Understanding pharmacists' perceptions about their roles in HIV PrEP therapy and their knowledge about HIV PrEP therapy

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Background

- The Centers for Disease Control estimates more than 1.2 million people in the United States living with the Human Immunodeficiency Virus (HIV) infection and almost 1 out of 6 are unaware of their infection. Approximately 50,000 people each year will contract the HIV virus in the United States. With HIV still on the rise, there are medication regimens to help prevent transmission of the infection; known as HIV pre-exposure prophylaxis (PrEP).[1]
- HIV PrEP is an ongoing medication therapy consisting of anti-retro viral medications, most commonly emtricitabine/tenofovir, brand name Truvada®. The regimen is prescribed to populations who are at high risk of contracting the HIV virus, such as men who have sex with men (MSM) and injection drug users (IDU), to decrease the risk of contracting the HIV infection before it happens.[2]
- Patient adherence is vital to avoid the risks of HIV contraction. When taken consistently, PrEP has been shown to reduce the risk of HIV infection in people who are at high risk by up to 92%.[1]
- Pharmacists have a very important role in helping patients with adherence to PrEP therapy. Being the final point of contact during dispensing the drug, the pharmacists can educate and counsel patients about the importance of adherence in addition to acquiring drugs from authentic sources, monitoring the adverse effects, and detecting drug – drug interactions.[3]

Purpose

- Measure and understand pharmacists' perceptions and knowledge on HIV PrEP therapy and their role with it.
- Decipher if there is a need to implement educational CEs for pharmacists regarding HIV PrEP therapy.

Methods

- The study protocol has been approved by Roseman University Institutional Review Board.

Design

- Cross sectional survey design among licensed pharmacists in Utah who practice in community settings.
- The sample size needed for the study is 358 (population size is 3908). With an expected, 60% response rate, the survey will be sent to 600 pharmacists.

Measures

- Primary outcome measure: Pharmacist's perceptions about their role in HIV PrEP therapy using the 12-item tool based on Godin's theoretical framework.[4]
- Secondary outcome measure: Pharmacist's knowledge about HIV PrEP therapy using nine items.
- Demographic characteristics: Age, gender, degree (B.Pharm. vs. Pharm.D.), years of practice, and job position in the pharmacy.

Analysis

- Descriptive analyses will be used to identify the characteristics of the respondents. T-tests and ANOVA will be used to identify the differences between the subjects based on the demographics. Regression analyses will be used to determine the association between attitude, knowledge, and actual behavior of counseling.

Results

Domains	Demographics					
Mean of the domain items (Mean ± SD)	Gender		Education Degree earned		Years of experience	
	Male	Female	Pharm.D.	Bachelors in Pharmacy	< 10 year	> =10 years
Actual knowledge score	4.99 ± 2.11	5.05 ±2.18	5.16 ± 2.07	4.49 ± 2.29	5.20 ± 2.08	4.72 ± 2.20
	P-value NS		P-value 0.034		P-value NS	
Perception of knowledge score	2.70 ± 0.76	2.80 ± 0.82	2.78 ± 0.76	2.57 ± 0.85	2.81 ± 0.74	2.62 ± 0.83
	P-value NS		P-value NS		P-value NS	
Intent to counsel	2.94 ± 0.96	2.90 ± 0.98	3.00 ± 0.99	2.68 ± 0.82	3.09 ± 0.91	2.68 ± 1.00
	P-value NS		P-value 0.044		P-value 0.002	
Beliefs about capabilities	2.47 ± 0.96	2.38 ± 0.91	2.52 ± 0.97	2.13 ± 0.76	2.60 ± 0.98	2.21 ± 0.84
	P-value NS		p-value 0.01		p-value 0.003	
Social influences	2.67 ± 0.82	2.72 ± 0.78	2.69 ± 0.81	2.69 ± 0.80	2.74 ± 0.82	2.61 ± 0.78
	P-value NS		P-value NS		P-value NS	
Moral Norms	4.32 ± 0.62	4.41 ± 0.53	4.40 ± 0.53	4.21 ± 0.74	4.43 ± 0.51	4.24 ± 0.67
	P-value NS		P-value NS		p-value 0.02	

NS = p-value >0.05

Regression analysis to predict the pharmacist's intent to counsel on HIV PrEP therapy

Domains from Godin's scale	Mean of the domain items	Regression coefficient	p-value (95% CI)
Intent to counsel	2.92 ± 0.97		
Belief about capabilities	2.43 ± 0.94	0.432	0.000 (0.326 – 0.538
Social influences	2.68 ± 0.80	0.553	0.000 (0.426 – 0.680)
Moral Norms	4.35 ± 0.59	0.035	0.674 (-0.129 – 0.199)

Conclusion

- Pharmacists have the responsibility to educate patients on a variety of medications and to always be updated on newer FDA approved medications such as HIV PrEP therapy
- Pharmacists have the capability and knowledge to counsel patients on HIV PrEP therapy, however, they lack the confidence and belief in doing so
- The need for implementing continuing education for pharmacists about HIV PrEP therapy may increase their confidence to educate their patients on the side effects, importance of adherence, and recommendations from the CDC
- HIV is a public health issue that needs further education on the prevention of HIV
- As more prescribers become familiar with HIV PrEP; pharmacists will be playing an even more vital role in the prevention of HIV PrEP therapy

Limitations

- Low response rate to the study; possible reason may be that the majority of email addresses in Utah's DOPL system were personal emails. Thus, a pharmacist accessing a professional survey during non-working hours may not be motivated to respond
- In addition, there is a possibility that some of the surveys reached clinical pharmacists who practiced in a hospital setting
- The items that measured the pharmacists' knowledge about HIV PrEP therapy were not validated items; these questions were based on the CDC recommendations
- The study only included pharmacists practicing in Utah where there is a low HIV population; the results do not reflect the knowledge of all pharmacists in the United States

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Disclosure

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