Disparities in Diabetes Care: Smoking Cessation among Women and Minorities Living with HIV at an Urban Academic Medical Center

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Background

- Chronic comorbidities, such as diabetes, must be appropriately managed in people living with HIV (PLWH)
- The American Diabetes Association (ADA) outlines best practices for diagnosing and treating diabetes, including recommended targets for:
  - Glycemic levels, as measured by HbA1c → "A"
  - Blood pressure control → "B"
  - Lipid reduction as measured by LDL-c levels → "C"
  - Cessation of smoking (non-smokers) → "N"
- These are commonly referred to as ABC or ABCN criteria
- This study examined diabetes management in PLWH by gender, race, and BMI, as assessed by guideline adherence to the above four metrics
- Patients analyzed are from an HIV registry of University Hospital Infectious Disease Outpatient clinic in Newark, NJ
- The clinic's 2451 total patients are 40% female, 63% non-Hispanic black, 23% Hispanic, and 64% >45 years old.

Methods

- Patients from the HIV registry were reviewed for a diagnosis of diabetes and both a clinic visit and an HbA1c score recorded between 2/1/2019 and 1/31/2020.
- Achieving glycemic target was defined as HbA1c ≤ 7.5 for patients <65 and HbA1c ≤ 8 for patients ≥ 65.
- Target adherence criteria also included a blood pressure average of <140/90 over this period and an LDL-c of <100 mg/dL.
- Non-smoking status includes both former and never smokers.
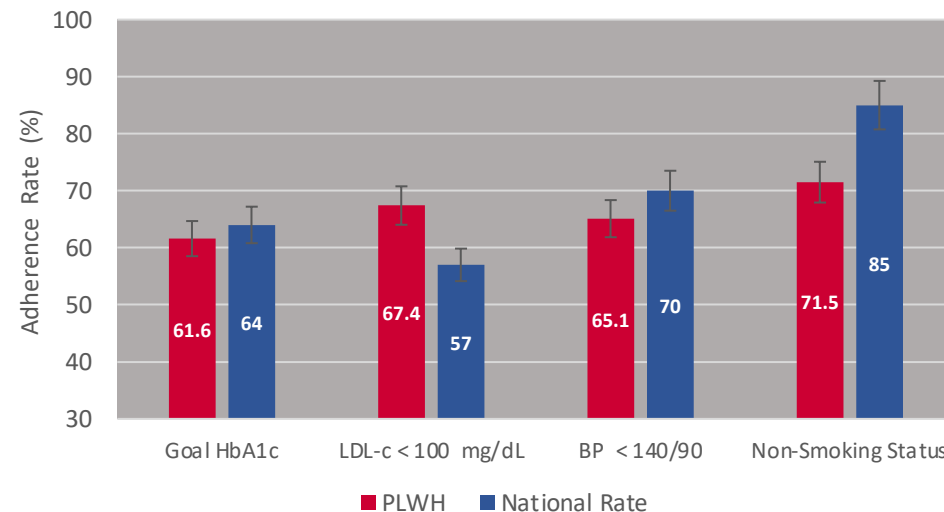
Demographic Data (n = 172)

Gender	(%)
Male	49.4
Female	50.6

Age, mean, (SD)
57.8 (10.0)

Race/Ethnicity	(%)
Non-Hispanic White	2.33
Non-Hispanic Black	73.3
Hispanic	20.4
Other	4.10

BMI (kg/m^2)	(%)
18.5-24.9	22.1
25.0-29.9	32.6
30.0-34.9	20.4
$\geq$ 35.0	25.0

Smoking Status	(%)
Never	43.6
Former	27.9
Current	28.5

Adherence to "ABCN" Criteria Among Diabetic PLWH

*HbA1c = hemoglobin A1c; ABC = hemoglobin A1c, blood pressure, low-density-lipoprotein cholesterol; ABCN = hemoglobin A1c, blood pressure, low-density-lipoprotein cholesterol, non-smoker; BP = blood pressure; LDL-C = low-density-lipoprotein cholesterol. National adherence rates based on Kazemian et. al 2019[2]

Results

- Of 1035 patients reviewed, a total of 172 met criteria.
- Adherence rate for achieving goal HbA1c was 61.6% (95% CI 54.2-68.6, n=172).
- Blood pressure adherence rate was 65.1% (95% CI 57.7-71.8, n=172)
- LDL-c adherence rate was 67.4% (95% CI 60.1-74.0, n=172)
- ABC and ABCN criteria rates were 24.4% (95% CI 18.6-31.4, n=172) and 18.6% (95% CI 13.5-25.1, n=172).
- The overall smoking rate, as well as the smoking rates in the female subgroup, those with BMI 18.5-24.9, and the non-Hispanic black subgroup were significantly higher than the national average (P<0.05).

Conclusion

- Among diabetic PLWH, the burden of tobacco dependence may be under-recognized in particular groups; namely non-Hispanic Black patients, women, and those with normal BMI
- These findings, in addition to a majority overweight patient population, highlight the need for increased education and interventions aimed at nutritional counseling and risk factor mitigation among all patient subgroups

References

1. American Diabetes Association. Standards of Medical Care in Diabetes-2020, Diabetes Care. 2020;43. doi:10.2337/dc20-S009
2. Kazemian P, Shebl FM, McCann N, Walensky RP, Wexler DJ. Evaluation of the Cascade of Diabetes Care in the United States, 2005-2016. JAMA Intern Med. 2019;179(10):1376–1385. doi:10.1001/jamainternmed.2019.2396