

# HIV Management in Primary Care

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## Abstract

**Title:** HIV Management in Primary Care

**Background:** HIV is a chronic medical condition that has been historically managed by specialists. Recent advances in medication regimens have simplified treatment. This simplification could result in more patients having HIV managed in primary care

**Purpose:** To assess perceptions and practices of primary care providers (PCPs) regarding management of HIV in primary care.

**Methods:** This was a quantitative, cross-sectional, descriptive study. Participants were included who were licensed healthcare providers and practiced primary care full-time

**Results:** Most participants answered that HIV cannot be managed in primary care, that they referred new and established patients to specialty clinics for management of HIV, and that they would be more likely to manage HIV in primary care if appropriate continuing medical education (CME) was available. **Conclusion:** This study demonstrates a need for HIV-related CME activities for PCPs

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## Introduction

### Background

*Human immunodeficiency virus* (HIV) is responsible for a chronic condition that has been historically complex to manage. HIV was initially identified in 1981, and it was further implicated as the cause of *Acquired Immuno Deficiency Syndrome* (AIDS) in 1983 [1]. Many primary care providers default to referring patients with HIV to a specialist for evaluation and management of the condition. Some of the reasons for this could be stigma surrounding the disease, provider unfamiliarity with ongoing management, and complex, multi-drug treatment regimens with broad adverse-effect profiles. In recent years, newer HIV drugs have become much easier to manage in once or twice-daily pill regimens which are being tolerated much easier [2]. Single-tablet regimens are also readily available for pre-exposure prophylaxis (PrEP). This evolution in treatment could lead to more primary care providers (PCPs) managing HIV without referring patients to HIV specialists.

Regular screening for HIV is promoted in primary care settings. HIV could be treated by PCPs, just like other manageable chronic conditions [3]. Many initial HIV diagnoses are made in primary care settings [4]. Discusses the importance of initiating anti-

retroviral therapy (ART) as soon as possible upon confirmation of an HIV diagnosis. Prescribing of HIV medication has become simpler and additional training for PCPs to do so have become much more available [5]. Describe one program that is specifically devoted to HIV primary care for advance practice nurses. HIV care is not only dependent on knowledge of how ART regimens are prescribed; it also depends on other factors. For example [6]. Suggested that cultural competence among PCPs affects how HIV care is provided.

Little data are available to account for how many PCPs have adopted these practices or how comfortable PCPs are with the practices [7]. Assessed the comfort level that PCPs have with HIV care. Data collected from PCPs in Oregon indicated that they were more likely to be comfortable with HIV counseling in the primary care setting, as opposed to direct medical management. Participants in that study were also more willing to attend training seminars for HIV management, as opposed to longer formal training programs. In a Canadian study, PCP participants who completed a modular continuing professional development (CPD) program showed a 137% increase in HIV medication refills among their patients [8]. Patients with HIV managed in primary care may have better compliance and outcomes.

## Rationale

With regard to willingness to manage HIV care, the mindset of these clinicians has not been well assessed or documented in the current literature [9]. Suggested that compared to HIV specialists, PCPs show much less comfort with prescribing PrEP. Data reflecting PCP comfort with managing HIV using modern regimens could bring about an awareness that may result in the implementation of training programs available to PCPs. This may also result in a PCP's increased inclination to make HIV management part of routine primary care. Additionally, many patients maintain trusting relationships with their PCPs, which often leads to greater rates of compliance [10]. emphasize how compliance with ART is of utmost importance for effective HIV management and is often problematic in underserved populations such as the patients described in the study at one inner-city clinic.

## Significance

Many HIV patients who are well-managed with streamlined medication regimens could benefit from receiving HIV care in the primary care setting. This would result in reduced trips to specialty offices, and possibly more meaningful treatment experiences that may lead to increased compliance with medication regimens [3]. Research in this area may help determine how willing PCPs are in taking on this task for their HIV patients.

## Methods

### Study design

The purpose of this quantitative, cross-sectional, descriptive study was to describe the current state of perceptions and practices of a small sample of PCPs regarding management of HIV in the primary care setting. The study was intended to answer two primary research questions. The first research question was, "What are the current perceptions and practices of a small sample of PCPs regarding management of HIV in primary care?" The second research question was "Are PCPs willing to manage HIV in primary care?" Approval was obtained from the A. T. Still University institutional review board (IRB).

### Participants

A survey was distributed to healthcare providers, including physicians, physician assistants, and nurse practitioners, using email lists from state and local professional organizations in Nevada. Three hundred emails were distributed. Participants were encouraged to forward the survey to colleagues to incorporate snowball sampling. There were forty-two respondents. Inclusion criteria included credentials as a physician, physician assistant, or nurse practitioner, currently licensed, and full-time practice in primary care. Exclusion criteria included unlicensed providers and those not practicing primary care full-time. Thirty-one participants met inclusion criteria.

### Data collection

Participants completed an online survey through Survey Monkey®. The survey included demographic questions regarding age, gender, ethnicity, and number of years in practice. The online survey was for research purposes only. Data were uploaded to

SPSS version 26 software for analysis. The survey consisted of 15 questions on demographics including age and gender identity and other characteristics including credentials and number of years in practice. The participants were asked if they encounter patients with HIV in their practice. The participants were then asked whether HIV was a chronic condition that could be managed in primary care. Next, they were asked what their current practices were when encountering both new and existing patients with a diagnosis of HIV, allowing for multiple choices to be selected.

Participants were asked what their reasons were for not managing HIV in primary care, allowing for multiple choices to be selected. They were then asked if they would be more likely to manage HIV if HIV-specific CME activities were available. Finally, participants were asked what format and length (in days) would be ideal for such a CME activity.

### Data analysis

Statistical analyses were completed using IBM SPSS version 26 (IBM Corp: Armonk, NY). Descriptive statistics (e.g., frequencies, percentages) were calculated to describe sample characteristics. Normality of the data was tested using the Shapiro-Wilk test ( $p < .05$ ).

The research questions were both addressed using descriptive statistics. The first research question (What are the current perceptions of a small sample of PCPs regarding management of HIV in primary care?), was addressed by analyzing frequencies of each descriptive variable to a dichotomous response variable. The second research question (Are PCPs willing to manage HIV in primary care?), was addressed by analyzing the frequencies of each descriptive variable to multiple choice nominal responses relative to both new and established patients. Hypotheses for these research questions were addressed with inferential statistical analyses using the Chi-square test, alpha level set at  $p < .05$  in a two-tailed test.

## Results

### Sample Characteristics

The sample consisted of 42 respondents, of which 11 were excluded due to not being full-PCPs. Among the remaining 31 participants, most (68%) described their gender identity as female. Seventy-one percent of the participants identified themselves as nurse practitioners (NPs) or physician assistants (PAs) **Table 1**. Participants' mean age was 45.2 years ( $SD=10.2$ ), and the mean number of participants' years in practice was 10.2 ( $SD=7.3$ ).

### Survey results

Twenty participants (64.5%) answered that HIV is a chronic condition that cannot be generally managed in primary care **Table 2**. Six participants (19.4%) answered that they manage

**Table 1.** "NP/PA" represents physician assistant or nurse practitioner.

| Participant's Credentials |          |            |
|---------------------------|----------|------------|
| Role                      | <i>n</i> | Percentage |
| Physician                 | 9        | 29%        |
| PA/NP                     | 22       | 71%        |

**Table 2.** CME represents continuing medical education.

| PCP Perceptions and Practices                       |    |            |
|---|----|------------|
| PCP Perceptions of HIV                              | n  | Percentage |
| HIV cannot generally be managed in primary care.    | 20 | 64.50%     |
| HIV can be generally managed in primary care.       | 11 | 35.50%     |
| Management of New Patients with HIV                 | n  | Percentage |
| Refer to HIV Clinic                                 | 17 | 54.80%     |
| Refer to Infectious Disease                         | 16 | 51.6       |
| Manage in Primary Care                              | 6  | 19.40%     |
| Other/do not see                                    | 1  | 3.2        |
| Management of Established Patients with HIV         | n  | Percentage |
| Refer to HIV clinic                                 | 15 | 48.40%     |
| Manage in primary care                              | 10 | 32.30%     |
| Refer to Infectious Disease                         | 10 | 32.30%     |
| Other   | 4  | 12.90%     |
| Reasons for Not Managing HIV in Primary Care        | N  | Percentage |
| Lack of Training/Experience                         | 14 | 45.2       |
| Complexity of Cases                                 | 6  | 19.4       |
| Likelihood of Managing HIV in Primary Care with CME | N  | Percentage |
| Yes   | 17 | 54.80%     |
| No  | 14 | 45.20%     |

new patients with HIV in primary care. Seventeen participants (54.8%) answered that they refer new patients with HIV to an HIV specialty clinic. Sixteen (51.6%) said they refer new patients with HIV to an infectious disease specialist. One participant (3.2%) answered "other," indicating that she does not see new patients with HIV **Table 2**.

Ten participants (32.3%) answered that they manage established patients with HIV in primary care, 15 (48.4%) referred established patients with HIV to an HIV specialty clinic, 10 participants (32.3%) referred established patients with HIV to an infectious disease specialist, and four participants (12.9%) answered "other" in response to how they routinely manage established patients with HIV **Table 2**.

Fourteen participants (45.2%) answered that the reason for not managing HIV in primary care was lack of training/experience, six (19.4%) answered that the reason was complexity of cases, and 11 participants (35.6%) answered that there were other reasons **Table 2**.

Finally, 17 participants (54.8%) answered that they would be more likely to manage HIV in primary care if this type of training/CME was available **Table 2**.

## Discussion

Many patients are most comfortable receiving their healthcare from their PCPs; this correlates with greater rates of follow-up and compliance. The purpose of this study was to determine PCP perceptions of HIV management in primary

care and to identify current practices of PCPs in regard to new and established patients with diagnoses of HIV. Most PCPs in this study perceived HIV as a chronic condition that cannot be managed in primary care. Additionally, most PCPs in this study referred both new and established patients with a diagnosis of HIV to other providers, such as infectious disease and HIV specialty clinics. This correlates with the study performed by Darr and Sinclair (1992) whose participants were more comfortable with HIV/AIDS counseling than with medical management in primary care. One reason for this may be that Darr and Sinclair (1992) surveyed only family physicians. Participants in the current study were mostly nurse practitioners and physician assistants who may not have had much exposure to patients with HIV patients in their primary training.

Participants identified lack of training as the primary reason for not managing HIV in primary care. Interestingly though, slightly more than half of the PCPs in the current study would be willing to manage HIV in primary care if additional CME activities were available, such as the one described by Kang et al. (2015).

## Recommendations

This study demonstrates that PCPs are not currently comfortable with managing HIV in primary care. This discomfort could change if CME activities were available to PCPs to guide management of HIV in uncomplicated cases. Therefore, CME activities educating PCPs in management of HIV are necessary. This would encourage PCPs to manage more of their patients' total care.

## Limitations

The primary limitation to this study was a small sample size. Research similar to this could be conducted with recruitment on a national scale. This would provide an opportunity for the data to be more representative of the general population. This could also correct for possible regional cultural biases and attitudes.

## Further Research

Future studies of this nature may assess the amount of HIV-related training and experience that participants may have had in their healthcare education. Summary scores may also be of use in determining whether trends among different demographics, such as gender, race, ethnicity, or age, might affect a PCP's willingness to manage HIV in primary care.

## Conclusions

HIV is a chronic medical condition that requires ongoing management. Recent advances in medications have simplified treatment [2, 3]. State that HIV can be managed in primary care, but they did not assess or account for clinician comfort levels in doing so. Most PCPs are not willing to manage HIV in primary care due to a lack of training. These findings align with those of [9]. This study demonstrates that CME activities relating to HIV management for PCPs would lead to better care for patients with HIV.

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