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Preventing unintended pregnancies in women living with HIV in resource-poor settings

By Carole Leach-Lemens

Contributors and reviewers

Reviewers for this edition:

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Key points

- Meeting the unmet needs for contraception can offer benefits related to the prevention of early first births, spacing of births, reducing infant and maternal mortality, preventing unintended pregnancies and mother-to-child transmission of HIV.
- Ensuring that all women, HIV-positive and negative as well as those in serodiscordant relationships, have access to appropriate contraceptives is complex for individuals, for couples, and for families. The complexity is compounded by an absence of international and national guidelines.
- How services are integrated and/or linked is dependent upon the specific national and local factors (economic, social and cultural) including the scale of the epidemic.
- It is widely acknowledged that the inclusion of people living with HIV is crucial to the successful implementation of policies and programmes and to the AIDS response. This should be expanded to include serodiscordant couples.
- Separate parallel funding streams for family planning and HIV are often mirrored by the creation of parallel vertical departments within health ministries and of programmes on the ground. Donors need to be motivated to move from parallel to integrated services.
- Political resistance to including sexual and reproductive health as an essential component of HIV programmes undermines efforts to meet the sexual and reproductive health needs of people living with HIV.
- Absence of examples of successful integration of family planning into HIV and vice versa handicaps effective policy and programme implementation. Rigorous evaluation with measurement of sexual and reproductive health outcomes is basic to this.
- Addressing stigma and discrimination including the attitudes of health care personnel is an integral component of successful programmes. Provide appropriate trainings and ongoing support to meet the complex sexual and reproductive health needs of HIV-positive people and those in serodiscordant relationships.
- Resources: human, financial and technical – operational research is lacking and is needed. On the national and local level how do programmes ensure that there are adequate resources including a reliable and consistent supply of medicines and

contraceptives and other supplies to meet the anticipated demand? How can staff manage an increased workload?

- Involvement of men is largely absent and if family planning is to succeed then it needs to include the family unit.
- Services need to be “woman-friendly” and decentralised (taken to the client(s)).

Integrating sexual and reproductive health into HIV - what does it mean in practice?

Linkage of sexual and reproductive health with HIV at the policy, programme and service levels is universally acknowledged as critical to ensure the protection of the reproductive rights and address the (reproductive) needs of people living with HIV. ^{1, 2, 3, 4, 5} Yet the evidence in support of this consensus is still underdeveloped, and a lot more operational research is needed to establish how to integrate effectively. ⁶

Services for sexual and reproductive health and HIV/AIDS still exist predominantly as separate, vertical programmes. In other words the contraceptive needs of people living with HIV are poorly addressed within HIV programmes if at all. Conversely family planning programmes inadequately consider the needs of people living with HIV.

While the World Health Organization (WHO) and its UN partners recommend a comprehensive four-pronged approach ⁷ for the prevention of mother-to-child transmission, the focus has been on HIV testing to identify pregnant women already HIV-infected and provide them with antiretroviral treatment (pillar three see Box 1).

Prevention of unintended pregnancies among women living with HIV (pillar two) is given equal importance in this framework but has received little attention. Yet nearly all contraceptive methods are safe and effective for women living with HIV including those on antiretroviral treatment (see Box 2).

Meeting the contraceptive needs of women of reproductive age living with HIV, who represent approximately half of all global HIV infections, will reduce illegal and unsafe abortions, reduce the number of HIV-positive births as well as HIV-related infant and child deaths. Maternal and child morbidity and mortality rates will be reduced considerably and so help meet the Millennium Development Goals (MDGs) of 2015.

The WHO recommended approach to PMTCT (Box 1)

- **Pillar One: Prevention of HIV in women, especially young women**
- **Pillar Two: Prevention of unintended pregnancies in HIV-infected women**
- **Pillar Three: Prevention of transmission from an HIV-infected woman to her infant**
- **Pillar Four: Support for mother and family.**

In this issue we focus on pillar two, the prevention of unintended pregnancies in women living with HIV and the obstacles to successful integration of reproductive and sexual health into HIV programmes which include:

- Separate parallel funding mechanisms that reinforce and/or are mirrored by the vertical organisation of health ministries and service facilities on the ground.
- Political resistance to including sexual and reproductive health as an essential component of HIV programmes.
- The paucity of evidence-based approaches for integrating reproductive and sexual health and HIV services which are essential for effective scale-up, advocacy and donor support.
- The significant and growing human resource crisis: how are current needs being met and how will the ever-increasing need be met? Task-shifting can only go so far.
- The fear of stigma and discrimination from disclosure and from health care professionals.

We provide examples of best practice, practical suggestions from clinicians in the field as well as relevant tools and resources for resource-poor settings.

We acknowledge the limited scope of this article. The focus is primarily on sub-Saharan Africa. We do not address the needs of specific populations, notably intravenous drug users and adolescents. These will be addressed in future issues of HATIP.

While the precise definitions of linkage and integration differ they are part of the same continuum. We have chosen not to engage in debate on the definition. The choice of linkage or integration is based on specific national and local circumstances.

Reproductive possibilities for women living with HIV and health outcomes

All women as well as those living with HIV have the right “to decide freely and responsibly on the number and spacing of their children and to have access to the information, education and means to enable them to exercise these rights.”⁸

For women living with HIV this principle requires providers, as noted by Wilcher and Cates, to consider four reproductive possibilities:⁹

- If a woman does not wish to become pregnant, she should be referred to or offered family planning services.
- If she wishes to become pregnant, she should be educated about the local infertility and prenatal services, the types of chemoprophylaxis available to reduce the risks of transmission to her child, and if in a serodiscordant relationship, HIV prevention approaches to minimise the risk of transmission to a partner when trying to conceive
- If she is currently pregnant and wishes to continue her pregnancy, she should be offered the opportunity to obtain antiretroviral therapy to reduce HIV transmission risks (and for her own health), and
- If she is currently pregnant and does not wish to continue her pregnancy, she should be referred to safe abortion services. Postpartum contraception could be offered as an option for those who do not wish to become pregnant again.

Improved access to sexual and reproductive services not only allows women (including women living with HIV) control over their reproductive lives and offers them safe fertility options but will have significant public health benefits from improved maternal and infant morbidity and mortality.^{10, 11}

In spite of the agreement among the international community of the necessity and benefits of universal access to sexual and reproductive health and HIV prevention, treatment and care to achieve Millennium Development Goals (MDGs) by 2015, family

planning and maternal and newborn services in resource-poor settings are falling far short.

- An estimated 215 million women who want to avoid a pregnancy are not using an effective method of contraception.
- About 20 million women have unsafe abortions each year, and three million of the estimated 8.5 million who need care for subsequent health complications do not receive it.¹²

Countries with a high HIV prevalence also have a high unmet need for family planning.¹³

| Country | HIV prevalence | Unmet need for family planning |
|--------------|----------------|--------------------------------|
| Lesotho | 23.2% | 44.7% |
| South Africa | 18.8% | 15% |
| Uganda | 6.7% | 40.6% |

Sexual and reproductive poor health and HIV share common root causes including poverty, gender inequality, gender-based violence, stigma and discrimination and social marginalisation. Women living with HIV represent a subset of the most vulnerable of populations.

Preventing unintended pregnancies

In a recent *Bulletin of the World Health Organization* Wilcher and Cates cite¹⁴ four examples that support the importance of preventing unintended pregnancies in women with HIV within PMTCT programmes.

The current estimated range of unintended pregnancies is between 6% and 35%. A study of the cost-effectiveness of various interventions for prevention of mother-to-child transmission showed that reducing unintended pregnancies by 16% among women with HIV would have the same impact on infant HIV infections as reducing HIV prevalence by 1.25%.¹⁵ Adding family planning to PMTCT services in high HIV prevalence countries could halve the number of infant HIV infections when compared to PMTCT alone, they note.¹⁶ A further study suggested while contraception is not widely available in sub-Saharan Africa it is nonetheless reducing the number of HIV-positive births by 22% or around 173,000 infections.¹⁷

The fourth example cited showed that contraceptive use was estimated to result in the annual prevention of anywhere from 178 infant HIV infections in Guyana to 120,256 in South Africa.¹⁸

Preventing unintended pregnancies in women living with HIV will improve maternal and child health as well as prevent new HIV infections in infants and reduce the numbers of those orphaned because of HIV.

Women living with HIV continue to have sexual relationships and become pregnant, intentionally or not. In spite of the consensus about the urgent need, there is scant evidence of effective linkage between sexual and reproductive health and HIV services, as a recent review undertaken by International Planned Parenthood Federation and partners highlighted.¹⁹

Evidence on frequency of unintended pregnancies among women in care

PMTCT services and programmes to date have focused almost exclusively on women who are already pregnant.

Dr. Eric Van Praag of Family Health International Tanzania told HATIP: "MTCT services are in almost all places already integrated into reproductive health clinics and family planning services are usually provided in these services. The [challenge is how] to create an attitude among nurses to make optimal use of the available family planning services [for women with HIV], and to strengthen them, but it is mainly an attitudinal issue."

In other words, all services which provide care to women with HIV should pay more attention to family planning issues.

Frequency of unintended pregnancies

While there are no population-based estimates of unintended pregnancies in women living with HIV, studies suggest that levels of unintended pregnancies among HIV-positive women range from 51% to 91%. These estimates are based on anecdotal reports, formal questionnaires and interviews of women enrolled in PMTCT programmes (in Rwanda, rural Eastern Uganda, rural South Africa and the Côte d'Ivoire) and ranging from post-natal follow-up to two years.²⁰

Antiretroviral treatment significantly reduces mother-to-child transmission and restores health. It also restores fertility to people living with HIV both as a biological process and as an option. The majority of people on ART are able to resume socially productive and sexually active lives that involve both protected and unprotected sex with or without the desire for children.²¹ Factors that influence and determine the desire of women living with HIV to have or not have children are multiple and complex. These include: age, marital, educational and socio-economic status, cultural and religious beliefs, sexual behaviour as well as family size and losses, access to family planning services, and beliefs and attitudes of providers.^{22, 23, 24} In resource-poor settings, notably in sub-Saharan Africa, these factors may be greatly influenced by the traditional role of women, the importance given to motherhood and the desire of the woman's partner for children.²⁵

Although high levels of pregnancies have been observed in women with HIV, a number of studies have now shown that these pregnancies are unintentional and unwelcome to the women who become pregnant. One analysis of a prospective cohort study over two years of women in rural Uganda (Eastern Uganda) showed that at any time over 93% of women repeatedly said they did not want more children, yet pregnancy incidence increased from 3.46 per 100 women years in the first quarter to 9.5 per 100 women years at 24 months. A parallel increase was seen in women reporting sexual activity, from 24% at baseline to 32.5% over 24 months.

In this cohort 86% of sexually active women who did not want children were not using any modern method of contraception other than condoms after two years on ART. In spite of being counselled on family planning at the time of ART as well as being offered referral to the local family planning clinic, over 95% did not use dual contraception by their second year on ART. The pregnancy rate throughout remained below the national average yet the rate of induced abortion was twice that estimated for Eastern Uganda. Interviews confirmed that many more attempts at abortion were made but not disclosed, as elective abortions are illegal in Uganda.

Further analysis revealed that contraception use in general and condom use in particular was dependent upon the woman's partner's approval and cooperation. Physical abuse, while not directly related to unintended pregnancy, was reported at baseline and was in line with national domestic violence data. Additionally the authors noted that the association between domestic violence and child morbidity and mortality underscores the need for HIV

programmes to provide increased support and protection from physical abuse to their women clients.²⁶

Views of women with HIV on unintended pregnancy

Another study looking at baseline data on family planning and PMTCT among six high volume primary health clinics in two urban slum areas in Nairobi, Kenya showed that women with HIV who already had 2-3 children on average were 7.5 times more likely than HIV-negative women to say that they do not want more children. Reasons were diverse and included concern for their own health, difficulties in taking care of the children they already had, as well as misconceptions about the risk of vertical transmission. Over half believed that a woman with HIV would give birth to an HIV-positive child.

Mixed feelings about future childbearing were also expressed illustrated by a 26 year old widow with one child. "I can get more children and I have to give them space before another one comes. Since I am positive I feel I can have one or two children and if God decides to take all of them or one I remain with one. So I feel it is important to have more children so that even if God takes one of them, you never know his plans...I am HIV positive and this cannot allow me to have more children. If I do so my health continues to deteriorate."²⁷

In this specific study providers played a significant and influential role on a woman's decision about future child bearing. Providers were not fully informed and gave inaccurate information about vertical transmission. In addition concern about side-effects was the primary reason contraceptives were not used even when a woman did not want to become pregnant.

[Recent findings from a study in seven African countries](#) show that women living with HIV are more likely to become pregnant after starting antiretroviral treatment. While reasons for the link are unclear, it further highlights the need for pregnancy planning and management as a key component of HIV treatment and care. The chance of becoming pregnant not only increased over four years of antiretroviral treatment, but was almost 80% higher for HIV-infected women who began antiretroviral treatment than for HIV-infected women not on treatment.²⁸

These studies underscore the need for family planning services to be an integral and continuous part of antiretroviral interventions. Women and partners need to be made aware of factors that place women on ART at increased risk of unwanted pregnancy. These studies revealed the need for regular family planning counselling and not only at the start of ART, as well as comprehensive and ongoing training for providers.

Evidence on cost-effectiveness of preventing unintended pregnancies compared with other PMTCT strategies

Prevention of unintended pregnancies can reduce costs related to PMTCT services and eventually the numbers of children orphaned by HIV and in need of care and support. Analyses have shown the cost and benefit of adding family planning services to PMTCT services. For example, increased use of contraception through both traditional family planning services as well as outreach among non-users who do not want to get pregnant can prevent close to 30% more HIV-positive births than HIV counselling and testing together with nevirapine prophylaxis, at the same cost.^{29, 30}

According to a recent study, provision of family planning at HIV treatment sites would reduce the cost of each infant HIV infection

prevented by half; from US\$ 1300 for each infection prevented with treatment alone to an estimated US\$660 with family planning.³¹

Unmet needs for contraception

As noted more than 215 million women living in resource-poor settings who want to avoid a pregnancy are not using an effective method of contraception. All are potentially at risk of becoming infected with HIV. Women living with HIV are an especially vulnerable subset of an already vulnerable population.

Meeting the unmet need for contraception can offer women and their families benefits related to preventing early first births, spacing of births, reducing infant and maternal mortality, preventing unintended pregnancies and mother-to-child transmission of HIV. An estimated 1.4 million pregnant women living with HIV are in low- and middle-income countries.

Although estimates of unintended pregnancies among women living with HIV range from 51-91% of all pregnancies, the true scale of unmet need amongst women living with HIV is difficult to ascertain.

Barriers to provision of contraception – funding, politics and logistics

Wilcher and Cates³² highlight key factors that prevent current PMTCT programmes from effectively linking with sexual and reproductive health policies and programmes to prevent unintended pregnancies of HIV-positive women before they become pregnant.

As noted above HIV-positive women who are already pregnant are the main focus of most PMTCT programmes. These programmes do not reach women before they become infected and/or discover their status outside of the antenatal programme, and can only help PMTCT clients prevent subsequent unintended pregnancies.

- Of importance, an estimated 21% of pregnant women living in low- and middle-income countries were tested for HIV in 2008 and 45% received drugs to prevent mother-to-child transmission. Only one-third of those who tested positive were assessed for eligibility for antiretroviral treatment for their own health. These numbers reflect what is referred to as a “cascade effect”. At each step of the PMTCT process, from initial contact to receipt of antiretroviral treatment and postpartum care, the number of women who access services decreases.
- Wilcher and Cates underscore the missed opportunities throughout the PMTCT process – from antenatal, intrapartum, postpartum care to entry into paediatric care and care for the woman – to reinforce messages about healthy timing and spacing of pregnancies, and to create linkages to sexual and reproductive health.
- Strengthening of vertical family planning services and integration of family planning services into HIV programmes and vice versa are apparent solutions. However, effective linkages are further hindered by international funding mechanisms.

Global family planning and HIV/AIDS programmes are funded through separate mechanisms. This is often mirrored by the creation of parallel reproductive health and HIV departments within ministries of health at the national level, ultimately leading to the creation of separate vertical programmes. And, while unintended pregnancies account for 14-58% of all births in high HIV burden countries, monies designated for HIV programmes are not used for family planning.

The Global Fund to Fight AIDS, Tuberculosis and Malaria fund HIV proposals with sexual and reproductive health components and the

U.S. President's Emergency Plan for AIDS Relief (PEPFAR) encourages linkages with reproductive health programmes. However, as Wilcher and Cates note, since neither includes contraceptive use as an indicator, implementation of contraceptive services within HIV programmes has not been a priority in practice. They stress the value of the well-known saying “what gets measured gets done”, underscoring the importance of appropriate monitoring and evaluation.

Until recently, PEPFAR, the single largest funder of global AIDS programmes, in direct contrast to the other donor countries, severely undermined efforts to ensure the reproductive health needs and rights of people living with HIV. Ideology replaced sound public health principles. Effective lobbying by groups supportive of the Bush presidency reinforced the view enshrined in the Mexico City Policy that family planning equaled abortion and was “anti-life”.

The Mexico City Policy was announced in 1984 under President Reagan. It prevented any foreign nongovernmental organisation from receiving US family planning funds if it performed or advocated abortion. In 1991 President Clinton ended the policy. In 2001 George W. Bush reinstated the ban for all USAID population programmes. In reality this had significant consequences for reproductive health/HIV integration since it prevented organisations with extensive experience in reproductive health from bringing their expertise into an integrated programme approach.

However, PEPFAR now makes a specific commitment to fund family planning. PEPFAR's current five-year strategy states: “Expand(ing) integration of HIV prevention, care and support, and treatment services with family planning and reproductive health services, so that women living with HIV can access necessary care, and so that all women know how to protect themselves from HIV infection.”³³

The withdrawal of the Mexico City Policy, the reinstatement of funding for the United Nations Population Fund together with Secretary of State Hillary Clinton's address in January of this year further signal an important opportunity to integrate family planning within HIV programmes.

On January 8 2010 Secretary of State Hillary Rodham Clinton “reiterated the Obama administration's support” for universal access to family planning, improving maternal health care and other goals outlined at the 1995 International Conference on Population and Development Action Plan held in Cairo, Egypt. “Too often, still today in 2010, women and girls bear the burdens of regional and global crises, whether it's an economic downturn or climate change or political instability ... And 15 years after the Cairo conference, far too many women still have little or no access to reproductive health services, including family planning and maternal healthcare,” Clinton said, noting that “more than 215 million women worldwide” do not have access to “modern contraception.”

She continued: “We have pledged new funding, new programs, and a renewed commitment to achieve Millennium Development Goal Five, namely a [three-fourths] reduction in global maternal mortality, and universal access to reproductive healthcare.” She noted that the Global Health Initiative will “address interrelated health challenges together, for example, by integrating family planning, maternal health services, and HIV/AIDS screening and treatment, so that women receiving reproductive care will also receive HIV counseling, and will be referred to an HIV clinic if they need one.”³⁴

However, the Helms amendment (part of the Mexico City policy) which places a ban on foreign aid for abortion remains in place as does a modified version of the anti-prostitution pledge. It remains to be seen to what extent Clinton's pronouncement on January 8 will

be upheld. This policy whole or in part had and continues to have an effect on contraceptive supply to meet the need.

Logistics - supply chain issues

Quality reproductive health care needs effective systems to ensure timely delivery and a constant flow of condoms and contraceptives to prevent stockouts, as well as to ensure a wide range of condoms and contraceptives are available in all settings. Escalating demand for contraceptives is outpacing supply.³⁵

Contraceptive dilemmas

For HIV-positive women in resource poor-settings, as for all women, making a choice to use contraception or not, which method to use, compliance, whether to use sterilisation or seek an abortion are complex decisions and depend upon socio-economic, cultural as well as religious factors. Perceived effectiveness of the method as well as known side-effects will also play a part.

Most user dependent methods require a basic understanding of reproduction and literacy skills in order to follow written instructions. In many countries women are unable to make independent decisions about their sexual and reproductive health because of political instability, economic dependence, as well as cultural and religious attitudes to women's rights.³⁶

When women with HIV and couples wish to delay pregnancy, limit their number of children, or avoid pregnancy altogether, access to voluntary family planning services with effective counselling is critical. So is access to reliable contraceptives.

In addition in many countries in sub-Saharan Africa with high HIV prevalence rates, serodiscordant relationships are common. Research focus has been primarily on the clinical and biomedical aspects of HIV transmission, with little or no research on the psychological and social factors that affect serodiscordant couples in their relationships. Their sexual and reproductive choices are still poorly understood.³⁷

These gaps in policy and service provision led The Global Network for People Living with HIV (GNP+) to undertake an exploratory study about the coping strategies and choices made by serodiscordant couples in long-term relationships. The study included 51 couples in South Africa, Tanzania and the Ukraine.

The results of the qualitative interviews underscored the perceived normality of the relationships, with HIV playing a minor part. Fifty-one percent of the African couples said they wanted to have children including those who already had children. Nonetheless the desire or intention to have children revealed the difficulties and complexities surrounding this issue. These included fear of infecting the HIV-negative partner, resolving each partner's conflicting wishes, the significant influence that medical doctors played as well as what alternatives to natural conception were available and affordable.

"I do have love for children and I still want to have one, but I am scared to infect my partner....and that's the only challenge that I have." HIV-positive woman, South Africa³⁸

"No plans to have children and we use condoms always. I fear that the child might get infected so I decided to remain with the existing child. I

also fear to get infected during the process of sexual intercourse." HIV-negative man, Tanzania³⁹

In addition the couples felt their discordant status had affected intimacy because of having to use condoms out of fear of infecting the HIV-partner. The findings revealed that very few in South Africa and Tanzania were living openly as serodiscordant couples even though most had disclosed to one or more people. The fear of stigma and discrimination was the primary reason given. In Tanzania and South Africa 60% and 21% respectively, had experienced discrimination because of their HIV status or because of being in a discordant relationship. In the Ukraine discrimination from health care professionals was experienced. All reported a lack of information materials and support services for serodiscordant couples.

As a result of these preliminary findings GNP+ makes the following five recommendations based on the understanding that governments play a key role in managing national responses to HIV. These recommendations "should be integrated into a holistic framework that recognises the complexity of HIV discordant relationships, while implementing creative strategies to meet the prevention, treatment and psychosocial needs of serodiscordant couples."

- 1 Put serodiscordance on the HIV and AIDS policy and research agenda.
- 2 Develop holistic and comprehensive HIV programmes for couples.
- 3 Ensure the provision of sexual and reproductive health services in a supportive and non-discriminatory environment.
- 4 Involve discordant couples in the HIV response.
- 5 Address stigma and discrimination.⁴⁰

In addition to the complex psychosocial issues other important issues in counselling HIV-positive men and women include dual protection to prevent both pregnancy and HIV or sexually transmitted infections (STIs), potential interactions of contraceptive methods with antiretrovirals, and managing the side effects of methods.

Contraceptive methods (Box 2)

Non-hormonal methods:⁴¹

- **Male condom**
- **Female condom,**
- **Diaphragm or cap (a flexible device placed in the vagina during sex, not recommended for women with HIV.**
- **Intrauterine device (IUD) a small flexible device, containing copper, that is fitted in the womb, and works for up to ten years. Also known as a 'coil'.**

Hormonal methods: not affected by the use of antiretroviral drugs

- Intrauterine system (IUS) also known as *Mirena*, this is a hormonal version of the IUD that releases the hormone progesterone, and works for up to five years.
- Injection. An injection is given by a doctor or nurse, containing the hormone progesterone. The most common version is *Depo Provera* and should be taken every twelve weeks.

Hormonal methods: affected by the use of antiretroviral drugs

- Combined pill: contains the hormones oestrogen and progesterone.
- Progesterone-only pill: contains the hormone progesterone.
- Skin patch: a small beige patch applied to the skin like a sticky plaster, changed once a week. Releases oestrogen and progesterone.
- Vaginal ring: a small plastic ring that is inserted for three weeks at a time and releases oestrogen and progesterone.
- Implant: a small flexible rod that is inserted under the skin, and releases progesterone for up to three years.

Dual protection

Dual method use or dual protection is the simultaneous use of an effective contraception method with consistent condom use for the most effective prevention of both unplanned pregnancy and sexual transmission of HIV. If condoms alone are used then women need to be advised about emergency contraception. Condoms if not used consistently and correctly have a significant failure rate. Even when used correctly approximately 2% of women are still likely to become pregnant.

The emergency contraceptive pill is a hormonal method, and is affected by antiretrovirals. This means that the usual 1.5mg dose may not work and (UK) guidelines recommend taking two pills (3mg dose). Alternatively an IUD fitted within five days of either unprotected sex or ovulation will work as an emergency contraceptive.⁴² How feasible this is within most resource-poor settings is questionable.

Although some evidence has suggested that hormonal contraception may accelerate disease progression in women with HIV in Africa, two large reviews of disease progression rates in women have failed to support this view.^{43, 44} Although a number of longitudinal and cross-sectional studies have suggested

a relationship between hormonal contraceptive use and an increased risk of HIV acquisition, a 6000-woman prospective study in Zimbabwe and Uganda did not find an increased risk.⁴⁵

Dealing with contraception in practice

We asked our reviewers how they would deal with a woman who is HIV-positive and doesn't want to become pregnant. She has not told her husband of her status for multiple reasons including fear of abuse and/or economic dependence. Her husband wants to have more children and having more children is the norm culturally.

Dr. Rony Zachariah, coordinator of operational research at Médecins sans Frontières noted that "there are a number of possibilities that should be considered and there is no single answer to this problem. There is a risk that must be assessed on a case-by-case basis.

- Under the circumstances, the first and immediate option for the woman is to have access to a family planning/contraception method to give her and the existing services time to consider possible ways forward in what is obviously a complex and sensitive problem. Access to *Depo Provera* injection every three months might be the best bet as this provides contraception and in rural communities this is handy for the mother, as it only requires a visit once every three months. Other options may be considered depending on the feasibility and acceptability, for example, intrauterine devices.
- The couple has obviously been having unprotected sex and it is thus likely that both individuals are already HIV-positive. What would be ideal is to convince the couple to go for counselling and HIV testing together. In this scenario, the woman will pretend that she doesn't already know her status. The possibility of this happening will depend upon the context. However with increasing access to HIV testing and counseling, information, education and communication (IEC) at community stand-alone sites, home visits by community workers, HIV testing at health facilities could make this a reality. Depending on the results, the next steps are decided upon 'as a couple'.
- Depending on the cultural context, an elder 'mediator' who the woman has confidence in could promote couple counselling and HIV testing or even disclosure. The woman is the one who must finally consider if this choice is appropriate as she is often the best person to judge the potential risks."

Dr. Halima Dawood of Pietermaritzburg Department of Internal Medicine, Greys Hospital, South Africa noted "this is a real issue in our setting" and continued:

- "we generally try and get her to convince her partner to test and if he is infected and untreated the risk of superinfection is high, especially if no barrier contraception is available. We often enlist the assistance of counsellors and social workers to help empower these women.
- If it really is not an option to have him tested I would try and ensure the best maternal health for her to ensure an optimal pregnancy for both mother and child, notably prenatal screening, antenatal screening ensuring an undetectable viral load.
- The real minefield is when both partners are patients – this has additional legal and ethical implications if one partner is negative."

Dr. Eric Van Praag suggested "first respect the mother's wishes and discuss with her the options of involving her husband in discussions. This is easier said than done and she may not be able

to get the husband into the clinic for many reasons including absence. So I would suggest to provide her with a choice that involves not telling him directly but to make it a process in which he can eventually be told."

Interactions of hormonal methods with antiretroviral therapy

Women with HIV who receive ART get the same benefits from contraception as do all other women. However, some hormonal contraceptives (see Box 2) can be affected by antiretroviral drugs making the contraceptive less effective leading to the possibility of an unplanned pregnancy.

There are possible drug interactions between hormonal contraceptives and both non-nucleoside reverse transcriptase inhibitors (NNRTIs) and protease inhibitors (PIs). Liver metabolism is increased, possibly lowering oestrogen blood levels, so reducing contraceptive effectiveness.

While there is evidence to suggest that the NNRTI efavirenz (*Intelence*) as well as drugs from the newer classes of integrase inhibitors, fusion inhibitors and entry inhibitors do not interact with hormonal contraceptives, these are generally not available in resource-poor settings. Other drugs, for example, the TB drug rifampicin, also interact with hormonal contraceptives.

All types of hormonal contraceptives are affected by the use of PIs and NNRTIs with the exception of *Depo Provera* and other contraceptive injections, and the *Mirena* intrauterine system. No problems exist with non-hormonal methods including condoms, female condoms and the IUD.

The needs of HIV-positive women with more advanced disease, heavy vaginal bleeding, or irregular menstrual cycles as well as current injecting drug users need to be taken into account. Suggested options include the *Mirena* intrauterine system and injectable progestogens since they both reduce vaginal blood loss and do not require daily doses as for oral contraceptives or quarterly visits to a provider as for *Depo Provera*.

Counselling issues

While evidence is limited a study of HIV/family planning integration programmes in five countries found that providers at HIV care and treatment sites and at HIV counselling and testing sites lacked adequate training in family planning and had limited knowledge of safe and effective family planning methods for women with HIV.⁴⁶

Availability of termination/abortion

Abortion is illegal in much of the developing world. Unintended pregnancies are the root cause of abortion. 82% of unintended pregnancies in the developing world occur among women with an unmet need for modern contraceptives. 55% of induced abortions are unsafe. Almost all abortion-related deaths occur in developing countries.⁴⁷

Meeting the unmet needs for contraception for all women including those living with HIV will reduce maternal and child morbidity and mortality rates.

We asked our reviewers how they deal with a woman who discovers she is pregnant but does not want a child, and wants an abortion – but does not want her partner or family to know. Dr. Rony Zachariah noted that:

- "It is important to find out why the woman wants an abortion. If this is because of fear of having an HIV positive child or because

she fears for her own health, she should be informed of the possibilities to access PMTCT and ART.

- However, most of the time when a woman decides that she does not want a child she has already given this decision a great deal of thought. It is in any case the woman's right to take this decision, all the more when she is HIV-positive. She does not need the husband's approval. This, as termination of pregnancy, is a way of protecting the woman's life and health and thus is a medical indication for termination of pregnancy.
- Often up to twelve weeks, a medical abortion can be considered using tablets containing a combination of two medications, mifepristone and misoprostol (medication for abortion). During the first appointment at the clinic you give the mifepristone pill to take orally. Then 24 to 72 hours later, in the privacy of the woman's own home she takes the second medication, misoprostol. Misoprostol causes contractions, resulting in a miscarriage. When used in combination, mifepristone and misoprostol are 95-97% effective within two weeks. The woman is told that if bleeding is severe and persistent she must return to the clinic. A therapeutic abortion can then be considered using a dilation and curettage procedure."

Dr. Halima Dawood reiterated Dr. Zachariah's statement that the woman does not need her husband's approval if she wants an abortion.

We further asked our reviewers how they would deal with the request where abortion is illegal, even if her partner is in agreement?

Eric Van Praag noted that "in Tanzania abortion is illegal, but widely practiced and mostly unsafe. There are some safe places where she can be referred to but this will cost her a lot of money. So she will have to get financial support from somewhere. In my experience she will go to some family members but not to others and see what she can put together."

Dr. Rony Zachariah noted: "There are only about four countries where abortion is completely illegal. This (abortion) must be looked at within the legal framework in each country. One has to be aware of the framework and try and work within it. In any case a termination of pregnancy in an HIV-positive woman falls into the accepted medical indication/criteria for an abortion as it protects the woman's health and life. Thus this is not necessarily illegal and so acceptable within the legal framework.

Another way to work around this is to prescribe mifepristone and misoprostol and when the woman starts to bleed, do a therapeutic abortion, which then makes the latter enter into the legal framework."

Where is contraceptive advice/provision delivered?

Examples of evidence-based successful integration of family planning into HIV programmes and vice versa are wanting, making it difficult to develop evidence-based recommendations. In particular rigorous evaluation with measurement of sexual and reproductive health outcomes is largely absent.

Little evidence exists to support the cost-effectiveness of integrated programmes over that of providing these services separately.⁴⁸ This is essential information if policy makers and funders are to be persuaded of the need to provide and effectively allocate limited resources.

The examples described below support the concept, as with other health services, of different approaches being suitable for different settings.

On a national level factors to consider include:

- Resources: human, financial and technical
- Facility set up
- Scale of the epidemic
- Strength of supply chain to ensure reliable and consistent supply of medicines, contraceptives and other supplies

And specifically, for those on the front lines of healthcare planning and delivery:

- Ensure that integration does not overwhelm existing services and diminish quality. How can integration improve existing health care provision?
- Manage the increased workload for staff who take on new responsibilities.
- Allow for increased costs at the beginning when setting up integrated services and training staff.
- Combat stigma and discrimination from and towards health care providers. If not, this has the potential to undermine the effectiveness of integrated services.
- Adapt services to attract men and young people.
- Reach those who are most vulnerable and the least likely to access services, for example adolescents and young people.
- Provide special training and ongoing support for staff so that they are able to meet the complex sexual and reproductive health needs of HIV-positive people effectively.
- Motivate donors to move from parallel to integrated services and to sustain these services – make monitoring and evaluation an essential component of service delivery. ⁴⁹

Linking services for HIV counselling and testing and sexual reproductive health is an effective way of reaching important target populations, for example, people living with HIV, men as well as young people with sexual and reproductive health care as described in the example below.

GHEKIO ⁵⁰ (Groupe Haïtien d'étude du sarcoma de Kaposi et des infections opportunistes - the Haitian study group on Kaposi's sarcoma and opportunistic infections) in Haiti began as a research institute in 1982 by a group of doctors concerned about HIV. It provides an example of a successful integrated approach that evolved over time in response to the specific needs of the populations served, supported by operational research showing what was feasible.

What began in 1985 with the provision of voluntary counselling and testing services and treatment for opportunistic infections in one of the poorest neighbourhoods of the capital in what is the poorest country in the Western hemisphere has now become the entry point for comprehensive sexual and reproductive health including family planning.

Stigma was the motivation for the integration of services. The need for family planning, for example, in the 1990s was in response to women living with HIV being turned away by family planning clinics after referral by GHEKIO because of stigma and discrimination. Baseline data revealed that a significant number of women living with HIV who became pregnant did so unintentionally.

Task-shifting and a multi-skills approach are key to the expansion of services. Nurse-midwives, for example, working under the supervision of GHEKIO gynaecologists are taking over a number of responsibilities in the area of family planning and PMTCT. All GHEKIO health workers are trained to meet the special family

planning needs of people living with HIV, as well as the routine needs of other clients giving flexibility in how services are organised.

On average 70% of all clients are self-referred. Approximately 90% initially visit for VCT services. Of the 24,000 new people who visit the centre annually, 60% are women, 90% are of reproductive age, 16% are HIV-positive and 10% have syphilis. 8,000 (30%) are adolescents or young adults aged 15-24 years.

Family planning counselling for people living with HIV includes:

- Providing information and counselling about reproductive rights, fertility intentions and options as well as infertility services, advice on planning a pregnancy for discordant and sero-concordant HIV-positive couples, and contraception.
- Dual protection
- PMTCT for those who wish to become pregnant and for women already pregnant
- Prevention of sexual transmission of HIV to partners

Group discussions include the provision of educational materials. All women are encouraged to return with their partner(s). 60% of clients for this service are female. 20% return with their partner(s).

Stigma and discrimination toward people living with HIV is recognised as an ongoing concern in Haiti. So the Centre actively encourages staff to examine their own attitudes and rethink them if necessary to ensure clients' rights are respected. Techniques include drama and role play.

Unlike GHEKIO not all integration interventions meet anticipated goals. For example, a family planning/voluntary counselling and testing intervention in Kenya showed that while providers' discussions about fertility desires and contraceptives methods with people living with HIV improved somewhat, there was no increase in the use of effective contraception even though approximately one third of clients were at risk for intended pregnancy. ⁵¹

By contrast a retrospective evaluation using a case study methodology of a comprehensive family planning (FP) and antiretroviral therapy integration pilot in Mbale, Uganda ⁵² showed that with the introduction of family planning services into ART services the number of clients on ART accepting a family planning method increased threefold. The pilot supported demand, supply and advocacy intervention activities and was designed using an FP-ART integration framework outlining five levels of integrating FP into HIV services. This framework is based on a systems approach to build site capacity in training, referral, supervision and logistics. Facilities choose from the levels and can add to them over time (as in the Haitian best practice noted above) depending on their capabilities and resources. ⁵³

A Tanzanian project, run by Pathfinder International, uses community health workers who provide family planning advice to HIV-positive couples teaching them how to avoid unwanted pregnancies or infecting their unborn children. ⁵⁴

Over 3,000 couples have benefited since 2008. Pathfinder International undertook a study in 2008 and found that 90 percent of home-based care providers were willing to add family planning services to their other activities but did not have appropriate training.

Community health workers are not only low cost but "they interact more with people living with HIV than anybody else; they therefore provide a perfect opportunity to reach out to them, including family planning services," according to Judith Rwakyendea, reproductive health and family planning programme officer at Pathfinder International. ⁵⁵

A couple with five children now receiving counselling to prevent unwanted pregnancies, learned about prevention of mother to child transmission after their youngest became infected with HIV. "I normally did not go to a government hospital, I just had my babies at a clinic run by some lady to whom we give small money and she allows you to give birth at her place. We just call her shangazi (auntie). I was surprised when my child tested positive. I didn't even know children could get HIV" said the mother. ⁵⁶

Involvement of men is key yet their participation remains a major challenge. "We have more success where fathers agree to join the programme but not all are willing and it becomes very difficult because it means the mother does many of the things secretly," said Margaret Mapunda, a trained community health worker. "Imagine trying to give these services to a woman who fears disclosing her status or whose husband's status is unknown. It is a challenge but we try what we can." she added. ⁵⁷

Lessons of successful integration

We asked our reviewers if they had worked in a setting where family planning had been successfully integrated into HIV services: what in their opinion were the reasons for this success and what were some of the obstacles and how were they overcome.

Dr. Rony Zachariah of Médecins sans Frontières (MSF) highlighted the following learning from MSF programmes:

- "Decentralisation to primary care level and the offer of family planning in the same structure and by the same midwife enhances its acceptability as it becomes a more 'mother-friendly' and 'accessible' service. Family planning should not just be part of PMTCT services but also part of the HIV/AIDS general clinic services.
- Family planning methods: in rural communities family planning services are often at a considerable distance and all individuals have different needs. Methods such as *Depo Provera* (which require an injection every three months) or longer term methods such as implants or intrauterine devices are more acceptable. This availability of a wider choice of methods improves uptake as the method used needs to be tailored to individual needs and circumstances.
- In some cultural contexts it is important to have women offer family planning services to women as it is more culturally acceptable.
- Getting men involved. Family planning is not for 'mothers alone' but for the whole family and that is why it is called 'family planning'. The 'father' too has a vital role. One of the main reasons for failure is not getting men involved and fostering their support for the women in issues related to family planning. Family planning strategies, awareness campaigns and motivation talks all need to include men."

Planned pregnancies

Getting onto ART and maintaining an undetectable viral load

Many HIV-positive women will choose to become pregnant when they already know their HIV status. Some women will already be on antiretroviral therapy. As in the Haitian model appropriate counselling that is impartial, supportive and nonjudgmental should be offered in both instances and include the woman's partner and take into account his status.

Access to antiretroviral therapy is important for both the mother's health as well as to prevent transmission of HIV to her child.

Antiretroviral therapy should be used to reduce viral loads to undetectable levels. The chances of transmission to her child if a mother's viral load is undetectable are almost zero.

There is evidence to suggest that women on first-line antiretroviral treatment regimens containing efavirenz in South Africa upon learning that they are pregnant seek abortions. The authors suggest that provider counselling take this into account.⁵⁸

Efavirenz, a non-nucleoside reverse transcriptase inhibitor (NNRTI) is not recommended in pregnancy especially during the first 12 weeks. However, if a woman is doing well on efavirenz after the first trimester and possibly it may be an appropriate choice following a late diagnosis with a higher CD4 count and when nevirapine is not recommended. See HATIP May 7, 2009 – *Switching from efavirenz to nevirapine in women with high CD4 counts* – for further discussion of the use of efavirenz during pregnancy.

Counselling

The best advice for serodiscordant couples remains controversial. The GNP+ study, noted above, highlights the psychosocial complexities and needs that surround this issue, including dealing with stigma and discrimination from health care professionals.

While an undetectable viral load is important for avoiding HIV transmission to the child, it does not mean that viral load is undetectable in genital fluid. Uncircumcised men have a greater risk of contracting HIV. Infections of the genital tract also increase the risk of HIV transmission. This means that a provider when counselling a woman with HIV and/or a couple will advise them to consider their general health, have appropriate check-ups and treat any sexually transmitted infections.

If a male partner is HIV-negative:

Choices include a do-it-yourself artificial insemination or "self-insemination" using a plastic syringe which carries no risk to the man. Different counsellors may suggest different methods. One way is to have protected intercourse with a spermicide-free condom. Another is for the male partner to ejaculate into a container. In both cases, the sperm can be inserted into the vagina with a plastic syringe. Appropriate counselling will also advise on the timing and process to coincide with ovulation. ⁵⁹

If a male partner is HIV-positive:

For couples who are both HIV-positive most doctors will recommend safer sex. This is to limit the chance of re-infection with a different strain of HIV. Other issues to consider regarding re-infection:

- The risk will relate to viral load levels and if you are on treatment there is a good chance they are very low
- This consequence is only likely to be important if one partner has drug resistance, especially if they have a high viral load.

The choices, described above for when a male partner is negative can also be followed. ⁶⁰

It is essential for all counsellors to be able to provide the most accurate, complete information in a non-judgmental way so that the woman and/or couple are able to make informed decisions. However, as Eric Van Praag points out, access to antiretroviral therapy is critical to managing HIV within couples where a desire for children exists. The current reality on the ground is that many women will be offered only single-dose nevirapine, rather than continuous antiretroviral therapy.

Conclusion

As Eric Van Praag states “the main issues are human resources and staff attitudes. These are the two most difficult things to change in any public health system. International donors, programmes and partners are the most lacking in these areas as they do not know how to address them.”

Resources and tools

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