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Adherence to HIV Postexposure Prophylaxis in a Major Hospital in Northwestern Nigeria

To the Editor—Of crucial importance in the success of HIV postexposure prophylaxis (PEP) is adherence to the 28 days course of antiretroviral treatment (ART).[1] Nevertheless, uptake of HIV PEP is acknowledged to be insufficient, with <60% of the individuals who started PEP treatment finishing the full course.[2] It is important to determine why HIV PEP adherence remains a challenge across different populations, settings, and exposures.[2] Previous studies have reported higher PEP treatment completion rates with a 2-drug regimen compared to a 3-drug regimen.[2,3] One reason for noncompletion of treatment is the adverse effects of ART used for PEP.[4,5] In this study, HIV PEP treatment adherence was defined as initiating PEP treatment following occupational exposure to HIV, returning to pick up subsequent doses, and completing the rest of the PEP course as well as follow-up visits. Those that failed to adhere to PEP treatment were classified as defaulters. We examined the predictors of PEP default in a tertiary-care hospital in northwestern Nigeria.

This retrospective cohort study was conducted at a major tertiary-care hospital that is home to the largest antiretroviral treatment (ART) center in northwestern Nigeria. The ethics committee of the hospital approved this study.

We examined details of all reported incidences of occupational exposures to an HIV-positive source that occurred within the hospital from October 2004 to December 2016. In total, 70 healthcare workers exposed to HIV positive sources took PEP during the study period, and 51 patients completed the treatment while 19 defaulted (27%).

As shown in Table 1, our study revealed that those on a non–tenofovir-containing regimen were 2.6 times more likely to default PEP compared to those on a tenofovir-containing regimen ($P = .0199$). This finding may be related to the better tolerability of the tenofovir-based regimen compared to the zidovudine-based regimen, as reported by previous studies.[6,7] We also found that patients prescribed 3 pills for HIV PEP were more likely to default than those prescribed 2 pills. This finding was not statistically significant. Previous studies have reported a higher PEP regimen completion rate with low pill burden.[8,9] Another finding, which was also not statistically significant, was that nonphysicians

TABLE 1. Examining for Predictors of PEP Default in Bivariate Analysis

Predictor	Category	Defaulted, n/N	Nondefaulted, n/N	Relative Risk (CI)	Pearson χ^2	*P* Value
Pill burden	3 pills	6/19	12/51	1.33 (0.596–2.983)	0.47	.493
	1 or 2 pills	13/19	39/51			
Regimen	[a]Non-TDF regimen	13/19	19/51	2.57 (1.105–5.992)	5.42	.0199
	TDF-based regimen	6/19	32/51			
Station of staff	Medical units	13/19	34/51	1.06 (0.463–2.429)	0.02	.889
	Surgical units	6/19	17/51			
Category of staff	[b]Nonphysician	12/19	24/51	1.62 (0.723–3.624)	1.44	.231
	Physician	7/19	27/51			

NOTE. CI, confidence interval; TDF, tenofovir; ART, antiretroviral treatment.
[a]Specifically refer to combination ART that excludes tenofovir but includes a combination of zidovudine, lamivudine, stavudine, efavirenz, and nevirapine.
[b]Refers to a nurse, laboratory scientists, health attendants, and students.

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and staff stationed in the medical wards were more likely to default on their PEP treatment. A possible reason for this is that nonphysicians underestimate the need to complete treatment and/or that staff in the medical ward might have underestimated exposure risks compared to those in the surgical ward.

This study highlights predictors of PEP default in a tertiary-care hospital in a resource-limited setting. Non-tenofovir containing regimen was a statistically significant predictor of PEP default, while 3 pills compared to 2 pills, staff in the medical ward and nonphysician status, though not statistically significant, also predicted default PEP treatment. However, the role of pill burden, category, and station of staff as predictors of PEP default should be further investigated in a multicenter prospective design using a larger sample size. This knowledge will help clinicians understand how to improve PEP uptake to prevent new HIV infections.

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Healthcare Personnel Relationships Related to Coordination of Catheter Care

To the Editor—Relationships between healthcare personnel (HCP) influence coordination of care; therefore, these relationships are expected to impact healthcare-associated infections (HAIs). It would be helpful to explore these relationships for potential association with HAIs such as central-line associated bloodstream infection (CLABSI) and catheter-associated urinary tract infection (CAUTI). Because a relational coordination (RC) survey tool[1] has demonstrated associations between the survey scores and performance outcomes in previous studies conducted in healthcare and business settings like the airline industry,[2,3] we conducted an observational quality improvement study to explore relationships between different types of HCP within an individual unit (an intensive care unit [ICU] or a ward), with respect to caring for patients with central venous catheters and urinary catheters.

This study was conducted at Parkland Memorial Hospital, a 770-bed public academic safety net hospital in Texas with 6 ICUs and 27 wards during September 2014 and October 2014 as part of a system-wide initiative to reduce HAI. Available rates of CLABSI and CAUTI in 2013 per routine surveillance by the infection control program informed the choice of units to be included in the survey. After ranking all units in the hospital based on the rates of CLABSI and CAUTI, we included units belonging to either the highest or lowest quartiles that provided care for a minimum of 100 urinary catheter or central line days per month. Relational coordination surveys were sent to 384 HCP employed in 5 units with high CLABSI rates and 4 units with low CLABSI rates and 359 HCP in 4 units with high CAUTI rates and 6 units with low CAUTI rates. We did not survey HCP like physicians, whose services are not confined to any single unit. The surveys were anonymous and were emailed using the REDCap® database.[4]