Policy Brief

Addressing Limitations to Equitable Access to Healthcare Services for People Living with HIV in Lebanon

K2P Policy Briefs bring together global research evidence, local evidence and context-specific knowledge to inform deliberations about health policies and programmes. It is prepared by synthesising and contextualizing the best available evidence about the problem and viable solutions through the involvement of content experts, policymakers and stakeholders.

K2P

Policy Brief

+ **Included**

Description of a health system problem

Viable options for addressing this problem

Strategies for implementing these options

× **Not Included**

Does not make **recommendations**

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K2P Policy Brief

Addressing Limitations to Equitable Access to Healthcare Services for People Living with HIV in Lebanon

United Nations Population Fund

National AIDS Control Program

Knowledge to Policy Center K2P

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Merit Review

The K2P Policy Brief undergoes a merit review process. Reviewers assess the brief based on merit review guidelines.

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Key Messages

Key Messages

What is the problem?

The overall problem is the limited access of People Living with HIV (PLHIV) to healthcare services across the HIV test – treat- retain continuum of care in Lebanon. The existing health system arrangements, stigma, and lack of individual’s knowledge about HIV do not ensure equitable access to treatment and care for PLHIV.

- In Lebanon, the declared cumulative number of PLHIV is estimated to be 1,893.
- The incidence since 2009 is estimated between 80 and 113 cases each year, with the majority of cases being among men who have sex with men.
- The governance arrangements such as the sub-optimal collaborations between the National AIDS Control Program and various HIV stakeholders (ministries, NGOs, international agencies), the unavailability of a law that protects PLHIV rights including the right to access healthcare services, and the unsustainable efforts to educate students on HIV/AIDS in a regular manner while waiting for the integration of HIV/AIDS education within the national teaching curriculum, limit access of PLHIV to treatment and care.
- The financing arrangements that limit access of PLHIV to treatment and care include the lack of affordability of the MoPH to cover free treatment for all including diagnostic tests required for continuous monitoring of PLHIV. The absence of health coverage by private insurance companies, and discrimination against PLHIV which puts them at risk of losing their jobs and increases their financial burden to access healthcare services are other limiting factors to access healthcare services.
- The delivery arrangements that limit access of PLHIV to treatment and care are: stigma from healthcare workers, low number of skilled healthcare workers that know how to deal and treat PLHV, the centralization of facilities in Beirut and lack of adequate service for PLHIV in healthcare facilities.

What do we know about the four options to address the problem?

The options suggested are derived from:

- High quality evidence
- Best practices
- Inputs of key informant interviews

Option 1› Integrate HIV care within primary healthcare centers (PHC), such as centers that provide Sexual and Reproductive Health (SRH) services, to reduce loss to follow up and ensure the continuum of care.

- Systematic reviews found this option to be effective in increasing quality of care and adherence to the continuum of care and in reducing costs on the patient and the provider.
- However, a systematic review found that primary healthcare physicians are not capable of detecting and diagnosing HIV.

Option 2› Ensure implementation and advocacy of existing and/or new laws, decrees and regulations to protect PLHIV rights so that accessing care becomes their legitimate right.

- Primary studies provided conflicting evidence regarding the effectiveness of this option. Some studies found that a law reduces stigma, while others found that it might increase it.

Option 3› Ensure that private insurance companies develop and provide comprehensive insurance schemes that cover PLHIV healthcare expenses

- Private insurance is more effective than public insurance in preventing HIV related deaths.
- Private insurance is cost effective to the provider, the patient and the government. However, primary studies found that it is creates inequities when patients are chosen according to their level of risk.

Option 4› Develop a multisectoral national strategic plan related to PLHIV.

- This option consists of education, training, media and awareness campaigns that can be achieved through multisectoral collaboration.
- Multisectoral collaboration is effective in achieving sustainability and improvements in health outcomes.
- It increases education and training of healthcare workers on HIV, which enhances quality of care, reduces stigma and improves PLHIV health outcomes.
- It also facilitates the implementation of comprehensive HIV education at schools and universities, which increases knowledge and attitude on HIV.
- It also encourages community based awareness and media campaigns that promote HIV testing and reduce stigma.

What implementation considerations need to be kept in mind?

- There are major concerns related to the financial sustainability of options. First, training healthcare workers and integrating HIV into PHC require a financing infrastructure. Additionally, there are concerns regarding the ability of the MoPH to financially sustain the provision of free HIV treatment and to fund PHCs.

- At the service delivery level, directors of PHC may resist integration efforts due to being overwhelmed with other programs.
- Multisectoral members of the National AIDS Control Program’s may not show commitment to the national strategic plan, as they may not perceive HIV as a priority.
- Private insurance companies may resist covering HIV care and treatment for fear of losing their clients due to increased premiums.
- Religious and political forces that associate HIV with taboo behavior and the existing law that criminalizes populations at risk in Lebanon may hinder advocating and implementing a law that protects the rights of PLHIV

Executive Summary

Executive Summary

The Problem

The overall problem is the limited access of People Living with HIV (PLHIV) to healthcare services across the HIV test – treat- retain continuum of care in Lebanon (UNFPA & NAP, 2013). The existing health system arrangements, stigma, and individual's knowledge about HIV do not ensure equitable access to treatment and care for PLHIV.

HIV continues to be one of the world's most significant health challenges. Although there is a treatment that prolongs the life of PLHIV, worldwide, the majority of people who test positively do not adhere to the continuum of care, or try to seek treatment and care when the disease is in its advanced stages (Luseno et al., 2010). The main reasons behind not seeking care are financial capacities of PLHIV (Gourlay et al., 2013; Peltzer & Pengpid, 2013; Wasti et al., 2012a; Wasti et al., 2012b; Merten et al., 2010) and stigma (Langebeek et al., 2014; Gourlay et al., 2013; Katz et al., 2013; Vreeman et al., 2013; Wasti et al., 2012a; Wasti et al., 2012b; Merten et al., 2010; Reisner et al., 2009).

In Lebanon, it was declared at the World AIDS Day conference that in 2015, the cumulative number of PLHIV, including Lebanese and refugees, was estimated to be 1,893 , the number of new cases is 113 and 81.4% of cases are transmitted sexually, with the majority being among men who have sex with men. In addition, it was mentioned that the NAP trained 550 healthcare workers during the year 2015.The recent political situation and the influx of Syrian refugees to Lebanon increases the number of PLHIV, however this number is not available due to the lack of a surveillance system (UNAIDS, 2014).

Most of the PLHIV that seek healthcare are in the late stages of the disease. Approximately 10% of PLHIV have restricted access to healthcare services, which mainly include dental services, family planning services and sexual healthcare services (UNFPA & NAP, 2013).

The Underlying Factors

The underlying factors of the problem stem from the health system arrangements in place. The National Aids Control Program (NAP), created by the MoPH in partnership with WHO, is mainly responsible for working closely with various sectors including NGOs, with the latter acting as the main portal of entry for testing, treatment and counseling to PLHIV (UNAIDS, 2014). The NAP announced its 2016-2020 strategy to fight HIV/AIDS in November 2015. However, the NAP requires continuous support in order to sustain and strengthen its role. As yet, there is no accurate and timely surveillance system in Lebanon to record and follow up on HIV cases (UNAIDS, 2014) and there is no law to protect PLHIV rights (WHO, 2014).

PLHIV face financial barriers to access HIV care. While the MoPH supplies free antiretroviral treatment (ART) for Lebanese and refugees living with HIV (UNAIDS, 2014), PLHIV have to pay the remaining expenses for comprehensive care. These include CD4 count test, viral load and chest X-rays that are frequently requested for monitoring of PLHIV health (Suthar et al., 2013). As such, PLHIV target NGOs to receive the needed services. In addition, there are growing concerns over the long-term financial sustainability of the Lebanese healthcare system in providing care (UNAIDS, 2014). The private sector, including private insurance companies refuse to cover PLHIV, which in turn affects the decision of companies to employ PLHIV. This leaves PLHIV with no source of income or healthcare coverage and increases the financial burden on PLHIV to access healthcare.

Stigma is among the main reasons why people are afraid to see a doctor to determine whether they have the disease or to even seek treatment and care (UNFPA & NAP, 2013). As such, it is important to address stigma as a main barrier to accessing healthcare services for PLHIV. The unfriendliness and lack of training of healthcare workers at healthcare centers further discourage PLHIV from accessing healthcare services (UNAIDS, 2014). In addition, although there are more than 110 Voluntary Counseling and Testing centers distributed around the Lebanese territory that provide free testing and counseling services to PLHIV, however, most are still not active (UNAIDS, 2014). The healthcare facilities that deliver care to PLHIV are centralized in Beirut and the big cities, other facilities are unprepared to deliver care to PLHIV and most of them lack of confidentiality, which discourages PLHIV to access healthcare services (UNAIDS, 2014).

Options of a policy approach to address the problem

Option 1› Integrate HIV care within primary healthcare centers (PHC), such as centers that provide Sexual and Reproductive Health (SRH) services, to reduce loss to follow up and ensure the continuum of care.

Eight systematic reviews found that integration of HIV care into PHC is related to reducing stigma and ensuring initiation and continuum of care (Legido-Quigley et al., 2013; Suthar et al., 2013; Car et al., 2012; Chorba et al., 2012; Lindegren et al., 2012; Car et al., 2011; Kennedy et al., 2010; Dehne et al, 2000). A systematic review indicated that PHC are effective in increasing HIV testing and retention of PLHIV into care (Kranzer et al., 2012). However, evidence is inconclusive on the effectiveness of integrating HIV care into PHC compared to providing care at specialized centers (Kredo et al., 2013; Lindegren et al., 2012). One systematic review found that physicians at PHC are often not capable of detecting and diagnosing HIV (Kostopoulou et al., 2008). Two systematic reviews reported that this option was cost effective (Kredo et al., 2013; Wong et al., 2012). However, a primary study concluded that while integrating HIV care into primary healthcare is cost effective, prevention is more effective (Renaud et al., 2009). Linking HIV care to PHC has been addressed in the Glion call to action. This initiative calls upon various stakeholders to address the linkage between family planning services and preventing mother to child HIV infection to be able to prevent, reduce transmission of HIV to infants and provide necessary treatment to both the mother and the child (WHO & UNFPA, 2006).

Option 2›

Ensure implementation and advocacy of existing and/or new laws, decrees and regulations to protect PLHIV rights so that accessing care becomes their legitimate right.

Implementing a law that protects PLHIV rights entitles PLHIV to free HIV treatment and makes it easier for PLHIV to access healthcare services (Sandoval & Cáceres, 2013; Okie, 2006; Galvão, 2002). Primary studies show that a law that protects PLHIV reduces the number of reported new HIV cases (Kirby, 2004), helps PLHIV retain their jobs (Nachega et al., 2015), and increases equitable access to healthcare services (Sandoval & Cáceres, 2013, Gruskin et al., 2013; Gable et al., 2009; Gable et al., 2008). Studies were inconclusive with regards to the law's effect on stigma; some studies reported that such law reduced stigma (Sandoval & Cáceres, 2013; Gruskin et al., 2013; Gable et al., 2009; Gable et al., 2008), while others reported that in countries where stigma is high, laws that protect PLHIV and encourage disclosure of sero-status or even criminalize non-disclosure of sero-status increased stigma and discrimination (O'Byrne, 2012; Chaudoir et al., 2011; Mahajan et al., 2008).

Option 3› Ensure that private insurance companies develop and provide comprehensive insurance schemes that cover PLHIV healthcare expenses

Studies showed that the privately insured are healthier, receive higher quality of care than individuals who are covered by public insurance (Huber & Mielck, 2010), and have higher protection against premature death due to HIV (Mugavero et al., 2009; Wilper et al., 2009; Bhattacharya et al., 2003). Private insurance has a positive impact on enhancing the quality of care and retention to care (Sulzbach et al., 2011; Marseille et al., 2006; Sinanovic & Kumaranayake, 2006; Waters & Peters, 2003). Four primary studies found that private insurance of PLHIV reduces the cost on patients and on the government (O'Byrne, 2012; Chaudoir et al., 2011; Sulzbach et al., 2011; Huber & Mielck, 2010; Mugavero et al., 2009; Wilper et al., 2009; Mahajan et al., 2008; Bhattacharya et al., 2003). Nevertheless, primary studies found that private health insurance creates inequity in healthcare coverage and access to care (Weiner et al., 2012; Ekman et al., 2008).

Option 4› Develop a multisectoral national strategic plan related to PLHIV.

This option addresses education, training, media and awareness campaigns that can be achieved through multisectoral collaboration.

Primary studies found mutlisectoral collaboration to be effective in achieving sustainability, improving health outcomes (Schwartländer et al., 2011; Ullah, 2011; Bäckstrand, 2006) and enhancing HIV prevention and treatment (Schwartländer et al., 2011, Kirby, 2004).

Addressing healthcare workers' (physicians, nurses and social workers) education and training as part of this national plan is important to maintain the quality of care (Kirby et al., 2004), improve PLHIV health outcomes and reduce stigma (Stangl et al., 2013; Rackal et al., 2011; Sengupta et al., 2011).

Additionally, multisectoral collaboration facilitates the development of comprehensive education curricula at schools, which is a cost effective tool (Cooper et al., 2012; Hogan et al., 2005) for reducing stigma (Fonner et al., 2014; Stangl et al., 2013; Sengupta et al., 2011). However, systematic reviews found that education in developing countries has a moderate effect on improving HIV behavior (Medley et al., 2009; Paul-Ebhohimhen et al., 2008).

Including awareness campaigns as part of this plan is effective in reducing stigma (Sengupta et al., 2011; Hogan et al., 2005) and promoting HIV testing (Naugle & Hornik, 2014; Vidanapathirana et al., 2006).

Implementation considerations

There are several barriers to implementation of these options at all levels of the health system: patient, professional, organizational and system levels. First, there are major concerns related to the financial sustainability of options at the various health system levels. At the professional level, there is a need to employ extra workforce or to train the available healthcare workers at PHCs, which is costly and time consuming (Pfeiffer et al, 2010; Price et al., 2009). At the organizational level, there are operational difficulties in integrating HIV care into PHCs (Kranzer et al., 2012), which require a financing infrastructure, medical equipment and device upgrades to integrate HIV care into PHCs (Pfeiffer et al., 2010; Topp et al., 2010; Price et al., 2009). In addition, private insurance companies may resist covering HIV care and treatment for fear of losing their clients due to increased premiums (Handel, 2013). At the system level, the MoPH lacks the funds required to sustain the provision of free treatment and to fund PHCs (UNAIDS, 2014). One example on overcoming the lack of financial sustainability is the Ryan White Fund program, which is a federal fund that helps provide free care to PLHIV build facilities specialized for HIV care and train healthcare workers to deliver the appropriate care (U.S. Department of Health and Human Resources, 2012).

Most other barriers were found at the system and professional levels. At the system (legislative) level, one barrier that may hinder the development and application of a law that protects PLHIV rights is the existing law in Lebanon that penalizes and criminalizes populations at risk (men who have sex with men, prostitutes and drug users) (Chatterjee et al., 2014; O'Byrne, 2012; Mahfoud et al., 2010; Gable et al., 2009; Coates et al., 2008; Gable et al., 2008; NAP, 2008). Religious and political forces that associate HIV with taboo behavior particularly men who have sex with men may also resist the application of such a law (Beyrer & Baral, 2011). Therefore, there may be a need to develop legal aid services and legal education services to PLHIV so that they know how to act based on the available laws (Gruskin et al., 2013; Stangl et al., 2013; UNAIDS, 2013a). Another barrier at the system level is the volatile political and economic context that Lebanon continuously faces (Schwartländer et al., 2011), this may impact the activation and sustainability of the national strategic plan. The use of SWOT (strengths, weaknesses, opportunities and threats) analysis may help develop an effective plan tailored to the context of Lebanon (Nkengasong et al., 2009).

At the professional level, PHC directors may resist integrating HIV care into PHC, mainly due to their preoccupation with other quality improvement programs (Goldfracht et al., 2006). In order to manage resistance to change, intensive internal marketing of the integration program can be done (Goldfracht et al., 2006). Another barrier at the professional level is the lack of commitment from multisectoral members of the national strategic plan who may not perceive HIV as a priority (Schwartländer et al., 2011; Woulfe et al., 2010). Engaging members of the national plan in the development of the plan may help foster a sense of ownership and commitment to the plan (Nkengasong et al., 2009; Goldfracht et al., 2006).

Content

K2P Policy Brief

The Problem

The overall problem is the limited access of People Living with HIV (PLHIV) to healthcare services across the HIV test – treat- retain continuum of care in Lebanon (UNFPA & NAP, 2013). The existing health system arrangements (governance, financing and delivery arrangements), stigma, and lack of individual's knowledge about HIV do not ensure equitable access to treatment and care for PLHIV.

Size of the Problem

HIV continues to be one of the world's most significant global public health challenges. At the end of 2013, there were approximately 35 million people around the world living with HIV (CDC, 2012a), with 97% of HIV cases in low- and middle-income countries (LMICs) (UNFPA et al., 2012).

Although HIV has no cure, the available antiretroviral treatment (ART) transformed this deadly disease into a chronic one, allowing PLHIV to live longer (UNAIDS et al., 2014). Adhering to the continuum of care, which consists of five steps, allows PLHIV to live not only longer but also healthier (Figure 1) (U.S. Department of Health & Human Services, 2013).

Background to Policy Brief

A K2P Policy Brief brings together global research evidence, local evidence and context-specific knowledge to inform deliberations about health policies and programs. It is prepared by synthesizing and contextualizing the best available evidence about the problem and viable solutions and options through the involvement of content experts, policymakers and stakeholders.

The preparation of the Policy Brief involved the following steps:

1) *Selecting a priority topic according to K2P criteria*
2) *Selecting a working team who deliberates to develop an outline for the policy brief and oversee the litmus testing phase.*
3) *Developing and refining the outline, particularly the framing of the problem and the viable options*
4) *Litmus testing by conducting one to one interviews with up to 15 selected policymakers and stakeholders to frame the problem and make sure all aspects are addressed.*
5) *Identifying, appraising and synthesizing relevant research evidence about the problem, options, and implementation considerations*
6) *Drafting the brief in such a way as to present concisely and in accessible language the global and local research evidence.*
7) *Undergoing merit review*
8) *Finalizing the Policy Brief based on the input of merit reviewers, translating into Arabic, validating translation, and disseminating through policy dialogues and other mechanisms.*

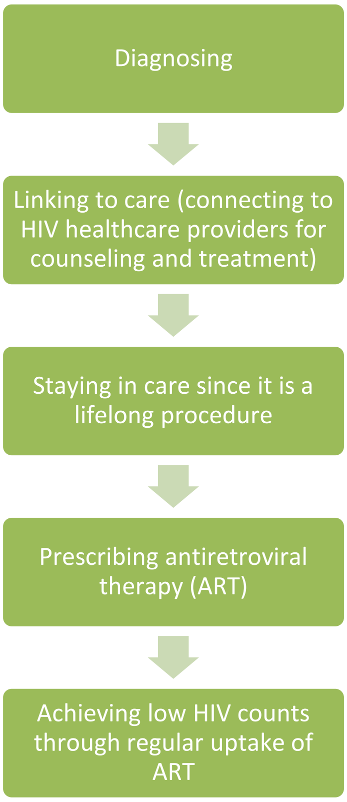

Figure 1 **Stages of the HIV continuum of care**

The majority of people who test positively for HIV do not initiate ART, are lost to treatment and care or try to seek care when it is too late and the disease is in its advanced stages (Luseno et al., 2010). Worldwide, only 62% of PLHIV achieve over 90% adherence to the treatment (Nachega et al., 2015). According to the Centers for Disease Control (CDC) (2012a), out of all the Americans diagnosed with HIV only 25% are virally suppressed (Giordano et al., 2007). Delayed establishment of care following HIV diagnosis is related to worse long-term outcomes (Ulett et al., 2006). In 2007, out of the Americans that were newly diagnosed with HIV, 40% did not visit a physician within the first six months, and more than half of them were out of care within one year (Giordano et al., 2007). A study in Uganda showed that early initiation of treatment is necessary, cost-effective, and increases life expectancy (Sempa et al., 2012). Early initiation reduces transmission, preventing the occurrence of new cases and decreasing costs (Delva et al., 2012; Sempa et al., 2012). It also reduces the risk of diseases related to HIV such as cardiovascular, cancer and renal diseases yet again reducing medical expenses (Sempa et al., 2012). A meta-analysis revealed that non-adherence to the treatment at a community level, increases the chance of HIV transmission and infection with opportunistic diseases, which increases healthcare costs, decreases productivity and negatively influences the economy (Nachega et al., 2015).

Many factors influence access of care and non-adherence to ART. Five systematic reviews found that there is a correlation between adherence to ART and accessing healthcare services and the financial capacities of PLHIV

(Gourlay et al., 2013; Peltzer & Pengpid, 2013; Wasti et al., 2012a; Wasti et al., 2012b; Merten et al., 2010). Eight systematic reviews reported that stigma plays a great role in preventing adherence to treatment and seeking care (Langebeek et al., 2014; Gourlay et al., 2013; Katz et al., 2013; Vreeman et al., 2013; Wasti et al., 2012a; Wasti et al., 2012b; Merten et al., 2010; Reisner et al., 2009). Other factors influencing adherence to treatment and access to care are health literacy among PLHIV (Dorner et al., 2014; Kalichman et al., 2013), substance use (illicit drugs and alcohol) and psychological issues such as depression (Langebeek et al., 2014).

Various countries worldwide implemented several strategies to enhance access to care and adherence to treatment, these include: (1) decentralizing care, which enables people from all regions to receive the care they need (Sandoval & Cáceres, 2013), (2) integrating HIV care into other services in order to avoid discrimination (Legido-Quigley et al., 2013; Suthar et al., 2013; Car et al., 2012; Chorba et al., 2012; Kennedy et al., 2010; Dehne et al., 2000), (3) training healthcare providers and task-shifting to give the needed care and treatment to PLHIV (Callaghan et al., 2010) and (4) conducting community based interventions to reduce stigma and achieve better acceptance of PLHIV (Stangl et al., 2013; Sengupta et al., 2011). Additionally, three systematic reviews showed that the use of technology-based strategies such as text messaging increases the adherence to ART (86-88).

The Middle East and North Africa (MENA) region has a low HIV prevalence of 0.1% (UNAIDS, 2013b). Reporting of HIV cases in this region has been rising; the number of reported cases between 2001 and 2012 increased by 73% and the number of new infections grew by 52%, the highest reported increase in the world (UNAIDS, 2013b). In addition, while the number of deaths due to HIV dropped by 16% worldwide, it was estimated to have doubled in the MENA region, with one in five PLHIV receiving ART (UNAIDS, 2013a).

In Lebanon, at the World AIDS Day conference, statistics about the latest HIV/AIDS situation were shared. Statistics showed that in 2015, the cumulative number of PLHIV, including Lebanese and refugees, was estimated to be 1,893. Of these 85.8% are men and 14.2% are women. Of the reported cases 92.7% claimed to have contracted the virus while they were in Lebanon. HIV incidence in Lebanon since 2009 is estimated between 80 and 113 new cases per year (NAP, 2014). In 2015, 113 new HIV cases were reported, of which 81.4% were transmitted sexually, with the majority being among men who have sex with men. Men who have sex with men, among other at risk populations (sex workers and injected drug users), still engage in risky behavior (UNAIDS, 2014). HIV mostly affects the younger productive population in Lebanon, with 31.8% of PLHIV between 15 to 29 years of age and 38.1% between 30 and 49 years. In addition, the recent political situation in the region and the influx of Syrian refugees to Lebanon increased the number of PLHIV (UNAIDS, 2014).

Results from a focus group discussion conducted with PLHIV in Lebanon revealed that PLHIV who seek care at hospitals are those who are at the late stages of the disease. Participants pointed out that the main reasons for the delay in seeking care are (1) participants did not know about centers where they can get tested and/ or treated or (2) physicians did not ask for HIV blood testing earlier on and they found out about their infection at later stages. Thus, there is an urgent need to ensure equitable access to HIV treatment and care early on in the disease in order to help PLHIV live a longer and healthier life and decrease the transmission of HIV.

A study conducted showed that stigma severely affects access of PLHIV to healthcare services in Lebanon (UNFPA & NAP, 2013). The study reported that 10% of PLHIV have restricted access to healthcare services, which mainly include dental services, family planning services and sexual health services (UNFPA & NAP, 2013). Approximately a third of PLHIV indicated that they refuse to attend any local clinic or hospital to obtain healthcare services and more than half reported that their experience on testing and diagnosis was challenging and that they were greatly concerned about the confidentiality of their medical files (UNFPA & NAP, 2013) (Figure 2).

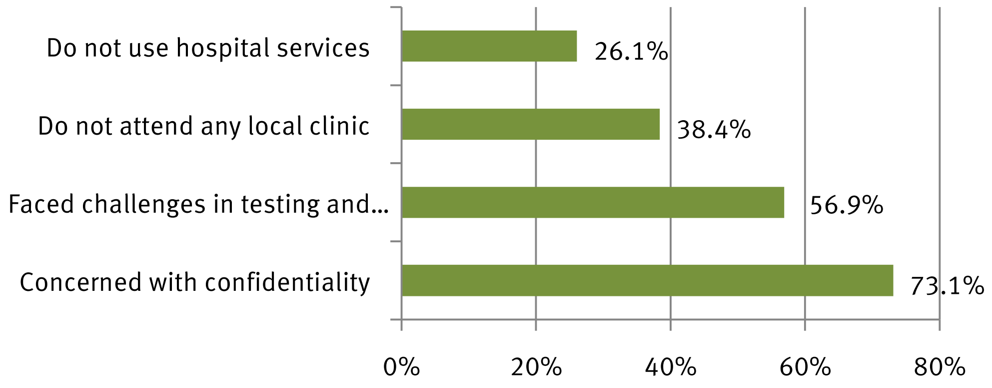

Figure 2 **Trends in access to healthcare services of PLHIV in Lebanon**

An additional barrier to access HIV treatment and care in Lebanon is the lack of HIV- related services such as sexual and reproductive health (SRH) services, which work on prevention and treatment. The MENA region, including Lebanon, suffers from an increase in the number of women living with HIV. However, the SRH services needs of these women are not being met, including family planning, antenatal care, delivery, postpartum care, and guidance on prevention of mother-to-child transmission (Colvin et al., 2014). In Lebanon, there is no policy available to support the linkage between SRH and HIV services (International Planned Parenthood Federation et al., 2011). In an assessment conducted by the UNFPA (2011), half of the centers that provide SRH services in Lebanon reported no integration of HIV care into their services.

However, at the SRH services where HIV care is integrated, only 7.5% provide treatment for PLHIV, 7.5% provide prevention for PLHIV, and 5% are concerned with providing information or services to key populations (sex workers and men who have sex with men) (International Planned Parenthood Federation et al., 2011). These centers focus mainly on provider initiated HIV testing and counseling and HIV prevention for the general population (International Planned Parenthood Federation et al., 2011). This assessment also showed that 68% of clients would like to be provided with HIV services at the SRH centers they visit (International Planned Parenthood Federation et al., 2011). Focus group discussions with PLHIV confirmed this finding as well.

Underlying Factors

Health system arrangements are among the main causes behind inequitable access to healthcare services for PLHIV. Health system arrangements include: governance, financing and delivery arrangements.

Governance Arrangements

Since the outbreak of HIV in Lebanon in 1985, the MoPH deployed various measures to prevent and control the disease. The MoPH first created a response scheme with hospitals and PHCs to report HIV cases and control the spread of the virus (Legido- Quigley et al., 2013).

In 1989, the MoPH launched the National AIDS Control Program (NAP) jointly with the World Health Organization (WHO) (UNAIDS, 2014). This program aims to increase awareness within the community, decrease HIV/AIDS related stigma and discrimination, and improve the rights of PLHIV (MoPH, 2010). The NAP also collaborates with various key stakeholders in HIV such as ministries, parliamentarians, decision-makers, Non-Governmental Organizations (NGOs), international agencies and others (UNAIDS, 2014).

In 2012, the NAP developed its second National Strategic Plan a multisectoral plan that includes an increased commitment by the government in terms of support in areas as policy, visibility, and resource mobilization (UNAIDS, 2014). The plan also includes increased commitment by employers' and workers' organizations; increased commitment by professional groups such as media, lawyers, and educators as facilitating agents of change; increased collaboration between government and civil society; and increased research, in addition to an ambitious scale up of Voluntary Counseling and Testing centers (VCT) activities to include the most remote and underserved geographical areas of the country (UNAIDS, 2014). In November 2015, the NAP announced at a meeting with the MoPH and WHO, that it will be launching a new strategy to fight HIV/AIDS for the years 2016-2020, it was also mentioned that the NAP was able to accomplish only 20% of the previous strategy objectives due to the national situation.

Through collaborating with NGOs, the NAP accomplished the following in 2014: provided ART to PLHIV, conducted prevention campaigns, established (VCT) and trained staff at these centers, controlled blood supplies to ensure blood transfusion safety, established outreach programs, and integrated information on HIV into other programs such as in school curricula (UNAIDS, 2014). In 2015, this collaboration helped the NAP train 550 healthcare workers at various centers. Focus group discussions with PLHIV revealed that NGOs are considered the main portal of entry for testing, treatment and counseling to PLHIV in Lebanon. However, the absence of a body that regulates collaboration between the NGOs and between the NAP and various NGOS, results in lack of transparency in the services each delivers and the programs each develop. This is mainly due to the continuous rivalry among NGOs, which affects the effectiveness of the services they provide and leads to the duplication of work they do (UNAIDS, 2014). Therefore, support and continuous monitoring of their activities is needed in order to sustain and strengthen this model of health service delivery to PLHIV in Lebanon.

In another initiative aimed to address HIV in Lebanon, the MoPH established the National Committee in 1990, which is a multi-disciplinary committee responsible for providing epidemiological information about HIV/AIDS. However, this committee is currently inactive (UNAIDS, 2014) and to date there is no accurate and timely surveillance system available in Lebanon to record and follow up on HIV cases and to comprehensively understand HIV-related dynamics and trends (UNAIDS, 2014).

There is currently no law to protect PLHIV rights in Lebanon and support their right to use and access healthcare services (Freeman et al., 2014), despite efforts made by various parties to establish such a law. In 2008, the Soins Infirmiers et Developpement Communautaire (SIDC) drafted and submitted a declaration to the MoPH (SIDC, 2008). Since the day it was submitted no action was taken and till today the declaration is still on hold at the MoPH. Other efforts to push for laws protecting PLHIV include the 2012 League of Arab States that issued the “Arab Convention on HIV Prevention and Protection of PLHIV” which is still open to member states’ signature (Freeman et al., 2014). In addition, in 2012 efforts were exerted to issue a law in Lebanon to protect PLHIV, the draft law developed included: the annulations of HIV pre-marital testing, doctors’ right to report HIV cases to partners only if they think it involves harm, doctors should report HIV cases anonymously for surveillance purposes only, making abortion legal if it threatens the life of the fetus, training healthcare workers, conducting awareness campaigns and involving the media, making testing available at both public and private healthcare centers to improve accessibility, harm reduction acts such as distributing syringes and needles at jails, distributing HIV awareness brochures and condoms at pubs, and removing tax from contraceptive products such as condoms and lubricants that help in containing the spread of HIV infection (Draft Law, 2012). The absence of a law that protects the rights of PLHIV is exacerbated by the presence of laws that criminalize the most at risk populations, which reduces access to health care services and jeopardizes the right of PLHIV to healthcare (Beyrer & Baral, 2011). In addition, the vagueness of the law that allows employers to perform pre-employment medical tests, and does not specify which tests should be performed, gives employers the right to test for HIV without their employees consent, and lowers PLHIV chances to be employed.

Another factor that hinders actions to enhance access to HIV care to PLHIV is related to the structure of the country including the highly volatile political and internal security situation, which disables policy changes and threatens medium- to long- term plans, including those related to HIV. In addition, strong resistance from religious leaders and decision makers, especially since HIV is considered a cultural taboo, makes it difficult to achieve improvements in enabling access to care for PLHIV (UNAIDS, 2014).

Financing Arrangements

The MoPH provides free antiretroviral treatment (ART) for Lebanese and refugees living with HIV (UNAIDS, 2014). However, HIV patients have to pay for the CD4 count tests, making access to this service not readily available to the population (Papadopoulos, 2007). Tests including CD4 counts, viral load, chest X-rays and other tests are expensive and are needed to regularly monitor the health of PLHIV. As such, PLHIV target NGOs to receive the needed services. Although treatment is provided for free at the NAP, the lack of confidentiality was highlighted as a major issue in the focus group conducted with PLHIV, which forces them to receive services at NGOs. Initiation of ART is mandatory when CD4 count is less than 350 cells/mm^3 but the MoPH modified ART guidelines to match WHO requirements so as to start treatment at a CD4 count of 500 cells/ mm^3 (WHO, 2013). The new guideline increases the number of PLHIV eligible for treatment, which increases the need for more funding in order to enable NAP to provide treatment to all eligible PLHIV (UNAIDS, 2014).

Additionally,There is growing concern over the long-term financial sustainability of the Lebanese healthcare system. This concern is not only specific to the provision of ART, but it also extends to the general coverage provided by the MoPH (UNAIDS, 2014). This is due to lack of continuous stable financial support, the lack of global fund support at the national level and the shortage of funding from external sources that will particularly be affected in view of the demographic and epidemiological transitions expected to occur over the next twenty years (UNAIDS, 2014; Papadopoulos, 2007). In addition, issues of limited funding at centers that provide SRH services (governmental bodies and NGOs) make it difficult to integrate and sustain HIV testing within SRH services (International Planned Parenthood Federation et al., 2011).

When it comes to coverage the NAP collaborates with the private sector in patient care and support; nonetheless, the private sector is still not involved in HIV treatment and care and insurance companies refuse to cover PLHIV care (UNAIDS, 2012). As such, companies cannot provide employees with an insurance plan, which discourages employers from recruiting PLHIV. Another barrier to employing PLHIV is travel restrictions. These restrictions prevent Lebanese PLHIV from traveling to work in Gulf countries as well as restrict the entry of foreigners with HIV to work in Lebanon, which further increase discrimination against PLHIV and limit their chances to employment (Chang et al., 2013). Limited employment opportunities leave PLHIV with no source of income or healthcare coverage and increase the burden of healthcare expenses on them.

The MoPH provides coverage for the treatment of unemployed PLHIV; however, it is at risk of financial sustainability. Additionally, as perceived by the focus group participants, sometimes when the MoPH learns that the patient is HIV positive it refuses to cover for the procedures needed. The National Social Security Fund (NSSF) covers the employed segment of the population. However, due to the lack of confidentiality and the unrestricted access of the employer to medical procedures, the employment of PLHIV is jeopardized if the employee learns about their HIV status. The less fortunate PLHIV go to NGOs for financial support; however, NGOs rely on funds that may not be sustainable. This situation creates healthcare access barriers for PLHIV. One way to achieve comprehensive coverage is for private insurance to extend coverage to PLHIV; however, these companies refuse to include PLHIV in their risk pool.

Another factor contributing to the financial constraints on access to HIV care is the increased influx of Syrian refugees, which further increases the financial burden on NAP and NGOs, which already suffer from limited funds (UNAIDS, 2014).

Delivery Arrangements

Stigma was consistently reported as a significant determinant of access to HIV treatment and care. Stigma is defined as “a dynamic process of devaluation that ‘significantly discredits’ an individual in the eyes of others” (Hodgson et al., 2014). Stigma disgraces PLHIV and labels them as different. It is the consequence of the prejudice that arises from the prevalent social, cultural and religious environment (UNFPA & NAP, 2013). Stigma is also the main reason why people are afraid to see a doctor to determine whether they have the disease or to seek treatment and care (UNFPA & NAP, 2013). HIV/AIDS related stigma was negatively associated with disclosure and health outcomes, impacting HIV preventive behaviors; HIV care-seeking behaviors; quality of care for PLHIV; and treatment of PLHIV among loved ones, health care providers and the larger community (Hodgson et al., 2014). As such, it is important to address stigma as a main barrier to accessing healthcare services for PLHIV.

Healthcare workers are another key determinant of access to HIV treatment and care. Healthcare workers may exhibit unfriendly behavior with PLHIV, which discourages access to healthcare services (Hodgson et al., 2014; Chakrapani et al., 2014; Kranzer et al., 2012; Chakrapani et al., 2011; Coetzee et al., 2011; Mills et al., 2006). Additionally, the low number of skilled human resources negatively affects access to HIV treatment and care (UNAIDS, 2014, Mills et al., 2006). Focus group discussions with PLHIV showed that physicians who accept treating PLHIV are centralized in Beirut and the big cities in Lebanon, creating inequities in physician distribution and access to treatment in remote areas. PLHIV form the focus group also reported that when they disclose being HIV positive they are either refused treatment by healthcare workers or are taken advantage of by increasing medical expenses of the procedure.

Other delivery arrangements contributing to limited access to HIV treatment and care are the unpreparedness of healthcare facilities to deliver care to PLHIV, inadequate counseling services (Hodgson et al., 2014; Chakrapani et al., 2014; Chakrapani et al., 2011), lack of linkages across services (Hodgson et al., 2014; Posse et al., 2008) and excessive waiting times (UNFPA & NAP, 2013). The lack of confidentiality and privacy at healthcare centers also reduces access of PLHIV to healthcare services (UNFPA & NAP, 2013). Access to healthcare services is also influenced by demographic factors; for example, long travel time and distance, due to centralization, to reach healthcare centers (Coetzee et al., 2011; Kennedy et al., 2010; Posse et al., 2008; Mills et al., 2006) discourages PLHIV from seeking care. There are more than 110 VCTs distributed around the Lebanese territory that provide free testing and counseling services to PLHIV, however, some of these VCTs are not yet active (UNAIDS, 2014). Systematic reviews reported that VCTs are effective in identifying people with high CD4 count and thus starting treatment and linking PLHIV to care at an earlier stage (Fonner et al., 2014; Pottie et al., 2014; Suthar et al., 2013). However, studies in Lebanon reported that there is lack of knowledge about the availability of such centers to PLHIV and the general population (Legido- Quigley et al., 2013) and the healthcare workers at these centers require training to provide quality care to PLHIV. In addition, half of the centers that provide some form of SRH services in Lebanon do not integrate HIV as part of their services, limiting the availability of centers where PLHIV can receive care without being stigmatized (International Planned Parenthood Federation et al., 2011).

Policy Options and Implementation Considerations

Many options can be selected as a starting point for deliberations designed to inform future initiatives to support access of PLHIV to healthcare. Based on evidence and the input from key informant interviews, to promote discussion about potentially viable options, four options were selected for more in-depth review, these are:

Option 1› Integrate HIV care within primary healthcare centers, such as centers that provide SRH services, to reduce loss to follow up and ensure the continuum of care.

Option 2› Ensure implementation and advocacy of existing and/or new laws, decrees and regulations to protect PLHIV rights so that accessing care becomes their legitimate right

Option 3› Ensure that private insurance companies develop and provide comprehensive insurance schemes that cover PLHIV healthcare expenses

Option 4› Develop a multisectoral national strategic plan related to PLHIV.

The focus in this section is on what is known about these options. In the next section, the focus turns to the barriers to adopting and implementing these options and to possible implementation strategies to address the barriers.

Options

Policy Options and Implementation Considerations

Option 1

Integrate HIV care within primary healthcare centers, such as centers that provide SRH services, to reduce loss to follow up and ensure the continuum of care

In Lebanon, there are around 75 PHCs that have implemented "universal coverage". These centers are well funded, have adequate resources and capacity and are best fit to integrate HIV care into their services. They are well scattered around the country and can be targeted by the NAP and MoPH.

Many systematic reviews pointed out the importance and benefits of integrating HIV care into primary healthcare centers (PHC). This strategy helps to decentralize care and increase access. Eight systematic reviews found that integration is related to reducing stigma and ensuring initiation and continuum of care (Legido-Quigley et al., 2013; Suthar et al., 2013; Car et al., 2012; Chorba et al., 2012; Lindegren et al., 2012; Car et al., 2011; Kennedy et al., 2010). A systematic review indicated that PHC are effective in increasing HIV testing and retention of PLHIV into care at earlier stages and enables PLHIV to live a longer healthier life (Kranzer et al., 2012). Another systematic review found that HIV care at PHC significantly increases retention of PLHIV into the continuum of care by 70% (Kredo et al., 2013). The same review reported that continuum of care in Low and Middle Income Countries (LMIC) is better achieved when treatment is provided at PHC instead of hospitals (Kredo et al., 2013). In addition, a systematic review found that enhancing the continuum and retention of care will on the long term help in reducing hospital stay and emergency room admissions, since PLHIV are diagnosed and treated at an earlier stage and have low viral count (Handford et al., 2006). However, the evidence is controversial when it comes to assessing the effectiveness of integrating HIV care into PHC versus the effectiveness of providing care at specialized centers. One systematic review found PHC to be more effective than specialized care alone specifically in terms of prevention, detection and management of the disease (Wong et al., 2012), while another systematic review could not assess the effectiveness of integrating HIV care for perinatal mothers into PHC versus receiving care at specialized centers (Car et al., 2011). One systematic review reported that physicians at PHC are often not capable of detecting and diagnosing HIV (Kostopoulou et al., 2008), which may result in delayed treatment and care. This issue was addressed in the Glion call to action. This initiative calls upon various stakeholders to address the linkage

SUMMARY

Option 1
Integrate HIV care within primary healthcare centers, such as centers that provide SRH services, to reduce loss to follow up and ensure the continuum of care.

Option 2
. Ensure implementation and advocacy of existing and/or new laws, decrees and regulations to protect PLHIV rights so that accessing care becomes their legitimate right.

Option 3
Ensure that private insurance companies develop and provide comprehensive insurance schemes that cover PLHIV healthcare expenses

Option 4
Develop a multisectoral national strategic plan related to PLHIV.

between family planning services and preventing mother to child HIV infection to be able to prevent, reduce transmission of HIV to infants and provide necessary treatment to both the mother and the child (WHO & UNFPA, 2006).

Two systematic reviews reported the cost effectiveness of this option. The first systematic review found that decentralizing into PHC reduces cost on both the patient and the provider; especially that PLHIV can access centers that are closer to their homes (Kredo et al., 2013). The second review found that routine voluntary testing at PHC was cost effective (Wong et al., 2012). However, a primary study concluded that although integrating HIV care into PHC was cost effective, HIV prevention was found to be more effective (Renaud et al., 2009).

Implementation barriers for adopting this option include operational difficulties (Kranzer et al., 2012), as well as the need for infrastructure and medical equipment and device upgrades, which require funding (Pfeiffer et al., 2010; Topp et al., 2010; Price et al., 2009). There is also the need to employ extra workforce or to train the available healthcare workers, which is also costly and time consuming (Pfeiffer et al., 2010; Price et al., 2009). In addition concerns about financial sustainability create another challenge to integrating HIV care into PHCs (UNAIDS, 2014). An example of a strategy to overcome these barriers is the USA Ryan White Fund program which helps provide care to PLHIV who do not have any kind of coverage and lack financial resources (U.S. Department of Health and Human Resources, 2012). This federal fund helped provide quality care to PLHIV, increase adherence to treatment, reduce stigma, and provide trained healthcare workers to deliver the appropriate care (U.S. Department of Health and Human Resources, 2012). In Lebanon, a similar initiative can be undertaken by the NAP which already has training programs but suffers from limited funding (UNFPA & NAP, 2013).

Resistance of PHC directions may also hinder the implementation of this option, since they may already be preoccupied with other quality improvement programs and fear they do not have time for new programs (Goldfracht et al., 2006). In addition, despite requests from physicians, some patients may still refuse HIV testing or enrolling into HIV care (CDC, 2012b). Opt-out testing, which recommends routine testing for HIV, is one way to integrate universal HIV testing into healthcare centers, it was first introduced in 2006 by the CDC to test adolescents, adults and pregnant women (Jover-Diaz et al., 2012). This method was found to reduce stigma, be cost effective, detect HIV positive cases at an early stage for which treatment can be more effective, and reduce the chance of transmitting HIV to newborns (Fox et al., 2011).

Table 1 **Key findings** from systematic reviews and single studies

Category of finding	Option 1
Benefits	A high quality systematic review, found that decentralizing HIV care from hospitals to PHC increases the number of

Category of finding	Option 1
	PLHIV who are retained in care by 70% (Kredo et al., 2013). The same review reported that continuum of care in LMICs is better achieved when treatment is provided at PHC instead of hospitals (Kredo et al., 2013). A high quality systematic review indicated that visits of PLHIV to PHC reduces hospital stay and decreases ER admissions (Handford et al., 2006). A medium quality systematic review found that primary healthcare is more effective than specialized care alone in terms of prevention, detection and management of HIV (Wong et al., 2012). A systematic review found that integrating HIV care within primary healthcare helps increase testing for HIV and retain PLHIV into care (Kranzer et al., 2012). Eight systematic reviews found that integration is related to reducing stigma and ensuring initiation and continuum of care (Legido-Quigley et al., 2013; Suthar et al., 2013; Car et al., 2012; Chorba et al., 2012; Lindegren et al., 2012; Car et al., 2011; Kennedy et al., 2010).
Potential harms	A systematic review pointed out that primary healthcare physicians are not capable of detecting and diagnosing HIV (Kostopoulou et al., 2008).
Cost and/ or cost effectiveness in relation to the status quo	A high quality systematic review found that decentralizing HIV treatment and care into primary healthcare reduces cost on both the patient and the provider; especially that PLHIV can access centers that are close to their homes (Kredo et al., 2013). A medium quality systematic review found that routine voluntary testing at PHC was cost effective (Wong et al., 2012)
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the approach element were pursued)	A high quality systematic review could not assess the effectiveness of integrating HIV care for perinatal mothers into PHC rather than providing care at specialized centers (Car et al., 2011). A primary study found that although integrating HIV care into primary healthcare is cost effective; prevention is more effective (Renaud et al., 2009).

Option 2

Ensure implementation and advocacy of existing and/or new laws, decrees and regulations to protect PLHIV rights so that accessing care becomes their legitimate right.

It was difficult to find systematic reviews for this option, and as such key findings were retrieved from high quality primary studies. Political commitment to HIV, even when it is only expressed verbally, is the first step to enforce a law. Political commitment led to great improvements in various countries such as Uganda, Botswana, Brazil and Thailand in terms of budgetary and law enforcement (Piot & Coll, 2001). In Peru, the law makes it easier for PLHIV to access healthcare services and obliges the national treasury to cover the cost of HIV treatment (Sandoval & Cáceres, 2013). This same is true for Brazil, making it impossible for someone with HIV to be denied free treatment (Okie, 2006; Galvão, 2002).

In addition, in Australia, the development of a law against discrimination that protects PLHIV and ensures their access to healthcare services helped reduce the number of reported new HIV cases (Kirby, 2004). Anti-discrimination laws help ensure that PLHIV retain and obtain jobs. A systematic review found that PLHIV in LMICs are 27% more likely to adhere to treatment when they are employed (Nachega et al., 2015). Therefore, a law that addresses the rights of PLHIV to employment may help preserve adherence to the treatment and at the same time contribute to alleviating the economic loss of productivity due to HIV. Four studies found that a law protecting the rights of PLHIV increases equitable access to healthcare services and ensures provision of services such as support and care (Gruskin et al., 2013; Sandoval & Cáceres, 2013; Gable et al., 2009; Gable et al., 2008). The same studies mentioned that the law reduces stigma (Gruskin et al., 2013; Sandoval & Cáceres, 2013; Gable et al., 2009; Gable et al., 2008). However, other studies reported that in countries where stigma is high, a law that encourages disclosure about HIV status may increase stigma and discrimination and affect disclosure (Chaudoir et al., 2011; Mahajan et al., 2008). In other counties, such as in Canada, where there is a law that criminalizes non-disclosure of HIV, HIV status ignorance increased, stigmatization and discrimination against PLHIV increased as well, and safe sex practices among PLHIV decreased (O'Byrne, 2012).

One barrier to the implementation of this option is the presence of a law that penalizes and criminalizes populations at risk (Chatterjee, 2014; Gable et al., 2009; Coates et al., 2008; Gable et al., 2008). Religious and political forces that associate HIV with taboo behavior particularly men who have sex with men may also resist the application of such a law (Beyrer & Baral, 2011). To overcome these barriers, there may be a need to develop legal aid services and legal education services to PLHIV so that they know how to act based on the available laws (Gruskin et al., 2013, Stangl et al., 2013, UNAIDS, 2013a).

Table 2 **Key findings** from systematic reviews and single studies

Category of finding	**Option 2**
Benefits	A primary study showed that in Australia, the development of a law against discrimination of PLHIV helped reduce the number of reported new HIV cases (Kirby, 2004) Four primary studies found that a law reduces stigma, increases equitable access to healthcare services and ensures provision of services such as support and care (Gruskin et al., 2013; Sandoval & Cáceres, 2013; Gable et al., 2009; Gable et al., 2008). A law helps PLHIV determine their rights and how to react accordingly (Gruskin et al., 2013, De Cock et al., 2002). Political commitment to HIV, even when it is only expressed verbally, can lead to great improvements in various countries such as Uganda, Botswana, Brazil and Thailand in terms of budgetary and law enforcement (Piot & Coll, 2001). The law obliges the national treasury to cover the cost of HIV treatment in Peru (Sandoval & Cáceres, 2013) and Brazil (Okie, 2006; Galvão, 2002).
Potential harms	In countries where stigma is high, having a law for disclosure about HIV status might increase stigma and affect disclosure (Lagomarsino et al., 2012; Chaudoir et al., 2011; Mahajan et al., 2008) In Canada, the law that criminalizes non-disclosure of HIV status holds the potential to encourage HIV status ignorance, increase HIV stigmatization and discrimination and reduce safe sex practices among PLHIV (O'Byrne, 2012)
Cost and/ or cost effectiveness in relation to the status quo	The literature did not report on the cost or cost effectiveness of this option
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be	There was controversy with regards to the effect of this option on stigma. Some studies found that the law reduced stigma (Sandoval & Cáceres, 2013; Gable et al., 2009; Gable et al., 2008) while others reported that the law increased stigma (Lagomarsino et al., 2012; Chaudoir et al., 2011; Mahajan et al., 2008).

Category of finding	Option 2
warranted if the approach element were pursued)	

Option 3

Ensure that private insurance companies develop and provide comprehensive insurance schemes that cover PLHIV healthcare expenses

Private insurance coverage may present a solution for the financial limitations to access HIV treatment and care. A systematic review conducted in Germany, which is not directly related to HIV patients, showed that the privately insured are healthier than those insured by public insurance, and have access to new innovative drugs and organ transplantations (Huber & Mielck, 2010). Privately insured patients face less financial burdens due to co-payments, shorter waiting times, and have better communication experiences with healthcare providers (Huber & Mielck, 2010). Another study found that private insurance was more effective than public insurance in preventing HIV related deaths (Bhattacharya et al., 2003). Four primary studies found that private insurance of PLHIV reduces the cost on patients and on the governmental financing per patient (Sulzbach et al., 2011; Marseille et al., 2006; Sinanovic & Kumaranayake, 2006; Waters et al., 2003). It reduces governmental financing by almost five folds, which may be a key solution to ensure sustainability of funding HIV treatment and care (Sinanovic & Kumaranayake, 2006). Additionally, four studies mentioned that private insurance has a positive impact on enhancing the quality of care provided to PLHIV (Sulzbach et al., 2011; Marseille et al., 2006; Sinanovic & Kumaranayake, 2006; Waters et al., 2003). Studies found that private insurance plays a stronger role than public insurance in strengthening adherence to treatment and care (Mugavero et al., 2009; Keruly et al., 2002). It was also associated with higher protection compared to public insurance against premature death of PLHIV (Mugavero et al., 2009; Wilper et al., 2009; Bhattacharya et al., 2003). The harms that may be faced most with private health insurance is that these companies prefer to cover the lower at risk segment of the population, high risk individuals either cannot pay for private insurance or pay a higher premium increasing inequity in inequity in healthcare coverage and access to care (Weiner et al., 2012; Ekman et al., 2008). In addition, two primary studies found that private insurance is expensive and might have a regressive effect on the poorer segment of the population (Baker, 2011; Meng et al., 2011). However, one study pointed out that even if insurance companies do cover HIV testing, this does not necessarily mean that the number of people tested for HIV will increase, as this depends on physicians orders and whether the physician recommends HIV testing and the patient accepts this recommendation (McWilliams et al., 2012).

One challenge for privately insuring PLHIV is that the price of the premium is adjusted depending on the risk of the pool. If the insurance companies assume that PLHIV are at high risk, prices will go up for both PLHIV and other people in the pool and people then start enrolling in sub-optimal cheaper insurance plans. This makes it difficult for insurance companies to cover healthcare expenses for PLHIV (U.S. Department of Health and Human Resources, 2012). However, research has been done to update solutions and schemes to lower the premium (Handel, 2013; Terlikbayeva et al., 2013; Ekman et al., 2008).

Table 3 **Key findings** from systematic reviews and single studies

Category of finding	Option 3
Benefits	One systematic review conducted in Germany, showed that the privately insured are healthier than those insured by public insurance, and have access to new innovative drugs and organ transplantations, they face less financial burdens due to co-payments, shorter waiting times, and have better communication experiences with healthcare providers (Huber & Mielck, 2010). One study found that private insurance is more effective than public insurance in preventing HIV related deaths (Bhattacharya et al., 2003) Two studies found that private insurance protects against premature death of PLHIV (Mugavero et al., 2009; Wilper et al., 2009; Bhattacharya et al., 2003) Continuum and adherence to care is higher among PLHIV that have private insurance versus those who are covered by public insurance (Mugavero et al., 2009; Keruly et al., 2002) Four studies found that private insurance increases the quality of care (Sulzbach et al., 2011; Marseille et al., 2006; Sinanovic & Kumaranayake, 2006; Waters et al., 2003)
Potential harms	Two primary studies found that private insurance companies prefer to cover the lower risk segment of the population, high risk individuals either cannot obtain private insurance or pay a higher premium increasing inequity in healthcare coverage and access to care (Weiner et al., 2012; Ekman et al., 2008) Two primary studies found that private insurance is expensive and might have regressive effect on the poor (Baker, 2011; Meng et al., 2011)

Category of finding	Option 3
Cost and/ or cost effectiveness in relation to the status quo	Four studies found that private insurance of PLHIV reduces the cost on patients and the governmental financing per patient (Sulzbach et al., 2011; Marseille et al., 2006; Sinanovic & Kumaranayake, 2006; Waters et al., 2003) One study showed that private financing reduces governmental financing by almost five folds ensuring sustainability of funding (Sinanovic & Kumaranayake, 2006)
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the approach element were pursued)	Even if insurance companies do cover HIV testing, this does not mean that the number of people tested will increase, as this also depends on physicians orders, and if the physician recommends HIV testing and the patient accepts this recommendation (McWilliams et al., 2012).

Option 4

Develop a multisectoral national strategic plan related to PLHIV

This option consists of a multisectoral national plan related to PLHIV that addresses education, training, media and awareness campaigns that can be achieved through collaboration across ministries (MoPH, MoSA, MoF and MEHE), NGOs and the private sector.

Multisectoral collaboration

Three primary studies indicated that multisectoral partnership, not specifically for HIV programs, is an effective way for achieving sustainability and improving health outcomes (Schwartländer et al., 2011; Ullah, 2011; Bäckstrand, 2006). The development of a framework that engages players from different sectors helps in community mobilization, protection of human rights, outreach to the most at risk marginalized populations, reducing stigma, increasing adherence to treatment and reduce loss to follow up (Schwartländer et al., 2011). Political commitment is needed in order to strengthen collaboration and enhance HIV prevention and treatment (Schwartländer et al., 2011, 34).

In Australia, the collaboration between ministers permitted reducing stigma through media campaigns, developing a national structure to mobilize a national strategy, implementing syringe and needle exchange programs, introducing HIV into school curriculum, repealing and reforming laws that criminalize high risk groups, and implementing anti-discrimination laws (Kirby, 2004).

No HIV specific studies were found for the collaboration between the government and NGOs, but evidence found that this type of collaboration for a tuberculosis program in Bangladesh led to health improvements and was effective in increasing access to care, diffusing knowledge and facilitating training of healthcare workers (Ullah, 2011). A study in Peru found that public and civil society participation in health enabled the country to be part of the Global Fund to Fight AIDS, Tuberculosis and Malaria and ensured sustainable provision of funds (Okie, 2006). A systematic review found that the integration of community mobile-vans for voluntary testing, self-testing at home, and rapid HIV testing for PLHIV facilitated access to care in Central Asia (Nguyen et al., 2014).

One way to help increase the financial abilities of PLHIV is through collaborating with the private sector for providing PLHIV with microloans. Microloans were provided in India and Vietnam, among many other countries. They enable PLHIV to start their own businesses and allow them to bear the cost of their treatment and needed care (Bagcchi & Collier, 2012; Kennedy et al., 2010; Robins et al., 2008; Juárez & Díez, 1998).

Education and training

A systematic review found that the education and training of healthcare workers are important for maintaining the quality of care (Braun et al., 2013) and three high quality systematic reviews pointed out that training healthcare workers, including physicians nurses and social workers, improves PLHIV health outcomes and reduces stigma (Stangl et al., 2013; Rackal et al., 2011; Sengupta et al., 2011).

Three systematic reviews concluded that comprehensive sexual education at schools has an impact on reducing stigma and changing HIV-related behaviors (Fonner et al., 2014; Stangl et al., 2013; Sengupta et al., 2011). In addition, two studies found school education to be a cost effective tool (59- 60). However, two systematic reviews found that education in developing counties has a moderate effect on improving HIV behavior (Medley et al., 2009; Paul-Ebhohimhen et al., 2008). A systematic review reported that HIV education increases knowledge and attitude but has a lower effect on behavior change (Santelli, 2008). A more recent primary study found that although sexual education for the youth does improve knowledge and self-efficacy, there is still uncertainty about its impact on sexual behavior (Cooper et al., 2012). Furthermore, one study reported that educational programs are of risk since the information provided lacks medical accuracy and the information provided is not scientifically correct (Atusingwize et al., 2014).

Community-based awareness and media campaigns

Two systematic reviews found that community based awareness campaigns were effective interventions to reduce stigma (Stangl et al., 2013; Sengupta et al., 2011). Two systematic reviews found that mass media has a direct effect on reducing stigma in addition to promoting HIV testing (Naugle & Hornik, 2014; Vidanapathirana et al., 2006). Mass media campaigns related to health issues were found to be cost effective in three systematic reviews (Jacob et al., 2014; Naugle & Hornik, 2014; Robinson et al., 2014; Bertrand et al., 2006 ; Vidanapathirana et al., 2006). And one primary study reported cost effectiveness of mass media campaigns related to HIV in developing countries (Hogan et al., 2005).

Uncertainty is related to the use of mass media. A systematic review on mass media intervention that disseminates HIV information in an aim to reduce stigma and increase knowledge showed that results were significant on a small sample size, whereas studies related to perceived risk, self-efficacy, interpersonal communication with partner/spouse, abstinence and condom use showed mixed results or no effect (Bertrand et al., 2006)

Implementation barriers to this option are related to the national political context and the extent to which it enables the activation of a National strategic plan. A forecast of the situation should be conducted (Schwartländer et al., 2011) in order to sustain this option despite the political and economic situation in the country. To be effective, the option should be a priority to policymakers, investors and decision-makers (Schwartländer et al., 2011), there is a continuous need to keep the multisectoral members committed to work through incentives and other means (Woulfe et al., 2010). Conducting SWOT analysis and including stakeholders in the development of the plan so that they are committed to it on long term (Nkengasong et al., 2009) have been found to be solutions to the mentioned barriers. Building a Cooperative process to involve all stakeholders in developing the integration program will help foster sense of ownership and commitment to the plan (Goldfracht et al., 2006).

Table 4 **Key findings** from systematic reviews and single studies

Category of finding	Option 4
Benefits	Three primary studies found multisectoral collaboration to be an effective way for achieving sustainability and improving health outcomes (Schwartländer et al., 2011, Ullah, 2011; Bäckstrand, 2006) Two primary studies reported that political commitment enhances HIV prevention and treatment (Schwartländer et al., 2011; Kirby, 2004). In Australia the collaboration between ministers permitted reducing stigma through media campaigns, developing a national structure to mobilize a national strategy, implementing syringe and needle exchange programs, introducing HIV into school curriculum, repealing and reforming laws that criminalize high risk groups, and implementing anti-discrimination laws (Kirby, 2004). Two systematic reviews found that studies assessing community based awareness to be effective interventions

Category of finding	Option 4
	to reduce stigma (Stangl et al., 2013; Sengupta et al., 2011) Two systematic reviews found that mass media has a direct effect on promoting HIV testing and reducing stigma (Naugle & Hornik, 2014; Vidanapathirana et al., 2006) Three systematic reviews concluded that comprehensive sexual education at schools has an impact on changing HIV-related behaviors and reducing stigma (Fonner et al., 2014; Stangl et al., 2013; Sengupta et al., 2011) A systematic review found that healthcare workers education and training is important to maintain the quality of care (Braun et al., 2013). Three high quality systematic review pointed out that training and educating healthcare workers improves PLHIV health outcomes and reduces stigma (Stangl et al., 2013; Cooper et al., 2012; Sengupta et al., 2011)) A primary study in Peru, found that the public and civil society participation in health, drove the country to be part of the Global Fund to fight AIDS, Tuberculosis and Malaria, and ensure sustainable provision of funds (Okie, 2006) A systematic review found that the integration of community mobile-vans for voluntary testing, self-testing at home, and rapid HIV testing for PLHIV facilitates access to care in Central Asia (Nguyen et al., 2014). Four primary studies indicated that collaboration with the private sector, such as banks, increases the financial abilities of PLHIV through providing them with microloans. This was done in countries such as India and Vietnam, among many others. Microloans enable PLHIV to start their own businesses and allow them to bear the cost of their treatment and needed care (Bagcchi et al., 2012; Kennedy et al., 2010; Webb-Robins et al., 2008; Juárez & Díez, 1998).
Potential harms	One study reported that information provided at schools may be harmful because it lacks accurate scientific information related to HIV and its treatment (Atusingwize et al., 2014).
Cost and/ or cost effectiveness in relation to the status quo	Three systematic reviews found health mass media campaigns to be a cost effective method (Jacob et al., 2014; Bertrand et al., 2006) and one primary study conducted in developing countries reported that mass media campaigns are cost effective to combat HIV (Hogan et al,. 2005) Two primary studies found that sexual education is a cost effective tool (Cooper et al., 2012; Hogan et al., 2005)
Uncertainty	A systematic review on a mass media intervention that

Category of finding	Option 4
regarding benefits and potential harms (so monitoring and evaluation could be warranted if the approach element were pursued)	disseminates HIV information to reduce stigma and increase knowledge showed that results that were significant were on a small sample size, and studies related to perceived risk, self-efficacy, interpersonal communication with partner/spouse, abstinence and condom use showed mixed results or no effect (Bertrand et al., 2006) Two systematic reviews found that education has a moderate effect on improving HIV behavior (Medley et al., 2009; Paul-Ebhohimhen et al., 2008). A systematic review reported that HIV education increases knowledge and attitude but has a lower effect on behavior change (Santelli, 2008). However, a more recent primary study found that although sexual education for the youth does improve knowledge and self-efficacy, there is still uncertainty about its impact on sexual behavior (Cooper et al., 2012).

Implementation considerations and counterstrategies

Level	Barriers	Counterstrategies
Patient	Patients may refuse to be tested at PHCs for HIV or to enroll into HIV care even when physicians ask for it (CDC, 2012b).	Opt-out testing is one way to integrate universal HIV testing into healthcare centers. It was first introduced in 2006 by the Center for Disease Control (CDC), to test adolescents, adults and pregnant women (Jover-Diaz, et al., 2012). This method was found to reduce stigma, be cost effective, detect HIV positive at an early stage where the CD4 count is still high and treatment can be more effective, and reduce the chance of transmitting HIV to newborns (Fox et al., 2011)
Professional	There is a need to employ extra workforce or to train the available healthcare workers at PHCs which is costly and time consuming (Pfeiffer et al., 2010; Price et al., 2009).	Allocating federal funds helped provide a large number of well-trained healthcare workers to deliver the appropriate care (U.S. Department of Health and Human Resources, 2012)
	Resistance from directors of PHC may hinder integration of HIV into PHC because they may already be preoccupied with other quality improvement programs and fear they do not have time for new programs (Goldfracht et al., 2006)	Intensive internal marketing of the integration program can be done in order to manage resistance to change from managers and healthcare professionals (Goldfracht et al., 2006)
	Multisectoral members of the national strategic plan may not commit to work on HIV issues, as it may not be a priority (Schwartländer et al., 2011; Woulfe et al., 2010)	Including stakeholders in the development of the national strategic plan helps foster a sense of ownership and commitment to the plan (Nkengasong et al,. 2009; Goldfracht et al., 2006)
Organizational	Operational difficulties may challenge integrating HIV care into PHCs (Kranzer et	

Level	Barriers	Counterstrategies
	al., 2012).	
	Need for infrastructure and medical equipment and device upgrades to integrate HIV care into PHCs (Pfeiffer et al., 2010; Topp et al., 2010; Price et al., 2009)	Allocating federal funds help in developing centers and acquiring them with the needed devices and services to treat PLHIV (U.S. Department of Health and Human Resources, 2012)
	Premium price increase will lead to people enrolling in sub-optimal cheaper insurance plans, making it difficult for insurance companies to cover healthcare expenses for PLHIV (Handel, 2013).	Previous research has been done to update solutions and schemes to lower the premium (Handel, 2013; Weiner et al., 2012; Keruly et al., 2002; Ekman et al,. 2008; 69, Terlikbayeva et al., 2013).
System	Financial sustainability concerns create a challenge to integrating HIV care into PHC (UNAIDS, 2014)	Developing a federal fund such as the Ryan White Fund program can help in providing care to PLHIV who do not have any kind of coverage and lack financial resources (U.S. Department of Health and Human Resources, 2012).
	The presence of a law that penalizes and criminalizes PLHIV and populations at risks and makes it difficult to develop a law that protects their rights (Gable et al., 2009; Gable et al., 2008; Chatterjee, 2014; Coates et al., 2008; Mahfoud et al., 2010, NAP et al., 2008).	Develop legal aid services and legal education services to PLHIV so that they know how to act based on the available laws (Gruskin et al., 2013, Stangl et al., 2013; UNAIDS, 2013a).
	Religious and political forces that associate HIV with taboo behavior particularly men who have sex with men may hinder the implementation of a law protective the rights of PLHIV (Beyrer, & Baral, 2011).	Conducting SWOT analysis helps in developing an effective plan (Nkengasong et al., 2009) The national political and economic contexts should be forecasted to activate the national strategic plan (Schwartländer et al., 2011)

Next Steps

Next Steps

The aim of this policy brief is to foster dialogue informed by the best available evidence. The intention is not to advocate specific policy options or close off discussion. Further actions will flow from the deliberations that the policy brief is intended to inform. The deliberation took place on December 4 2015, and included:

- Deliberation amongst policymakers and stakeholders regarding the policy options described in this policy brief.
- Refining options, for example by incorporating components of options, removing or modifying components.

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