

Table 2. Factors independently associated with hospital readmission in OPAT patients

Risk factor	Readmitted N=36	Not Readmitted N=392	Univariate Analysis p-value	Multivariate Analysis Odds ratio (95% CI)
Enrollment in strengthened OPAT program	23 (63.9%)	332 (84.7%)	0.001	0.327 (0.152 – 0.702); p=0.004
Vancomycin, n (%)	18 (50%)	114 (29.1%)	0.009	2.57 (1.26 – 5.27); p=0.01
OPAT treatment duration, days, median (IQR)	35.5 (15.75-41.75)	25 (12-36)	0.005	0.991 (0.982 – 0.999); p=0.027

Conclusion: An OPAT program with dedicated staff at a large academic tertiary care hospital was independently associated with decreased risk for readmission, which provides critical evidence to substantiate additional resources being dedicated to OPAT by health systems in the future.

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

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Session: P-23. Clinical Practice Issues

Background: People living with HIV (PLWH) and diabetes mellitus are at increased risk of developing significant medical complications such as atherosclerotic cardiovascular disease. Disproportionate rates of diabetes and HIV among minority groups raise the issue of how demographic disparities may impact care. The American Diabetes Association (ADA) 2020 guidelines for diabetes care recommend optimal glycemic levels (A), blood pressure control (B), lipid reduction (C), and smoking cessation (N), commonly referred to as ABC or ABCN criteria. This quality assessment project examines diabetes management in PLWH by gender, race/ethnicity, and BMI, in a predominantly minority-serving clinic, as assessed by rates of guideline adherence to the above metrics.

Methods: This project was reviewed and approved by the Rutgers IRB. Patients from an HIV registry of University Hospital Infectious Disease Outpatient clinic in Newark, NJ were reviewed for a diagnosis of diabetes and both a clinic visit and an A1c 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.

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 and LDL-c adherence rates were 65.1% (95% CI 57.7-71.8, n=172) and 67.4% (95% CI 60.1-74.0, n=172), respectively. ABC and ABCN 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 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).

Table 1: Demographic Data of PLWH and Diabetes

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	n=172
Age, mean (SD), years	57.8 (10.0)
Gender, n (%)	
Male	85 (49.4)
Female	87 (50.6)
Race, n (%)	
Non-Hispanic white	4 (2.33)
Non-Hispanic black	126 (73.3)
All Hispanic	35 (20.4)
Other	7 (4.10)
BMI (kg/m ²), n (%)	
18.5-24.9	38 (22.1)
25.0-29.9	56 (32.6)
30.0-34.9	35 (20.4)
≥35.0	43 (25.0)
PMHx, n (%)	
Hypertension	147 (85.5)
Smoking Status, n (%)	
Never	75 (43.6)
Former	48 (27.9)
Current	49 (28.5)

Percentages may not equal 100 due to rounding

Abbreviations: BMI = body mass index; PMHx = past medical history; SD = standard deviation

Table 2: Adherence to ABCN Criteria in Diabetes Care by Demographics for PLWH from 2/1/2019 – 1/31/2020

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	Goal HbA1c n=172 % (95% CI)	LDL-C < 100 mg/dL n=172 % (95% CI)	BP < 140/90 n=172 % (95% CI)	Non-Smoking Status n=172 % (95% CI)	Meeting ABC Criteria n=172 % (95% CI)	Meeting ABCN Criteria n=172 % (95% CI)
Total	61.6 (54.2-68.6)	67.4 (60.1-74.0)	65.1 (57.7-71.8)	71.5 (64.4-77.7)	24.4 (18.6-31.4)	18.6 (13.5-25.1)
Gender						
Male	63.5 (52.9-73.0)	64.7 (54.1-74.0)	63.5 (52.9-73.0)	75.3 (65.2-83.0)	25.9 (17.8-36.1)	22.4 (14.8-32.3)
Female	59.8 (49.3-69.5)	70.1 (59.8-78.7)	66.7 (56.3-75.7)	67.8 (57.4-76.7)	23.0 (15.4-32.9)	14.9 (8.94-23.9)
Race/Ethnicity						
Non-Hispanic black	63.8 (55.1-71.6)	69.3 (60.8-76.7)	61.4 (52.7-69.4)	66.9 (58.4-74.5)	24.4 (17.8-32.6)	16.5 (11.1-24.0)
All Hispanic	51.4 (35.6-67.0)	54.3 (38.2-69.5)	74.3 (57.9-85.8)	85.7 (70.6-93.7)	25.7 (14.2-42.1)	25.7 (14.2-42.1)
BMI (kg/m ²)						
18.5-24.9	76.3 (60.8-87.0)	65.8 (49.9-78.8)	57.9 (42.2-72.1)	60.5 (44.7-74.4)	26.3 (15.0-42.0)	18.4 (9.22-33.4)
25.0-29.9	58.9 (45.9-70.8)	64.3 (51.2-75.6)	66.1 (53.0-77.1)	73.2 (60.4-83.0)	25.0 (15.5-37.7)	23.2 (14.1-35.8)
30.0-34.9	48.6 (33.0-64.4)	71.4 (55.0-83.7)	80.0 (64.1-90.0)	71.4 (55.0-83.7)	28.6 (16.3-45.1)	20.0 (10.0-35.9)
≥35.0	62.8 (47.9-75.6)	69.8 (54.9-81.4)	58.1 (43.3-71.6)	79.1 (64.8-88.6)	18.6 (9.74-32.6)	11.6 (5.07-24.5)
National*	64 (58-69)	57 (51-62)	70 (64-75)	85 (82-88)	25 (20-31)	23 (17-29)

Abbreviations: HbA1c = hemoglobin A1c; ABC = hemoglobin A1c, blood pressure, low-density-lipoprotein cholesterol; ABCN = hemoglobin A1c, blood pressure, low-density-lipoprotein cholesterol, non-smoker; BMI = body mass index; BP = blood pressure; LDL-C = low-density-lipoprotein cholesterol. * National adherence rates based on Kazemian et al. 2019

References:

- Kazemian P, Shebli FM, McCann N, Walensky RP, Weiler 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

Conclusion: For diabetic PLWH, smoking cessation requires improvement, particularly in female, normal BMI, and non-Hispanic black subgroups. 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.

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602. Do These Labs Really Matter? Searching for the Benefit of Laboratory Monitoring in Outpatient Parenteral Antimicrobial Therapy (OPAT)

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Session: P-23. Clinical Practice Issues

Background: Weekly laboratory monitoring is routinely performed for patients treated with Outpatient Parenteral Antimicrobial Therapy (OPAT). However, minimal evidence exists to guide this practice.

Methods: This was a single-center, retrospective cohort study to assess the value of laboratory monitoring in patients being treated with beta-lactam OPAT. This study included adult patients discharged from University of Utah Health (UHH) between January 1, 2018, and July 31, 2019, on beta-lactam OPAT with follow-up care with a UHH Infectious Diseases (ID) Provider. Patients discharged to a skilled nursing facility or long-term acute care hospital, or who received OPAT for a duration less than 7 days, were excluded. The primary aim was to describe how often abnormal laboratory values led to a therapy modification or documented adverse drug reaction (ADR) for patients receiving beta-lactam OPAT. Abnormal laboratory values were defined by consensus criteria for clinical significance (e.g., RIFLE criteria for kidney injury). Therapy modification and ADR occurrence was determined by chart review for UHH ID Provider documentation.

Results: A total of 346 patients were included; two hundred seventy-four (79%) had abnormal laboratory values during OPAT. Of these, 12 patients had a modification to their OPAT due to abnormal laboratory values. The most common therapy modification due to abnormal laboratory values was a change of antibiotic (9/12). Two hundred thirteen of 274 patients (78%) with abnormal laboratory values were maintained on their OPAT regimen without a modification. Of the 67 therapy modifications observed, 55 (82%) were due to reasons other than abnormal laboratory results (Table 1).

Abnormal laboratory values meeting criteria for clinical significance and possible ADR were observed in 469 instances. Of these, 43 (9%) were considered ADRs by the ID provider (Table 2).

Table 1 describes therapy modifications for patients on beta-lactam OPAT

Table 1. Therapy Modifications in Beta-Lactam Outpatient Parenteral Antimicrobial Therapy

Outcome	Total Patients (n = 346)	Abnormal Laboratory Results (n = 274)	No Abnormal Laboratory Results (n = 72)
Therapy modification due to labs	12 (3.5%)	12 (4.4%)	0 (0%)
Therapy modification not due to labs	55 (16%)	49 (18%)	6 (8%)
No therapy modification	279 (81%)	213 (78%)	66 (92%)

Table 2 describes documented ADRs in the presence of abnormal labs for patients on beta-lactam OPAT

Table 2. Adverse Drug Reactions in Beta-Lactam Outpatient Parenteral Antimicrobial Therapy

Outcome	Abnormal Lab Indicating Potential Outcome (n = 274)	Documented ADR in Presence of Abnormal Labs
Nephrotoxicity – n, %	70 (26%)	19/70 (27%)
Hepatotoxicity – n, %	97 (35%)	10/97 (10%)
Leukopenia – n, %	69 (25%)	5/69 (7%)
Leukocytosis – n, %	110 (40%)	4/110 (4%)
Thrombocytopenia – n, %	31 (11%)	2/31 (6%)
Eosinophilia – n, %	82 (30%)	3/82 (4%)
Neutropenia – n, %	10 (4%)	0/10 (0%)