



# Health Needs of People Living with HIV/AIDS: From the Perspective of Policy Makers, Physicians and Consultants, and People Living with HIV/AIDS

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## Abstract

**Background:** HIV/AIDS has been concentrated among injecting drug users in the country. This study aimed to investigate and identify health and treatment needs of people living with HIV/AIDS in Iran.

**Methods:** This qualitative study was conducted in 2012 in Iran. The study groups consisted of experts, practitioners, and consultants working with People Living with HIV/AIDS and their families. Data was collected through Focus Group Discussions and deep interviews. Data were analyzed using content analysis method.

**Results:** The findings of this study included the needs of people living with HIV/AIDS, which were classified in three main categories. The first category was prevention and counseling services with several sub-groups such as education and public and available consultation, distribution of condoms to vulnerable groups, increasing counseling centers in urban areas, providing appropriate psychological and supportive counseling, and family planning services. The second category included diagnostic and treatment services and had several sub-groups such as full retroviral treatment, Tuberculosis treatment and continuing care, providing care and treatment for patients with hepatitis, and providing dental services. The third category included rehabilitation services and had some sub-categories such as home care, social and psychological support, nutritional support, and empowering positive clubs.

**Conclusions:** This study puts emphasis on making plans based on the priorities to meet the needs of people living with HIV/AIDS in Iran.

**Keywords:** Health, HIV/AIDS, Qualitative study, Iran

## Introduction

Nowadays, HIV/AIDS is not limited to a geographical area or ethnicity; on the contrary, all groups of society, especially youngsters, are vulnerable to this disease (1, 2). In 2012, 35.3 million people were living with HIV/AIDS (PLHIV). In

addition, 1.6 million AIDS patients died in 2011 (3). Iran has a large number of injecting drug users (IDUs) and HIV/AIDS epidemic has concentrated in this group. Until the middle of April, 2013, an overall number of 26125 individuals have

been diagnosed with HIV in Iran (4). HIV/AIDS is one of the biggest challenges of public health in human communities (5). HIV/AIDS influences all aspects of the patient's and his relatives' lives, including physical, mental, social, and spiritual dimensions (6). Anxiety, stress, disappointment, depression, and fear of stigma among PLHIV and their relatives make them refuse to receive care-treatment services and pursue the process of their treatment (7, 8). This situation is exacerbated by long time span before detecting the symptoms of the disease, and lack of public access to health-treatment services, especially counseling services, for PLHIV and their relatives (9, 10). With respect to AIDS in Iran, different needs have been recognized, involving prevention, diagnosis, treatment, home care, enough psychological-social support, and other health and treatment needs of PLHIV and their families; however, due to economic/social/cultural obstacles, discriminating behavior against PLHIV during the provision of health services, and negative attitude toward PLHIV, sometimes eligible individuals cannot easily proceed to health centers in order to receive necessary cares (11). An issue, which causes many problems for these people with regard to their access to health, services (12).

Fast changes in the epidemiology of HIV/AIDS require special conditions and plans to control this disease and fulfill its health-treatment needs (13). Compared to the large bulk of attention that has been paid to HIV/AIDS training in Iran, there has been little focus on the health-treatment needs of patients and their families. In addition, these stakeholders have played no role in the majority of offered programs (14). High-risk groups have problems with regard to counseling for HIV/AIDS prevention, contraception, promotion of the use of condom, and regular visits by doctors (15). Effective control of HIV/AIDS is possible only through health training, promotion of the use of condom, economic/social/cultural intervention, consideration of social conditions and stigma reduction, consideration of patients' real needs and their management (11). In this regard, qualitative research, which is primarily inductive and descriptive, could provide rich contextual data

to understand social phenomena related to behavior of high risk groups and in addition describe the way in which individuals and groups have made adaptations in their everyday lives in response to HIV disease. For this reason, this study used a qualitative method to deeply investigate the health-treatment needs of PLHIV and their relatives.

Although the stigma towards HIV/AIDS emerges differently in all communities, each community has its own particular circumstances. The stigma leads to differences among people with HIV/AIDS to access and receive different levels of health services. Some of the above-mentioned studies pointed out the problems which face PLHIV while receiving services.

It is impossible to control HIV/AIDS unless the real health and treatment needs of PLHIV are recognized and plans concerning their problems are designed. As a result, this study was aimed to investigate the health-treatment needs of PLHIV and their relatives.

## **Methods**

This inductive content analysis qualitative study was conducted in 2012. It used Focus Group Discussion (FGD) and individual interview techniques and it aimed to investigate the health and treatment needs of PLHIV. To this end, data was collected from various groups of these stakeholders.

This article is part of a project entitled Integration of HIV/AIDS Programs and Health Systems; some other studies are extracted from this project, which is under review or publication.

To conduct this study, the study population was divided into five groups. These groups included: 1) men with HIV/AIDS; 2) women with HIV/AIDS; 3) families and relatives of people living with HIV/AIDS; 4) service-providers including physicians and consultants; 5) managers and experts and key people. FGDs were conducted to collect data from the first four groups. Two FGDs were conducted among groups 1 to 4 and eight FGDs were conducted. To conduct the study among the group of experts and managers and key people, six people were selected based on some discussions

and criteria and the required data were collected through interviews. Four out of all FGDs in group 1 to 4 were conducted in Tehran, the capital of Iran.

HIV-positive participants and relatives were purposively recruited with the assistance of health workers in the positive club in the Iranian Research Center for HIV/AIDS (IRCHA). Participants were recruited from among the clients who attended the club on the day of conducting FGDs in Tehran. One FGD was conducted among physicians who were providing services in different health facilities.

Four FGDs among group 1 to 4 were conducted in Kermanshah that is one of the provinces of Iran; Kermanshah has high rate of HIV/AIDS cases in proportion to other parts of the country. The participants in the first three groups in Tehran were selected from among clients attending Behavioural Counselling Centre; they were selected with the assistance of the informed staffs working in health facilities.

One of the FGDs was conducted among counselors and staffs who were providing services for HIV/AIDS patients in Kermanshah. We used FGD to collect data because this method allows the participants to be more comfortable sharing ideas in a homogeneous group.

Different criteria were utilized for selecting the participants; considering the group of PLHIV participants should meet the following criteria: more than a two-year history of HIV infection, a minimum experience of six months in attending one of the service centers, more than 18 years of age, and literacy. Regarding the relatives of PLHIV participants, the criteria included continuous life with the PLHIV as his/her spouse, parent, brother or sister, child, or his/her caretaker, a minimum age of 18, and literacy. Moreover, the physicians and counselors were selected from among those who had at least one year of working experience in one of the centers of providing services for PLHIV.

We selected six key persons among policymakers, managers, and informant specialists who had rich information in the field of health, HIV/AIDS, and serving HIV/AIDS patients. One of the six

key persons was one of the founders of PHC in the Iran who was familiar with health system and health programs. Two of the participants interviewed were two specialists in the field of infectious diseases who had long history of working in the field of HIV/AIDS and one of them was the chief of AIDS research center. One of the other interviewed participants was the head of AIDS Program at the Ministry of Health and Medical Education. One of them was among the administrators of the program in Welfare organization. One of the interviewees was an infectious diseases specialist with over five years of experience of working in one the centers that provide services for this kind of people. In this study, three of main researchers were female and four were male. Additionally, following some trainings we took advantages of the helps of some other people whose names are mentioned in acknowledgments.

To ensure a minimum participation rate of six people per each focus group discussion, researchers invited 40 people for FGD with PLHIV, 20 people for FGD with relatives of PLHIV, 10 people for FGD with physicians, and 10 people for FGD with consultants (totally 80 people were invited); of all, 70 person accepted the invitation and participated in the discussions.

The six people who were interviewed accepted our invitation and all of them participated in our interviews. The most important reason for drop-out was lack of time. Male and female PLWHIV were divided into separate FGD groups and in every FGD interviewers were selected from the same sex. The group of physicians and consultant covered both genders and included 19 Participants in two FGDs (Table 1).

To conduct the interviews a guiding questionnaire, which included eight main questions (Table 2) was used. To conduct FGDs the moderators (the first and forth authors ) who were qualified on conducting qualitative method and were assistant professors started the interviews through explaining the aim of the focus group sessions and the aim of the project entitled Health and treatment needs assessment of PLHIV. The participants were also assured about confidentiality, and were told that participation was voluntary and they

were also informed about their right to withdraw from the study at any time during the focus group sessions or interviews. The nature and purpose of the study were explained to each participant before his/ her consent, which was confirmed by an oral consent. Permission was sought orally prior to the interviews to audiotape the interview session. They were encouraged to talk openly about their ideas about PLHIV's psychological, familial, and social problems. The moderators then asked probe questions to confirm concepts mentioned and to explore areas that the participants did not talk about. Participants' views and beliefs about the problems and support needs were examined in detail. The observer (first and sixth authors and some other trained assistants) observed the atmosphere and interpersonal interactions in the focus group sessions. The researchers took field

notes immediately after each interview and explored them. Each FGD lasted 1.30 - 2 hours, and ended when no new issues seemed to arise.

Two FGDs for each type of groups and six interviews with key persons were conducted. Through analyzing data we found that we reached sufficient data, there was no more information, and we identified categories on different issues.

We summarized the results of every FGD and confirmed it through reciting the results to the participants.

The individual interviews were conducted in managers' offices and FGDs were conducted in a silent room in IRCHA in the Imam Khomeini hospital in Tehran and in a silent room in Kermanshah health center. The study protocol was approved by the ethical committees in IRCHA of Tehran University of Medical Sciences.

**Table 1:** The characteristics of studied groups

NO	Studied group	number of people invited to participate in the study	number of people who participated in the study	data collection method	place of study
1	Men living with HIV/AIDS	20	17	FGD	One group in Tehran and another group in Kermanshah
2	Women living with HIV/AIDS	20	15	FGD	One group in Tehran and another group in Kermanshah
3	Families and relatives of PLHIV	20	19	FGD	One group in Tehran and another group in Kermanshah
4	Service providers	20	19	FGD	Tehran and Kermanshah
5	Managers, experts, and key people	6	6	Deep interview	Tehran and Isfahan

**Table 2:** The questions used for FGDs and deep interviews and the matrix used to ask them from each group

Question	The content of the question							
Q1	What is your assessment about the current policies to fight AIDS in the country?							
Q2	To improve services for people with HIV/AIDS what new policies do you recommend?							
Q3	Is there any appropriate structure which includes and enforces intersectoral collaboration and community participation and international cooperation in the fight against AIDS in the country?							
Q4	How is the performance of different organizations and institutions in the fight against AIDS? (for the group of physicians and consultants the two previous questions were asked after question 7)							
Q5	What are the health needs of people living with HIV/AIDS and their relatives in terms of health and treatment needs?							
Q6	What are the current impediments to provide services to people with HIV/AIDS? What do you recommend to improve service delivery to people with HIV/AIDS?							
Q7	What are the other problems of individuals with HIV/AIDS which need to be addressed in health centers? And how should these problems be addressed?							
Q8	What suggestions or other solutions do you have for improving health care services to people living with HIV/AIDS?							
The matrix used to ask them from each group								
No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
experts and key people PLHIV	■	■	■	■	■	■	■	■
relatives of PLHIV								
service providers/ (physicians)			■	■	■	■	■	■
service providers/ (consultants)			■	■	■	■	■	■

## Results

As shown in Table 1, of the 80 people selected for FGDs, 70 persons participated in the study. In addition to these 70 people, six other persons were selected for interview, all of whom participated in the study. The results of the study had three main themes 1) Preventive and counseling services, 2) Diagnostic and Treatment Services, and 3) Rehabilitation services. The three main themes had some sub-themes, which are given in Table 3.

The results in Table 3 are presented and categorized for the four groups.

### *Health and treatment needs of PLHIV with regard to prevention services*

In the area of prevention services, most of the topics that were discussed by all the participating groups with regard to health and treatment needs of PLHIV and other stakeholders are listed in Table 3.

One of the interviewees believed that training packages should be prepared for various groups and appropriate training should be provided for young adults, and youngsters, so that they would not receive incomplete information from other resources: *“Right now, children receive some information even earlier than adults. Unfortunately, they may receive these information from wrong resources. When we do not provide the information for them, they gain it from other places. Ours kids do not understand [the difference between right and wrong] which makes problems form them.”*

A group of experts and authorities believed that prevention services should be appropriately provided for vulnerable groups: *“Sexual relations are inevitable. So, it is better to have protected relations; that is, condom should be used and suitable training should be provided for the high risk groups. In other words, there should be centers which offer condom to high-risk individuals.”*

From PLHIV perspective, in order to offer good prevention services, in addition to public training, access to counseling centers must be facilitated. The small number of counseling centers, people's lack of knowledge, and long travelling distance to counseling centers were some of the problems

mentioned by this group: *“The major part of the problem is that people are suffering from lack of knowledge; they don't have enough information. For example, suitable books should be distributed in the city or on the bus.”*

Also, PLHIV' relatives emphasized the need for public training and claimed that media play an important role in this regard.

They believed that, through training, the stigma, which is attached to PLHIV, should be reduced: *“Unfortunately, there is such a negative attitude toward AIDS in the society that I cannot announce that my brother is HIV positive.”*

Due to the large number of problems that patients encounter, they need special supportive and psychological counseling: *“HIV positive need psychological counseling. If in such conditions there is a place for them where they can talk about their problems, they will be able to easily join themselves to the society. With respect to social counseling, there is no body to guide them and provide counseling.”*

In addition, PLHIV who attended this discussion raised some issues about child birth, stating that they need to receive some services in order to prevent giving birth to infected children. Moreover, the participants believed that counseling services for family planning and prevention of sexually transmitted diseases should be provided in all health and treatment services.

### *Health and treatment needs of PLHIV with regard to diagnosis and treatment services*

In the area of diagnosis and treatment services, most of the topics that were discussed by all the participating groups with regard to health and treatment needs of PLHIV and other stakeholders are listed in table 3.

From the vantage point of experts and authorities, one of the initial steps for providing medical services for patients is prophylaxis and tuberculosis treatment, which require a protocol and appropriate training: *“We have a lot of problems, the most important of which is in the area of prophylaxis and tuberculosis. This problem has to do with the quality of treatment.”*

Table 3: Health and treatment needs of PLHIV

Group of study	Preventive and counseling services needs	Diagnostic and treatment services needs	Rehabilitation services needs
From the perspective of experts, managers, and key people	<ol style="list-style-type: none"> <li>1. Public and comprehensive training and consultation</li> <li>2. Preventive services such as condom distribution for vulnerable groups</li> <li>3. Integration of HIV/AIDS and reproductive health services</li> <li>4. Economic and social supports for vulnerable groups to reduce high-risk behaviors</li> <li>5. Identifying high-risk groups and making intervention plans</li> <li>6. Peer training</li> </ol>	<ol style="list-style-type: none"> <li>1. Full anti-retroviral treatment</li> <li>2. Improving inpatient services</li> <li>3. Establishing special day clinics to provide inpatient and surgical services</li> <li>4. Improving dental services</li> <li>5. Psychological supports and mental health services</li> <li>6. Providing treatment supports by health insurance organizations</li> <li>7. Promoting the use of rapid diagnostic tests</li> <li>8. Designing a protocol for prophylaxis and TB treatment of PLHIV</li> </ol>	<ol style="list-style-type: none"> <li>1. Home care</li> <li>2. Social and psychological supports, including group and family therapy</li> <li>3. Peer group supports</li> <li>4. Nutritional support</li> <li>5. Developing and promoting positive clubs</li> <li>6. Gaining support from individuals and charities</li> <li>7. Establishing welfare services in counseling centers</li> <li>8. Providing supports, especially in terms of insurance and employment</li> </ol>
From the perspective of PLHIV	<ol style="list-style-type: none"> <li>1. Public training and increasing people's access to counseling services</li> <li>2. Training PLHIV about positive prevention</li> <li>3. Training national officials and managers about HIV/AIDS</li> <li>4. Increasing counseling centers in urban areas</li> <li>5. Training health personnel to provide services for PLHIV</li> <li>6. Providing gender-specific services in counseling centers</li> <li>7. Appropriate counseling and psychological support</li> <li>8. Providing services to prevent the birth of infected children</li> <li>9. Maternal and child health and nutrition services</li> </ol>	<ol style="list-style-type: none"> <li>1. Providing inpatient services</li> <li>2. Free anti-retroviral therapy</li> <li>3. Hepatitis treatment</li> <li>4. Child delivery and gynecologic services</li> <li>5. Providing inpatient and outpatient services in all hospitals</li> <li>6. Dental services</li> <li>7. Access to the gynecologist for the infected women</li> <li>8. Conducting more accurate and advanced tests</li> </ol>	<ol style="list-style-type: none"> <li>1. Home care services</li> <li>2. Nutritional support</li> <li>3. Social and psychological support</li> <li>4. Supporting sport activities</li> <li>5. Family support</li> <li>6. Having fun and being with the peer groups</li> <li>7. Need to access shelters</li> <li>8. Creating a wide and comprehensive network for PLHIV</li> </ol>
From the perspective of families of PLHIV	<ol style="list-style-type: none"> <li>1. Public trainings</li> <li>2. Counseling patients' families</li> <li>3. Training and following standard precautions</li> <li>4. Positive prevention and raising awareness through peer group activities</li> <li>5. Family planning services to prevent disease transmission to sexual partners</li> <li>6. Preventing mother-to-child transmission</li> <li>7. Providing and training family planning services to prevent the transmission to sexual partners</li> <li>8. Raising people awareness through the media</li> </ol>	<ol style="list-style-type: none"> <li>1. Dental services</li> <li>2. Admission and appropriate treatment of patients in hospitals</li> <li>3. Continuing prophylaxis</li> <li>4. TB treatment and ongoing care</li> <li>5. Hepatitis treatment and care</li> <li>6. Psychology/psychiatry services</li> <li>7. Enhancing maternity services and equal rights for infected people like other patients</li> <li>8. Full health insurance</li> <li>9. Increasing the centers which provide special services and/or equipping other centers</li> </ol>	<ol style="list-style-type: none"> <li>1. Home care services</li> <li>2. Nutritional support</li> <li>3. Empowering positive clubs</li> <li>4. Providing services for infected children</li> <li>5. Social and psychological supports for addicted people</li> <li>6. Creating appropriate conditions for the pregnancy of positive patients</li> <li>7. Improving the conditions for employment</li> <li>8. Exempting PLHIV from military service</li> <li>9. Having equal rights similar to those of other patients and citizens</li> </ol>
From the perspective of physicians and consultants	<ol style="list-style-type: none"> <li>1. Training and counseling</li> <li>2. Providing the tools to prevent sexual transmission</li> <li>3. Community training to reduce the stigma</li> <li>4. Facilitating access to harm reduction services</li> <li>5. Improving service delivery to vulnerable groups and infected people</li> </ol>	<ol style="list-style-type: none"> <li>1. providing regular and specialized obstetrics and gynecology services for infected people and their families</li> <li>2. Providing infectious diseases services by experts at the centers</li> <li>3. Providing free immunization services</li> <li>4. Extending the coverage of Imdad committee's services</li> <li>5. Following-up patients under treatment, facilitating patients admission, and not isolating PLHIV</li> <li>6. Increasing patients' access to the preventative medicines</li> <li>7. Providing optimal dental services for these people</li> </ol>	<ol style="list-style-type: none"> <li>1. Home care services</li> <li>2. Nutritional support</li> <li>3. The need to change the way services are provided by supportive organizations</li> <li>4. Finding jobs for patients by welfare staffs</li> <li>5. Activating provincial coordination councils</li> </ol>
		<ol style="list-style-type: none"> <li>1. Using appropriate testing kits</li> <li>2. Integration of HIV services and health system services</li> </ol>	

A group of participants claimed that it is necessary to provide psychotherapy services for PLHIV: *"I think if we want to determine the priorities, the first one will be providing psychological support for these patients in order to help them have a normal life. In addition to the problems mentioned above, the patients have financial problems and cannot afford their medical and treatment issues. We need to support them in this regard."*

According to the participants' perspective, application and widespread use of the rapid diagnostic test of HIV/AIDS is of particular importance. Based on their ideas, it is necessary to conduct three types of regular experiments throughout the country in order to investigate body's immune function, measure viral load, and test drug resistance: *"When it comes to experiments, we have problems; many parts of Iran where the services are provided do not have facilities such as CD4 and viral load measurement."*

PLHIV stated numerous diagnosis and treatment needs, with the most important ones including stigma in providing services, medical personnel's reluctance to provide services for them, and high costs of treatment.

Participants believed that patients require both outpatient and inpatient treatment services in all hospitals. Participating counselors and patients believed that in order to provide better treatment services, it is necessary to trace the patients who are being treated and avoid isolating infected people.

One of the problems, which were mentioned, by most of the participants was the issue of receiving dental services. The factors that prevented patients from referring to dentistry involved long travelling distance, costs of access to these centers, violation of patients' confidentiality during treatment, and inappropriate behavior of dentistry's staff: *"Most of the individuals here have been infected to HIV through their addiction. Most of them have got broken teeth. But the problem is that every time I want to have two of my teeth extracted, a letter must be given to me [by authorities] so that the dentist can extract my teeth. And, this is just for extracting teeth [which is a simple operation]. There is not such a thing for dental fillings, for example."* According to one of the relatives, PLHIV who go to centers that provide dental services also have other needs which are not covered by the available health care

services: *"Right now, my husband has problem with his teeth. We do not have any money to spend on his teeth."*

Physicians and counselors who are active in counseling centers suggested that special units are devoted to providing dental services for these patients in counseling centers or similar places.

With respect to treatment services, family planning and reproductive health services were also mentioned by PLHIV. They believed that it is crucial to provide gynecologic services and that these services are hardly provided for patients: *"I could not deliver my baby in this city. Since I was HIV+, they did not let me deliver my baby here despite the fact that I had a letter from this [counseling] center."*

Some of the participants agreed with the idea of integrating the services for PLHIV in those places where services are provided for other people. They said that this model of service provision has been piloted in some health-treatment centers in different cities; however, they stated that there are still some problems: *"Probably one of the problems for integrating services is fear of violating confidentiality by those who are familiar with patients and their neighbors."*

### ***Health and treatment needs of patients and other PLHIV with regard to rehabilitation services***

In the area of rehabilitation services, most of the topics that were discussed by all the participating groups with regard to health and treatment needs of PLHIV and other stakeholders are listed in Table 3.

Based on experts' and authorities' view point, patients need home care, a topic that needs special attention: *"Home care is a serious and necessary part of the protocol of HIV care and treatment, but it has not received any attention; that is, the protocol which has been prepared for it is not applied."*

The same subject was also highlighted by patients' relatives: *"In addition to his disease, he [i.e. the patient] has psychological problem. So, somebody should take care of him. With a lot of effort, I found a nurse for him. Who is supposed to cover these costs?"*

PLHIV need psychological supports, such as group therapy and family therapy: *"We don't have a counselor who is able to provide group therapy and family therapy for HIV+ people. These are the things that we*

need.” Some of the recommended solutions for having better services are providing services through peer groups as well as developing and supporting positive clubs: “For instance, welfare organization has devoted budgets to 20 positive clubs. It means that these clubs have been recognized to receive pure support.” According to most of the participants, social and psychological support is one of the most important needs, part of which should be provided by the family and spouse. Most of the patients believed that they are not able to have good relations with their family: “they [i.e. the family members] do not understand us. They think that we should behave like healthy mothers. I need to talk with a person who has the same problem and can sympathize with me.”

The patients also mentioned that they need to be involved in recreational activities with peer groups and that, in positive clubs, they require to be trained in how to be engaged in group life: “One of the needs of people here is to learn how to live together.” They believed that mass entertainment could be helpful for them: “[We need that] every now and then they take us to an amusing place, so that our mood will change; we will be able to see and get familiar with each other.” The patients suggested that creating a national network among the positive clubs of the country can improve the provided health and treatment services for PLHIV: “A national network can strengthen the connection among the clubs and can help patients share their experiences. They can also solve their marriage problems [through this network].”

PLHIV’ relatives believed that supporting positive clubs is influential in helping infected people: “When their [i.e. PLHIV] spirits are low, they come to the club and we talk to them.”

In this study, in the area of rehabilitation services, another health and treatment need of PLHIV and others who are influenced by this disease was nutritional support and complementary nutrition of the patients.

From experts’ and authorities’ perspective, since patients become weak, they should receive nutritional support, complementary foods, and strengthening drugs: “If we are going to provide a real care, first we need to address their nutritional requirements.” Patients believed that most of them have nutritional problems and require support in this regard:

“Most of the times, I eat bread and cucumber [which is a very simple food] at 10 or 11 p. m. Also, physicians and counselors emphasize the necessity of providing nutritional support.”

Additionally, the participants emphasized that PLHIV should be supported, especially with regard to insurance and employment issues. They asserted that insurance and employment are two important supportive factors for these individuals. The issues related to insurance are now being pursued by the ministry of health. “The system should accept that these people [i.e. patients] should not be unemployed. They should be given priority [for employment]. In Vietnam, two percent of the total proportion of employment in factories is devoted to those workers who have abandoned their addiction through harm reduction plans.” PWHIV’ relatives emphasized the necessity of providing appropriate conditions for positive individuals’ pregnancy, improvement of employment conditions, and enjoyment of rights similar to those of other patients and citizens. Also, one of the participants stated that due to their special problem, these patients should be exempt from military service.

## Discussion

According to the views of experts, PLHIV, their relatives, physicians, and consultants, this study showed that the needs of PLHIV and their families can be categorized in three fields of preventive and counseling services, diagnostic and treatment services, and rehabilitation services.

Concerning preventive services, almost all groups of participants put emphasis on the following items: the need for public training and consultation, training national officials and managers about HIV/AIDS, distributing condoms widely among vulnerable groups, providing counseling and family planning services for vulnerable groups, and the need to receive supportive-mental counseling services. One of the main needs of people about HIV/AIDS is to inform and train all groups of people through mass media specially radio and television; this finding is in line with the results of other studies, for instance a study in Kerman showed that the most important source of infor-



mation on AIDS was mass media (16). Moreover, the findings of ten years of study in Asia, Africa, and Latin America have shown that the mass media had a big role in the prevention of HIV (17). However, a study in Bangladesh showed that the mass media are not very effective in this context such a finding is not consistent with our findings in this field (18).

This study showed that socioeconomic support for vulnerable groups is effective in reducing high-risk behaviors. A study in Iran showed that, due to the financial needs and lack of adequate social support, female sex-workers receive more money in exchange for not using condoms (19). A study in China showed that 84% of PLHIV were more inclined to undertake risky behaviors because of financial problems caused by social exclusion and loss of employment opportunities (20). The results of these two studies are consistent with our findings. Nevertheless, a study in United States showed that there is no relationship between socioeconomic status of an individual and his sexual behavior; this is not consistent with the findings of our study. Such a difference may be attributed to the prominent role of other health factors in USA (21). Therefore, based on our study and in line with the studies mentioned above, providing employment opportunities and adequate social support for PLHIV can motivate them to avoid risky behaviors, and subsequently reduce the transmission of HIV/AIDS among the population.

Based on the results of this study, reducing stigma and discrimination is another important need in the field of preventive services. While the country's laws and policies are not the cause of stigma, people and even some policymakers have a negative view toward PLHIV and treat them with discrimination. This finding is in line with the results of some other studies. For instance, the results of other studies have shown that, because of inappropriate behaviors and reactions of people, PLHIV hide their disease and do not refer to health centers (22-24). About 89.1% of health care workers in Rwanda confirmed the presence of discrimination between PLHIV and other community members (25). However, opposite results are also found, for example, a study in Ethiopia showed

that there was no relationship between medical students' high level of awareness and the elimination of stigma and positive attitudes towards patients with HIV/AIDS in this country(26). Effective interventions can improve attitudes and eliminate the stigma of AIDS in every population.

Based on our findings, the diagnostic and therapeutic needs of PLHIV included the followings: services to treat hepatitis and tuberculosis, access to gynecologists for the HIV positive women, the need for continuous prophylaxis, the need to receive dental services, the need to admitted easily and treated appropriately in hospitals, the need to receive psychological/psychiatric services, the need for a full health insurance, the need to receive free vaccination services.

Accessing and benefiting from free common antiretroviral therapy is one of the important landmarks in evaluating the success of HIV/AIDS control programs (15). However, based on the perspective of the participants in this study, the antiretroviral treatment should be developed more. Similar studies have been carried out in this area, for instance a study in Tehran showed that only 65.6% of PLHIV received antiretroviral therapy and the coverage of hepatitis B vaccination was 21.7%, and it was even less than 5% for the influenza and pneumococcal (15). The coverage rate of hepatitis B pneumococcal and influenza in United States were approximately 26.1%, 37%, and 33%, respectively (27). Another study in Thailand showed that a small number of patients received antiretroviral drugs (28). Therefore, to reduce the effects of HIV/AIDS, further attention should be paid to the development of antiretroviral treatments and free vaccination coverage for patients with HIV/AIDS.

With regard to diagnostic and therapeutic services, another important finding of this study was PLHIV' need for dental services. Because of the high cost of dental services, inappropriate behavior of dental staff, and the rejection of patients by the medical team, PLHIV are not willing to refer to dental clinics. Other studies have also confirmed these findings. For example, the results of a study in Iran showed that the referral rate of the patients for dental care was 47.9% and only 60 % of pa-

tients declared their HIV infection status to the dental care team; the most common reason that people do not disclose their HIV / AIDS is the fear of not being accepted by the medical staff (54.2 %) (2). A study in Brazil showed that the most important factor was socioeconomic factor (29). Thus, not only these people should be covered by dental care services, but also the dental staff should be trained to assure the oral and dental health of patients and motivate patients not to conceal their infection.

Based on our findings, the most important needs with regard to rehabilitation services are the need for home care, the need for nutritional support, the need for social and psychological support, receiving services through peer groups, providing services to children, and establishing assistance and counseling centers.

One of the most important rehabilitation needs of people with HIV/AIDS was social and psychological support. The World Health Organization has declared that the social and psychological support for PLHIV can help them to cope with the disease more easily, and seek treatment and consequently prevent the transmission of diseases (30).

Several studies have been carried out in this field in Iran, for example, a study showed that the majority of the studied subjects (56.5%) received poor social and emotional support from their families (14). The result of Murphy's research revealed that there is a significant relationship between depression of PLHIV and poor family and community support (31). The findings of these two studies were consistent with the findings of our study. Therefore, it is recommended to counsel and train families and to expand social supports to fulfill the most important needs of these people and to help them to cope with their illness and to prevent transmission to other individuals.

Based on result of our study, one of the main needs of PLWHIV and their families is to provide ARV treatment and harm reduction services; this is consistent with the result of other study. (32) Nutritional support is one of the other most important needs of PLHIV in the context of rehabilitation services. Most of the participants in this study stated that patients have poor and inadequate

nutrition and there is no specific nutritional support available for them. A study in Ethiopia showed that the prevalence of eating disorders in women with HIV/AIDS was 42.3% (33). A study in Botswana, South Africa showed that the use of multivitamin supplements and selenium reduces the risk of infection in PLHIV. This study is inconsistent with the results of our study. It seems that such a condition is due to the existence of a proper nutrition framework to support PLHIV in this country (34).

Although we tried to present the results of some similar and opposite studies for every main topic, since HIV/AIDS is not only a disease but also a social phenomenon it is worth mentioning that the results should be interpreted according to social and cultural features of every society; therefore, the interpretations depends on the differences and similarities in the context of each community. The above-mentioned fact can explain the cause of some differences. Furthermore, the differences in opinions of various groups, which have been interviewed in this study, might be due to differences in their attitudes and the way they are affected by this phenomenon.

There is no bias in the qualitative method and through trustworthiness; the researchers try to increase credibility and external validity of data.

To address transferability, the complete set of data analysis documents are on file and available upon request. This access to the inquiry's "paper trail" gives other researchers the ability to transfer the conclusions of this inquiry to other cases or to repeat, as closely as possible, the procedures of this project.

## **Conclusion**

Some decisions about providing services for people with HIV/AIDS are not still evidence-based. It is recommended for policymakers to obtain enough and appropriate evidences before taking the final decisions through using research which have been conducted in this area. Step-by-step integration of HIV/AIDS program into PHC can reduce the problems associated with the program.

Further research may concentrate on the ways to improve PWHIV's access to health, rehabilitation, prevention, and diagnosis services, as well as the latest models of service provision in different communities.

## Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

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