*. 2025;115(S1):S22–S27. <https://doi.org/10.2105/AJPH.2025.308020>)

In the more-than-40-year HIV epidemic, the health care needs of Black women have been overlooked,¹ with few interventions for their care.² The Grady Ponce De Leon Center, formerly the Infectious Disease Program, has served Atlanta, Georgia's, women, children, youths, and families for more than 30 years ensuring that people with HIV have access to primary care, HIV specialty care, and the essential support services needed to remain in care and reach viral suppression.

INTERVENTION AND IMPLEMENTATION

Under the Black Women First (BWF) Initiative, which applied an implementation science approach, the Black Women Organized for Wellness (B.WOW) project bundled the Enhanced Patient Navigation for Women of Color intervention³

with Positive Links (PLCares),⁴ a retention in care mobile health application developed by Warm Health Technology, to retain Black women with HIV in care. The intervention consisted of an all-Black-women team that offered peer support, education, and coaching from a patient navigator and used the mobile health application to increase self-efficacy, improve mental health, and build peer and community support.

PERSON, TIME, AND PLACE

B.WOW enrolled 100 Black women with HIV in the Metro Atlanta area between February 2021 and December 2022. The intervention aimed to enhance HIV care coordination, treatment, and psychosocial services. To be eligible for the intervention, participants must be living with HIV, identify as a

Black woman, and have one or more of the following characteristics:

1. aged between 18 and 55 years,
2. out of care for six months or more,
3. missing two or more appointments in the last 12 months,
4. not virally suppressed, and
5. having multiple comorbidities.

Priority was given to those who were out of care and not virally suppressed (Table 1). After consent, eligible participants were introduced to the team, which included the program manager, two patient navigators, and a peer counselor. Patient navigators identified women and supported them with their medical and social needs. Offering ancillary support, they also delivered six structured educational sessions through the mobile application, on topics that included HIV 101, understanding viral load and CD4, provider

TABLE 1— Black Women Organized for Wellness (B.WOW)
Participants' Baseline Characteristics: Atlanta, GA, February
2021–December 2022

	Mean $\pm$ SD or No. (%)
Age, y	36.6 $\pm$ 9
< 30	24 (24)
30–49	68 (6)
$\geq$ 50	8 (8)
Housing status	
Unstable housing	11 (11)
Temporary housing	28 (28)
Permanent housing	61 (61)
Current relationship status	
Single, never married	67 (67)
Married or in a committed relationship	31 (31)
Widowed, divorced, or separated	2 (2)
Education	
Less than high-school education	21 (21)
High-school diploma or GED received	37 (37)
Any post-high-school education	42 (42)
Current employment status	
Employed	28 (28)
Underemployed	43 (43)
Unemployed	28 (28)
Other	0
Currently a caregiver for another person	
No	38 (38)
Yes	62 (62)
Total number of public assistance benefits received in past 12 mo	
0	16 (16)
1–2	62 (62)
$\geq$ 3	22 (22)
Food stamps	
No	37 (37)
Yes	63 (63)
Rental assistance or housing	
No	86 (86)
Yes	14 (14)
Unemployment benefits	
No	94 (94)
Yes	6 (6)
Ever incarcerated in a correctional facility (jail or prison)	
No	58 (58)
Yes	42 (42)
Declined	0

Continued

communication, stigma and disclosure, and mental health and substance use. Enrolled with a unique username and password for confidentiality, participants were guided on how to use the mobile health application for daily mood and stress, logging medication intake, and community engagement on the application's community board feature. Participants could access their dashboard to view upcoming medical appointments. Most recent viral load and CD4 laboratory test results were manually entered by their patient navigator. A peer counselor maintained participant engagement on the community dashboard by sharing content that included motivational posts on Mondays, discussion topics on Tuesdays, quizzes on Wednesdays, songs to live by on Thursdays, and Friday "shout-outs" for those with 100% engagement. The community dashboard included housing and employment resources, and the application's resource section featured six required education sessions.

Participants, guided by the community advisory board (CAB), attended workshops covering self-love, disclosure, sex positivity, healthy relationships, and creating vision boards. Workshops were held virtually and in person to accommodate challenges with engagement because of the COVID-19 pandemic. The CAB included 10 intervention participants who provided feedback on the intervention process, PLCares application adaptations, and community board content. CAB members received a monthly \$50 store gift card for their participation. Participants who engaged with at least 48% of the application activities each month were eligible for \$50 in phone credit. For those without a phone, one was given to them from

TABLE 1— Continued

	Mean $\pm$ SD or No. (%)
Food security	
High or marginal food security	46 (46)
Low or very low food security	54 (54)
Total no. of services with which participant needed help	3.9 $\pm$ 2.7
Had a case manager	
No	63 (63)
Yes	36 (36)
Declined	1 (1)
Depression severity	
None to minimal	32 (32)
Mild	32 (32)
Moderate	18 (18)
Moderately severe	14 (14)
Severe	4 (4)
Years living with HIV at enrollment	12.4 $\pm$ 9
Participant is newly diagnosed (<1 y) with HIV	
No	87 (87)
Yes	13 (13)
Had a HIV primary care visit $\leq$6 months before enrollment	
No	18 (18)
Yes	82 (82)
Pre-enrollment viral suppression	
Viral load is not suppressed or is $\geq$ 200	65 (65)
Viral load is suppressed or is <200	35 (35)

Note. GED = general educational development. The sample size was n = 100.

B.WOW with a monthly data plan credit. The community board served as a virtual space for participants to share stresses, worries, and recipes, fostering a sense of community with peer support at their fingertips.

PURPOSE

B.WOW aimed to enhance viral suppression and HIV self-management through a tailored approach for Black women with HIV who were not in care and virally suppressed. Incorporating PLCares and guidance from peer-patient navigators and an all-women CAB, participants communicated virtually with their care team, accessed comprehensive HIV

education resources, and participated in decision-making processes for tracking medication adherence, mood, stress levels, and overall care planning. PLCares facilitated the creation of a supportive peer community, offering emotional and social support crucial for addressing gendered racism and stigma among Black women. This support contributed to increased resilience and self-efficacy, ultimately impacting overall health and well-being. Our objective was to reduce stigma and increase social support networks to improve viral suppression rates among Black women. When stigma was reduced and social support networks increased, viral suppression rates among Black women increased.⁵

EVALUATION AND ADVERSE EFFECTS

Self-reported data on social demographics, resilience, discrimination, stigma, service needs, and other social risks were collected at baseline, 6 months, and 12 months.⁶ Medical chart reviews conducted by the program manager provided information on viral suppression and primary care visits. We used the McNemar test and the paired *t* test to assess differences in various outcomes between baseline and the latest follow-up. We considered *P* values < .05 statistically significant. Among the 100 enrolled women, 41 received new phones, averaging 14 months of phone credits per participant. Engaged participants (n = 96) demonstrated a 51% response rate and 49% medication adherence for application check ins. Participants documented their mood and stress levels on a scale of 1 (very sad/low stress) to 5 (very happy/high stress) in the mobile application. Participants logged an average stress level of 2.3 indicating the women reported some stress daily. The average mood logged was a 3.4 indicating participants felt moderately happy daily. Participants posted an average of 29 messages on the community board. All women enrolled received both interventions with the average of 86 encounters each.

Participants were aged, on average, 36.6 years with a substantial portion aged 49 years and younger. This indicated a younger population facing socioeconomic instability, highlighted by 39% living in unstable or temporary housing. A significant majority, 67%, were single, and 21% lacked a high-school education with a high rate of underemployment or unemployment at 71%, showcasing socioeconomic

vulnerabilities such as those faced by Black women. In addition, 62% served as caregivers to children aged younger than 18 years, underscoring the added responsibilities and potential stress factors that could align with the experiences of Black women, who often are in caregiving roles within their families and communities. Dependency on public benefits was evident, with 63% receiving food stamps and a majority requiring multiple services, indicative of broader socioeconomic support needs. Moreover, the data reveal long-term HIV management challenges, with 87% not newly diagnosed yet facing barriers to achieving viral suppression, underscoring persistent health care access and socioeconomic challenges that resonate with broader issues faced by Black women with HIV.⁷

Table 2 describes the outcomes of the bundled intervention. Participants experienced a significant impact on viral suppression, social determinants of health, and psychosocial well-being, reflecting a holistic and successful approach to improving their lives. Viral suppression increased from 36.5% to 72.9% ($P < .001$). Unemployment and the need for mental health services remained stable ($P = .41$), but there was a significant increase in attempts to get mental health services (70.6% to 83.3%; $P = .025$). Utilizing PLCares for daily mood and stress check-ins increased participants' mental health awareness, and educational sessions facilitated easier discussions about it. Food insecurity and housing instability decreased. Life satisfaction levels were consistent. A substantial decrease in the total number of supportive services participants needed (from 3.74 to 2.84; $P < .001$) indicated the effectiveness of the bundled interventions to address their diverse needs. Health-related

quality of life demonstrated positive changes, with improved resilience ($P = .004$) and reduced HIV-related stigma ($P = .001$) and discrimination ($P = .038$).

SUSTAINABILITY

To sustain an intervention like B.WOW, it is critical to focus on both the broader components of the program and its adaptability to different contexts. The integration of patient navigators, peer counselors, and the women-led CAB creates a replicable model of care that addresses the unique barriers faced by Black women with HIV. This human-centered approach to care can be embedded into the overall care for Black women through partnerships with clinics and community-based organizations, ensuring continued support and community beyond the intervention period. Offering a mix of virtual and in-person workshops, as demonstrated in B.WOW, makes the program adaptable to various populations and responsive to external factors such as public health emergencies. Sustaining financial support could involve diversifying funding sources, including public health grants, partnerships with local businesses, and community-based organizations. The PLCares mobile application enhances self-efficacy and offers a space for women to build a community and a peer support system. Collecting outcomes data from the mobile application such as improved viral suppression rates and increased engagement in care, and positive changes in stress level, mood, and medication adherence can support the case for continued funding and policy advocacy, allowing for the program to be tailored and scaled to meet the needs of diverse communities while maintaining its core

focus on reducing stigma, building peer support, and enhancing health outcomes for people with HIV.

PUBLIC HEALTH SIGNIFICANCE

The BWF initiative and B.WOW showed improved health outcomes for Black women by fostering a safe community space for sharing, building self-efficacy, trust, empowerment, and resilience, leading to greater health care autonomy and viral suppression. The positive impact of this intervention is reflected in the participants' quotes given at intervention events:

Living with HIV for as long as I have, I have never become undetectable until I joined B.WOW.

—B.WOW CAB Member

Using PLCares helps me to remember to take my medications and when I need to keep my mood and stress level in check.

—B.WOW Participant

HIV disproportionately impacts Black women, with traditional health care models failing to meet their complex needs.¹ B.WOW facilitated their access to technology and supported managing diverse health needs, especially when it was critical to stay connected with health care providers during the COVID-19 pandemic.⁹ B.WOW improved the health outcomes of Black women with HIV by creating a culturally responsive environment where Black women felt recognized and supported, and where they could build community and enhance their health management.

B.WOW's bundled interventions highlight the need for care tailored to Black women with HIV, offering insights for intervention and policy design. Our findings demonstrate that mobile

TABLE 2— Outcomes of Black Women Organized for Wellness (B.WOW) Participants With Baseline and at Least One Follow-Up Visit: Atlanta, GA, February 2021–December 2022

	Baseline		Latest Follow Up 6 or 12 Months		P ^a
	No.	No. (%) or Mean $\pm$ SD	No.	No. (%) or Mean $\pm$ SD	
Any 2 visits or laboratory tests within 12 months, at least 90 days apart	85				NA
Yes				73 (85.9)	
No				12 (14.1)	
Virally suppressed	85		85		<.001
Yes		31 (36.5)		62 (72.9)	
No		54 (63.5)		28 (27.1)	
NHAS quality of life^b					
Unemployment	84		85		.28
Yes		41 (48.8)		36 (42.4)	
No		43 (51.2)		49 (57.6)	
Food insecurity	85		84		.34
Yes		21 (24.7)		16 (19.1)	
No		64 (75.3)		70 (80.9)	
Need mental health services	85		85		.41
Yes		34 (40.0)		30 (35.3)	
No		51 (60.0)		55 (64.7)	
Attempted to get mental health services	34		30		.025
Yes		24 (70.6)		25 (83.3)	
No		10 (29.4)		5 (16.7)	
Unmet mental health need ^b	24		25		.08
Yes		1 (4.1)		6 (24.0)	
No		23 (95.8)		19 (76.0)	
Housing instability	85		85		.16
Yes		32 (37.7)		26 (30.6)	
No		53 (62.3)		59 (69.4)	
Life satisfaction	85		83		.97
Very poor or poor		7 (8.2)		6 (7.2)	
Fair		23 (27.1)		23 (27.7)	
Good or very good		55 (64.7)		54 (65.1)	
No. of services participants needed	85	3.74 $\pm$ 2.5	85	2.84 $\pm$ 2.1	<.001
Health-related quality of life and other social indicators					
Physical health–related quality of life (PCS)	85	43.6 $\pm$ 10.4	83	45.1 $\pm$ 10.8	.17
Mental health quality of life (MCS)	85	43.7 $\pm$ 13.6	83	46.0 $\pm$ 13.1	.24
MSPSS score	85	57.6 $\pm$ 13.4	84	59.9 $\pm$ 12.5	.13
HIV stigma scale score	85	21.0 $\pm$ 7.7	84	18.4 $\pm$ 6.8	.001
Health literacy score	85	17.1 $\pm$ 3.5	84	17.5 $\pm$ 3.2	.28
BRCS score	85	8.28 $\pm$ 2.6	84	9.14 $\pm$ 2.6	.004
Discrimination score	85	4.45 $\pm$ 4.7	84	3.52 $\pm$ 4.2	.038

Note. BRCS = Brief Resilient Coping Scale; HIVPCV = HIV primary care visit; MCS = Mental Component Score; MSPSS = Multidimensional Scale of Social Support; NA = not applicable; NHAS = National HIV/AIDS Strategy; PCS = Physical Component Score. The sample size was n = 100. At follow-up, n = 85 participants' outcome data were available, 15 participants were lost to follow-up.

^aMcNemar or paired t test.

^bUnmet needs: Need for various services calculated as the number of attempted needs minus the number of met needs, in the past 6 months.

applications combined with peer support and education is a promising strategy to engage Black women with HIV and improve their health outcomes and quality of life. Tackling social determinants like unemployment, food insecurity, and housing is crucial for overall well-being. Increased mental health service access and the interconnectedness with HIV care, along with higher resilience scores and reduced stigma, underscore B.WOW's holistic approach. This initiative illustrates the potential for setting new standards in comprehensive, culturally responsive HIV care for Black women, influencing public health practices. *AJPH*

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PUBLICATION INFORMATION

Full Citation: Lewis-Chery SA, Heath CD, Zhang X, Ayafor V, Beaupierre M, Rajabiun S. Black Women Organized for Wellness (B.WOW): a bundled approach to enhance the health of Black women with HIV. *Am J Public Health*. 2025;115(S1):S22–S27.

Acceptance Date: December 22, 2024.

DOI: <https://doi.org/10.2105/AJPH.2025.308020>

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ACKNOWLEDGMENTS

This study was administered by the HRSA Ryan White HIV/AIDS Program Special Projects of National Significance with funding from the Minority HIV/AIDS Fund.

We extend our gratitude to the dedicated intervention staff for their unwavering commitment to implementing this initiative and their contributions to the writing of this supplement. We acknowledge the Black women who trusted us to implement a program by them and for them; without their time, contributions, and perspectives, this intervention could not have happened.

Note. The findings and conclusions are solely those of the authors and do not represent the official position of the Health Resources and Services Administration.

CONFLICTS OF INTEREST

The authors of this article have no conflicts to disclose.

HUMAN PARTICIPANT PROTECTION

This study received ethical approval (institutional review board approval no. 000-2140) from the institutional review board at Emory University, and all participants provided informed consent, ensuring adherence to established ethical guidelines and protection of participant rights.

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