Efficacy of the Patient Advocate Component in a Behavioral Intervention to Improve Treatment Adherence in the HIV Positive Population: A Systematic Review

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Introduction
The human immunodeficiency virus (HIV) is a comprehensive and progressive pathogen which attacks and depletes a portion of the immune system, rendering it unable to defend against opportunistic infections and malignancy. Infection with HIV is the precursor to acquired immunodeficiency syndrome (AIDS) and if untreated, will lead to death. According to the World Health Organization (WHO), HIV/AIDS is considered to be pandemic infecting as many as 39 million persons worldwide. Although there currently is no cure for the virus, the invention of antiretroviral therapy has managed to increase the quality of life for HIV-infected patients prolong overall life expectancy through suppression of viral replication and the sustenance of immunologic function. The HIV/AIDS pandemic persists secondary to the shortcomings of current treatment plans which inadequately address factors such as ignorance of HIV status, illiteracy, poor education about disease awareness and cultural misgiving, ineffectiveness counseling on treatment options and side effects, and lack of resources and supporting structures. Healthcare providers struggle to identify methods to improve adherence. Interventions which fail to address HIV/AIDS management with aholic and comprehensive approach perpetuate treatment failure and subsequent viral spread. Patient advocates (PAd) are being utilized as part of a behavioral intervention aimed to improve patient compliance. PAdS are highly trained in topics of HIV/AIDS disease and management and serve to assist patients with education, motivation, and treatment adherence support. The study reviewed here address the efficacy of the PAd component in HIV/AIDS treatment adherence.

Purpose
The purpose of this review was to perform an exhaustive literature search to obtain studies that directly address the efficacy of the PAd component in HIV/AIDS treatment adherence. Outcomes of each study are discussed and the overall quality of evidence was evaluated using GRADE, a universal system utilized to determine quality of evidence and strength of treatment recommendations.

Method
An exhaustive search of medical literature was conducted using three different databases to identify articles addressing this research question. The search was limited to articles published since the year 2001 that addressed the PAd component alone.

Findings

<table>
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<th>Comparison</th>
<th>Outcome</th>
<th>Quantity and type of evidence</th>
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<td>Patient Advocate vs No Patient Advocate</td>
<td>Engagement in care/retention in care/ART initiation</td>
<td>2 Obs studies</td>
<td>Increased engagement/retention in care</td>
<td>Low</td>
<td>0 0 0 0 0 0 0 +1</td>
<td>Moderate</td>
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<tr>
<td>Treatment adherence</td>
<td>3 Obs studies</td>
<td>Improved treatment adherence to ART</td>
<td>Low</td>
<td>0 0 0 0 0 0 +1</td>
<td>Moderate</td>
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Discussion
All three of the studies provide evidence suggesting that there is a place for PAdS in HIV/AIDS management programs. However, further studies with more objective and experimental design need to be conducted to decipher their efficacy and how best to utilize such a construct. Secondary to the fact that all three studies were of observational design, the evidence obtained is of low quality. Observational studies provide insight into a phenomenon and can potentially avoid ethical dilemmas drawing associations and making inferences about a cause and an effect. However, they fail to establish a causal effect and therefore must be followed by controlled experiments with an independent variable utilizing methods of randomization, blinding of participants/researchers, and avoid systematic error due to bias in order to produce valid outcomes and resulting high quality evidence.

Patients depend on their healthcare providers to allocate the best treatment suited to their individual needs. Providers must be able decipher between standard treatment guidelines and alternative options when presented with atypical presentations such that they can incorporate patient values and preferences into treatment recommendations.

Utilizing the GRADE system, the overall quality of evidence was found to be moderate confirming that further research is merited to assess efficacy of the PAd component in HIV/AIDS treatment adherence that will likely impact and possibly change the presented estimate of effect.

Conclusion
In conclusion, the observational studies reviewed in this paper have succeeded in hypothesizing that incorporating a PAd component into behavioral interventions will enhance HIV/AIDS treatment adherence. However, further experimental studies need to be performed with randomization; blinding procedures to avoid bias and to retain validity of study findings. The objectivity of these studies will better produce a high quality evidence which can be used to strongly recommend that PAdS are vital components in HIV/AIDS treatment management and further suggest that their incorporation into interventional programs will significantly improve treatment adherence helping to promote virologic suppression, enhance immunologic function, and reduce transmission of HIV/AIDS.

References