HIV and women's health

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Abstract
While antiretroviral therapy has transformed medical outcomes many challenges remain. Globally HIV/AIDS is the leading cause of morbidity and mortality among women aged 15–49 years [1]. Women, including transgender women, may be particularly vulnerable to HIV infection for a host of reasons, including biological, economical, educational, political and social factors. In addition many women also encounter a range of gender specific challenges to HIV treatment and management of their sexual and reproductive health. This article provides an overview of the common and specific challenges faced by women, and the necessary interventions required to meet their healthcare needs. The nurse's role in these aspects of HIV prevention and care will also be discussed.

Keywords: women, reproduction, sexuality, menopause, HIV, antiretroviral therapy

A. Revalidation

This article has been prepared with continuing professional development (CPD) in mind and can be used to support your revalidation. It is estimated that 3.5 hours of CPD activity will be required for completion of the reading, time out activities, the quiz and for writing a brief reflective account in relation to your learning and its applicability to your practice. There is a self-assessment quiz at the end of article for you to assess what you have learnt.

B. Aims and intended learning outcomes

The article aims to increase your knowledge and confidence in assessing and caring for women living with HIV (WLH).

After reading this article, undertaking the activities and completing the self-assessment quiz you should be able to:

- Describe a range of factors that influence how and why women are at increased risk of HIV infection and the possible impact of this diagnosis on women's abilities to express their sexuality;
- Discuss the potential impact of HIV infection on the female reproductive system;
- Outline the main options for effective contraception for WLH of child bearing age;
- List a range of ways in which the risk of vertical transmission of HIV can be reduced; and
- Discuss the factors that need to be taken into account when deciding on antiretroviral therapy (ART) regimens for WLH.

C. Trends and data

In 2017, of an estimated 36.9 million people living with HIV worldwide, 19.1 million were women and girls [2]. National data on HIV in the general population show that around 20,000 women were living with diagnosed HIV in the UK in 2016 and an estimated 1300 were undiagnosed [3].Young women (aged 15–24 years), and adolescent girls (aged 10–19 years) in particular, account for a disproportionate number of new HIV infections. In 2016, new infections among young women were 44% higher than men of the same age range [4]. Transgender people are one of the groups most affected by the HIV epidemic and are nearly 50 times more likely to be living with HIV than the general population. Globally, it is estimated that around 19% of transgender women are living with HIV [5].

D. HIV infection risk factors specific to women

Studies suggest that male-to-female transmission of HIV is twice as efficient as female-to-male transmission; with unprotected vaginal intercourse being a well-established high-risk route of sexual HIV transmission [6]. Worldwide, the majority of new HIV infections occur as a result of unprotected penile–vaginal intercourse. Unprotected vaginal intercourse is a highly efficient route of HIV transmission because high concentrations of HIV can occur in semen and vaginal fluids. Furthermore the genital epithelia are very susceptible to infection with the virus migrating through specific cells and(or) via non-intact tissue; the cells of the cervix being a particularly vulnerable site. The diagnosis of a sexually transmitted disease carries a three-fold higher risk for a subsequent HIV diagnosis within 10 years in young women [7]. Trauma of the vaginal epithelium as a result of female genital mutilation (FGM) is also likely to increase risk [8].

Low social status and economic dependence on men prevents many women from having control over their HIV risk and in many areas of the world women and girls have little access to health education [9]. Furthermore, coercion and sexual violence appear to be widespread globally, with 70% of women reporting being forced to have unprotected sex [10] without allowing for the fact that sexual violence is known to

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Figure 1: Factors influencing risk of HIV acquisition in women

be under-reported. Experience or fear of violence inevitably hampers women's ability to negotiate safe sex, and in addition, men are expected to control sexual relations in many societies [11].

Regardless of geographical location, if a woman is not able to support herself and make her own choices concerning sexual partners and activities, contraception and reproduction, she will be vulnerable to HIV. Disclosure of HIV status for many women risks loss of home security and employment as well as social stigma. Women may also be limited in accessing care due to family responsibilities and financial barriers. Importantly, it is the range of cofactors affecting transmission that make it difficult to generalise about HIV infectivity risk. Focusing on a single factor can lead to underestimation of risk, however identifying these may assist in optimisation of intervention strategies. Figure 1 summarises the complexity and multiplicity of this challenge.

Key point

Want to know more? HIV transmission factors are discussed at length in the article, Women and girls, HIV and AIDS. Go to www.avert.org/professionals/hiv-social-issues/key-affected-populations/women [9].

Time out activity 1

Consider what you know of HIV and its transmission, including the impact of broader psychosocial and cultural issues. What factors would you include in a pro forma designed to assess risk of HIV acquisition for women?

Now view and compare the list in Box 1 to your response.

Box 1. Factors to consider when assessing the risk of HIV acquisition in women

- Presence of concurrent STIs especially with genital ulceration (in either partner)
- Increased perfusion of the cervix, e.g. in pregnancy or with inflammatory cervical disease
- Access to condoms
- Lack of ability to demand condom use
- Exposure to, or fear of, sexual coercion and(or) violence
- Unprotected anal sex
- Recreational drug and alcohol use
- Limited access to healthcare and(or) effective treatment of STIs
- Viral load of sexual partners (which may be influenced by the point above)
- Female genital mutilation (FGM)

STI: sexually transmitted disease

In 2016–2017 a collaborative project between the Terrence Higgins Trust and Sophia Forum surveyed and highlighted a number of challenges and barriers faced by women living with HIV in the UK [12]. The aim of the project was to make women far more visible in the HIV response. Survey findings demonstrated:

> *… a significant unmet need, from prevention services that recognise and respect the diversity and fluidity of women's sexuality, to support services that meet women's needs across intersecting issues such as violence, mental health and immigration* [12].

The report calls for gender equity in research, funding, data, services and support with targeted investment and commitment from researchers, government organisations, commissioners and service providers among others.

Time out activity 2

Take 15 minutes to read the executive summary of the *Sophia Forum and Terrence Higgins Trust report: Women and HIV – Invisible No Longer* and note its key findings. Available at: www.edf.org.uk/sophia-forum-and-terrence-higgins-trust-report-women-and-hiv-invisible-no-longer/

In addition to those factors already described transgender people are more likely to have faced stigma and discrimination from family, the community and in the workplace, further limiting their educational and economic opportunities. These factors can mean that for some sex work is the most viable form of income available. In some countries the proportion of transgender people who sell sex is 80–90% [13]. Data suggest that HIV prevalence is up to nine times higher for transgender sex workers compared to non-transgender female sex workers [13].

E. Impact of HIV on sexuality and sexual experience

Male sexual dysfunction has received a disproportionate share of research interest, but data are incomplete and insufficient on the topic of sexual dysfunction in

women in general; however some studies have explored prevalence. A Ugandan study of WLH reported lower rates of sexual activity and rated sex as less important than men, and a US study revealed HIV stigma, disclosure, and body image concerns, among other issues, as inhibiting relationship formation and safer sexual practices for women [14]. Sexual activity declined similarly over time for all women in the study regardless of HIV status, but HIV has been identified as presenting an additional barrier to women who wish to be sexually active. Challenges continue to include: procuring condoms and seeking advice on safe sex practices, reduced ability to negotiate safer sex, physical and social changes and sexual health challenges due to disability and comorbidities.

Sexual dysfunction has a variety of causes and these are often multiple. These include reduced testosterone levels, depression, use of sedatives and tranquillisers, smoking, alcohol and recreational/illegal drug use, neuropathy, poorly controlled diabetes, long-term use of steroids, stress and fatigue, older age and hypertension among others, see Figure 2. As to be discussed in Section L, oestrogen and testosterone levels fall significantly during and after the menopause and this can cause a reduction in sexual desire. Women may also experience problems as a result of physical symptoms and discomfort during sex. Vaginal dryness, candida, pelvic inflammatory disease or damage caused to the vagina during pregnancy or childbirth are common causes. In women, testosterone is produced in the ovaries and adrenal glands, and as with men, this is important for maintaining muscle and bone mass, and libido. While hypogonadism is far less common in women with HIV, it can occur in the context of advanced disease. Use of ART can reverse this in many cases [15]. There are currently no fixed guidelines for the treatment of female hypogonadism, and treatment options are limited. Hormone replacement therapy (HRT) may be appropriate for some women, while the short-term use of testosterone may improve sex drive, lean muscle mass and energy levels. Other medical solutions for women with sexual problems are limited. Research has suggested these might have some benefits for women but the evidence is not yet clear. Viagra is not currently licensed for women although small studies reported benefits. In 2015, flibanserin was approved in the US as a treatment to increase sexual desire for premenopausal women [16]. Despite a lot of publicity, it has not been widely used, possibly as it is expensive, requires daily dosing and cannot be taken concurrently with alcohol [16]. Many sexual problems reported by women with HIV have underlying psychosocial causes for which cognitive behavioural therapy (CBT) or psychotherapy may help.

F. Antiretroviral therapy side-effect profiles and concerns

The majority of treatment regimens are as effective in women as in men but as always must be tailored to individual clinical circumstances and preferences. There is some evidence of increased risk of certain side effects



Figure 2: Causes of sexual dysfunction in women

for women, possibly due to interactions between ART and oestrogen. Liver toxicity with nevirapine use and skin rashes with certain drugs are seen more commonly in women compared with men, for example [17]. The increased risk of osteoporosis for women post menopause can be further exacerbated by ART. The risk of this condition is up to three times greater than for men living with HIV so is an important consideration when selecting the treatment regimen [18].

Toxicities and drug interactions appear to be a particular concern for transgender women living with HIV. A recent study found that these women are often hesitant to use ART or do not take it as prescribed because of concerns about drug interactions with feminising hormones. Furthermore, many of those surveyed reported using hormones obtained outside of the medical system, and unsupervised hormone use was much more common among WLH compared with women without HIV. In addition a number of the participants had received medically unsupervised injections for body modification, such as fillers for breast enlargement. Concerningly, more than half of the trans women living with HIV who were surveyed reported concerns about antiretroviral drug and hormone interactions, with many citing this as a reason for not taking ART, hormone therapy or both as prescribed [19].

G. Cervical changes in WLH

Cervical cancer is preceded by identifiable neoplastic changes (cervical intraepithelial neoplasia, or CIN) in the transformation zone of the cervix. Localised cervical cancer is highly curable (5-year survival rate of 92%), whereas disseminated disease is not (5-year survival of 13%) [20]. Two human papilloma virus types, HPV-16 and HPV-18, cause 70% of cervical cancers. An extensive South African study of WLH found that HPV-16 was the most commonly found type (42%) in the study cohort. WLH are about 10 times more likely than women without HIV to have abnormal cervical cytology and the aforementioned study found that those whose CD4 cell counts were <200 cells/mm^3 were at even greater risk [21]. This was attributed to immune dysfunction and HPV infection, the latter being more likely to be persistent in WLH [22]. In addition WLH progress from CIN to invasive disease faster than women without HIV.

Cervical cancer screening

There is wide consensus that for all sexually active women regular cervical cytology allows for early diagnosis and management of lesions in the pre-invasive stages, when treatment can almost always prevent progression to high-grade lesions and carcinoma. Research suggests this is especially so for women at risk of, and living with HIV [23], and BHIVA advises that all newly-diagnosed women should have cervical cytology as part of their initial sexual and gynaecological clinical assessment and thereafter annually. They also advise that all abnormal smears, including mild dyskaryosis, be referred to a specialist colposcopy service. As ART has not been shown consistently to prevent or alter the course of cervical dysplasia in WLH, management of it is the same whether or not the woman is taking ART [24]. The guidelines also suggest that the age range screened for cervical cancer should be the same as for women without HIV, i.e. first invitation at 25 years of age and ending at age 65 years [24]. Liquid-based cytology (LBC) is now the preferred technique for cervical screening and is recommended by the NHS Cervical Screening Programme [25].

H. Other sexually transmitted infections

Women have a higher risk than men of acquiring a sexually transmitted disease (STI) during unprotected vaginal sex and some STIs have significant, even life threatening, outcomes in women. Chlamydia and gonorrhoea, for example, if left untreated raise the risk of pelvic inflammatory disease with chronic pelvic pain, infertility and ectopic pregnancy. Untreated syphilis in pregnant women can result in infant death [26].

Ulcerative genital disease as a result of an STI increases risk of HIV acquisition. Herpes simplex virus 2 (HSV-2), for example, is by far the most common cause of genital ulcers. Numerous studies have shown a strong link even between asymptomatic, subclinical herpes infection and the acquisition of HIV [27]. *Trichomonas vaginalis* also seems to increase women's vulnerability to HIV. Women with bacterial vaginosis or vaginal candidiasis may also be more likely to acquire HIV [28].

I. Contraception for WLH

Clinicians practising in contraception use the evidence-based UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) [29] to support safe and effective clinical decision-making, alongside their clinical judgment based on intuition, knowledge and previous experience.

Women living with HIV may wish to plan or avoid pregnancy and they require advice on and access to a range of contraceptive methods. Decisions regarding contraception choice must be individualised and the women must be supported in making an informed choice that is practical and acceptable to them. For an individual woman to achieve optimal protection against pregnancy and onwards HIV transmission, she may need to use more than one method. Most available options for contraception may be considered in WLH who are not on ART but special considerations are needed for those taking treatment. Consistent condom use should always be encouraged in conjunction in order to reduce STIs and onwards HIV transmission in couples where HIV viral load is unknown or unsuppressed in either partner [24].

Barrier methods

The promotion of safer sex to prevent STIs remains a key message so condoms remain the stalwart in this

Key point

UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) offers guidance based on a rating system of 1–4 to indicate associated risk and acceptability for use depending on a range of criteria including factors such as smoking, body mass index (BMI) and other concurrent medical conditions [29].

regard. The effectiveness of both male and female condoms in preventing pregnancy is obviously dependent on correct and consistent use. Unplanned pregnancy rates in the first year of use can be up to 5%, even when used perfectly. Condoms are, of course, user dependent and their use needs to be negotiated between sexual partners. Many women find this challenging and will need extra support and guidance in this respect. Diaphragms and caps mean that relatively large areas of the vaginal mucosa remain exposed, potentially allowing viral transmission. UKMEC, therefore, advises that the risks of using a diaphragm or cap generally outweigh the benefits for WLH [29].

Hormonal contraception

Hormonal contraceptive methods are among the most widely used family planning methods worldwide. They include the combined oral contraceptive pill (COC), the combined contraceptive patch, progestogen-only pill (POP), injectable progestogens and the progestogen implant. The combined oral contraceptive pill is an option for women who are NOT taking ART. COCs inhibit ovulation and also have some effects on cervical mucus and the endometrium. The method offers high efficacy and there is little evidence of COC use and associated changes in HIV viral load or CD4 cell counts in WLH [30]. It should be noted that hormonal contraceptives cannot replace the ability of barrier methods to prevent transmission of HIV and other STIs; condoms should therefore be recommended in conjunction with any hormonal method.

Time out activity 3

Take a few minutes to look at the *BHIVA, BASHH AND FSRH guidelines for the management of sexual and reproductive health of people living with HIV infection 2008*. Available at: www.bhiva.org/SRH-guidelines. Go to Table 4 in section 5.1 to view the relevant drug interactions.

Importantly for women taking ART, some drugs may reduce the efficacy of systemic hormonal contraception. These include commonly prescribed non-nucleoside reverse transcriptase inhibitors (NNRTIs) and some protease inhibitors (PIs). The combined oral contraceptive is metabolised by the liver and its use in women with cirrhosis is ill-advised. Caution should also be exercised in women with abnormal liver function because of co-infection with hepatitis B and (or) C, or a history of alcohol misuse [30]. Interaction with rifampicin, commonly used for treating TB, is also significant [31].

A summary of alternative hormone-based options for WLH is given in Box 2.

Box 2. Alternative hormone-based contraception for WLH

- **Combined contraceptive patches** are transdermal patches applied weekly for 3 weeks followed by a 7-day patch-free interval. Compliance is often better with the patch compared to the combined oral contraception (COC). Efficacy is reduced by drugs that induce hepatic enzyme activity. Additional contraception is strongly advised, especially for those taking ART.
- **Progestogen only pills (POP)** work by thickening cervical mucus but newer POPs also inhibit ovulation. ART has the potential to alter the bioavailability of progestogen, potentially reducing contraceptive efficacy. An additional method of contraception, such as condoms, should be advised to protect against STIs and onwards transmission depending on whether HIV viral load remains detectable.
- **Long-acting injectable progestogens** are given every 8–13 weeks. Intramuscular or subcutaneous depot medroxyprogesterone acetate (DMPA) is considered a safe and effective method of contraception for WLH regardless of ART as the metabolism is unaffected by liver enzyme-inducing drugs. However use of DMPA is associated with significant loss of bone mineral density (BMD), which may be an additional consideration for WLH [32].
- **Progestogen-only subdermal implants** act by suppressing ovulation with high efficacy. They last for 3 years and are a safe and effective method of contraception for women with HIV not on ART. Use of ART has potential for reduction in efficacy, so again, an additional contraceptive method is usually recommended.
- **Levonorgestrel intrauterine systems (IUSs)** last for 5 years releasing a constant dose of oestrogen into the uterus daily, having a localised effect on the endometrium and preventing implantation. WLH may be offered an IUS after risk assessment and STI testing. Condom use should again be encouraged concomitantly depending on viral load and risk of acquiring STIs.
- **Copper intrauterine devices** prevent fertilisation and inhibit implantation, lasting up to10 years. The device is considered a safe and effective method for many WLH. Additional condom use should also be advised, as above.

ART: antiretroviral therapy; STI: sexually transmitted infection; WLH: women living with HIV.

J. Menstrual cycle and HIV

Many WLH experience changes in their menstrual cycle, which may include irregular or heavy bleeding, or amenorrhoea. Menstrual irregularities appear to be more common in women with low CD4 cell counts or high viral loads and in those with a low body mass index (BMI). Fluctuations in testosterone, oestrogen, and progesterone occur in response to immunological changes but direct mechanisms are as yet unclear. Women with signs of advanced HIV such as muscle wasting and loss of body fat, anaemia and poor nutrition may also experience menstrual changes as in the non-HIV population.

Time out activity 4

Take 5 minutes to list as many possible causes you can think of for menstruation changes, then list what you would include in an assessment checklist?

Now view the suggestions in Boxes 3 and 4

Box 3. Potential causes of menstrual changes

- Gynaecological disease such as ovarian cysts, uterine fibroids or pelvic inflammatory disease
- Pregnancy
- Use of some contraceptive options such as the IUD
- Significant weight loss/low BMI
- Acute stress
- High intake of soya – this has oestrogen-like properties and may contribute to menstrual irregularities
- Significant physical challenges, such as athletics training
- Premenopause or menopause
- Cervical dysplasia or cervical cancer
- Drug use; including persistent use of opiates, amphetamines and cocaine
- Some prescribed drugs such as metroclopromide, tricyclic antidepressants and some antipsychotics

IUD: intrauterine device; BMI: body mass index

Box 4. Assessing women with menstrual problems. Your assessment could include:

- Genitourinary assessment and referral for treatment for underlying infections or gynaecological disease etc.
- Consider and test for pregnancy as appropriate.
- Address any nutritional problems, e.g. low iron intake or unexplained weight loss. Obtain advice from a dietician.
- Review all medication taken, including those that are not prescribed.
- Refer back to prescriber for any problems thought to be related to use of contraceptives, e.g. COC or IUD.
- Consider physical activity patterns as well as stress and anxiety levels.
- Asking the woman to keep a record of her menstrual cycle and symptoms.

COC: combined oral contraceptive; IUD intrauterine device

K. Pregnancy

For many WLH starting a family and having a healthy baby is a realistic proposition. Major progress has been made in reducing the rate of vertical transmission of HIV. In the early 1990s, prior to today's evidence base and the availability of effective ART, the vertical transmission rate was >25%. In the mid-1990s only about one-third of pregnant women living with HIV were diagnosed at all and very few were diagnosed in antenatal care. The most recent UK data arise from a 2011 survey that looked at 400,000 births in England. The prevalence of HIV in women giving birth was 2.2 per 1000 on average – the highest being in London at 3.5 per 1000 [33]. Routine antenatal HIV testing was introduced in England in 2000 and rolled out throughout the UK by 2002. National uptake rates have improved year on year and today uptake is in excess of 97% [33]. In the UK today the vertical transmission rate is less than 1% among women who receive at least 14 days of ART but a small number of transmissions do still occur [34].

It is usually a combination of several of the factors mentioned Box 5 that lead to vertical transmission. It

Time out activity 5

Take 5 minutes to consider the possible reasons why a small number of transmissions could still occur in the UK despite <1% transmission rates in the UK [34], including broader psychosocial factors. Then look at the list provided in Box 5.

is important that we do not become complacent and that we continue to prioritise redressing health and social inequalities, seeking innovative ways of working with a view to eliminating the risk of newly acquired HIV during pregnancy or breastfeeding. Women accessing HIV care should have pre-conception counselling on all their conception options and the associated risks so that they can make informed choices with their partners.

All pregnant WLH should take ART to prevent vertical transmission of HIV and also to protect their own lifelong health. Those who are not tested or not accessing HIV care prior to pregnancy should commence ART as soon as they are able to; and within the first trimester if their viral load is >100,000 copies/mL and(or) CD4 cell count is <200 cells/mm^3. Importantly all women should have commenced ART by week 24 of pregnancy. In general pregnant women can use the same regimens recommended for non-pregnant adults as most ART medicines are safe to use [35]. There are however a few exceptions, for example PI monotherapy, which has lower pharmacokinetics in pregnancy and an increased risk of preterm delivery. Very recent data on the use of dolutegravir in pregnancy has raised safety concerns regarding neural tube defects in infants and the current advice for a woman taking this drug that becomes, or is pregnant, and is in the first trimester, is to switch to a regimen on which there is more safety data in pregnancy [36]. In July 2018 an alert was issued that cobicistat-boosted darunavir is contraindicated for use by pregnant women unless boosted further by ritonavir. Plasma levels of the drugs have been found to be reduced to suboptimal levels in the later stages of pregnancy [37].

Importantly some women may find adherence to ART particularly challenging during pregnancy especially if suffering from nausea or acid reflux, for example, or if they are concerned about potential detrimental side effects to their baby. Particular vigilance and additional support from nurses may well be required.

For women taking ART, a decision regarding a recommended mode of delivery should be made after a review of plasma HIV viral load results at 36 weeks. If a woman has a viral load of <50 copies/mL at 36 weeks and with no other obstetric contraindications, BHIVA recommend a planned vaginal delivery. Where the viral load is ≥400 copies/mL at the 36 weeks point, a planned caesarean section is recommended. Figure 3 summarises the variety of approaches necessary for preventing vertical transmission.

Box 5. Factors increasing the potential for vertical transmission

- Declining antenatal HIV testing
- Seroconversion during pregnancy
- Problems of engagement with care
- Suboptimal ART, e.g. problems with ART adherence or prescribing flaws
- Presenting late for antenatal care; limited opportunity for effective ART
- Postnatal transmission, e.g. due to seroconversion during, or undisclosed, breastfeeding
- Transferring antenatal care provider, lack of, or miscommunication, between providers
- Preterm delivery curtailing duration of ART meaning viral load remained detectable
- Problems with the antenatal test results, such as result not being reported

ART: antiretroviral therapy

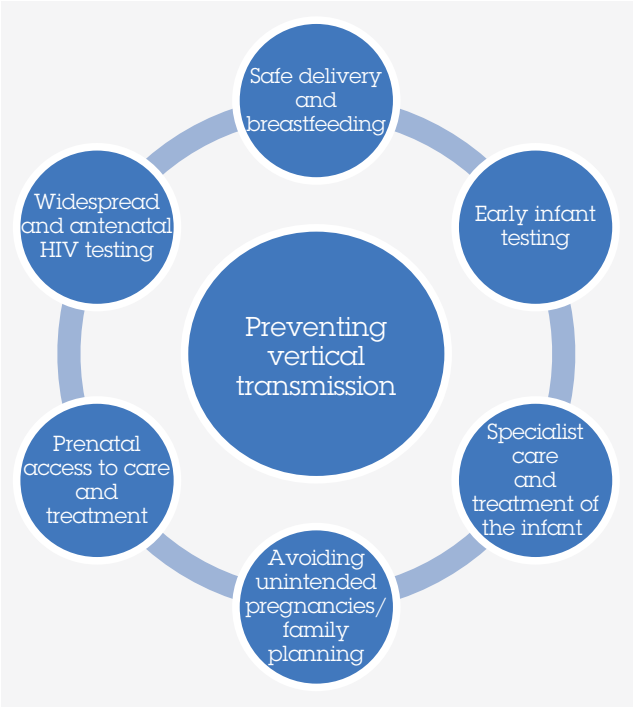


Figure 3: Methods for preventing vertical transmission

BHIVA's Standards of Care for PLWH specifically mention that the management of pregnancy, childbirth and the immediate postnatal period for women with HIV should be undertaken by a specialist multidisciplinary team. While prescribing of ART in pregnancy is within the scope of outpatient HIV units, the Guidelines stress that birth plans and plans for paediatric care must be managed in collaboration with obstetric services and local/regional paediatric HIV teams. All mothers with HIV should have access to the full range of evidence-based interventions to reduce the risk of onward HIV transmission, including free infant formula milk for those who are unable to afford it [38].

L. HIV and the menopause

Key point

Did you know? The word 'menopause' is derived from Greek –'menos' meaning 'month' and 'pausis' meaning 'to stop'. The term was first used in 17th century France, however, it is only relatively recently that there has been general awareness of menopause as a concept as 100 years ago life expectancy was much shorter and few women lived long enough to experience it [39].

There is widespread agreement on the definition of menopause. It is defined as amenorrhoea for 12 consecutive months. For women taking effective ART longer survival means many women now live beyond menopause and into their postmenopausal years. In addition to a change in the menstrual pattern with eventual cessation, the drop in production of both oestrogen and progesterone can cause a variety of symptoms, which can vary considerably from one woman to the next [40].

Menopausal symptoms can include the following:

- vasomotor symptoms (e.g. hot flushes and sweats);
- musculoskeletal symptoms (e.g. joint and muscle pain);
- effects on mood (e.g. anxiety and low mood);
- urogenital symptoms (e.g. frequency and vaginal dryness);
- sexual difficulties (e.g. low sexual desire); and
- reduced memory capacity and loss of concentration.

In women aged ≥45 years the presence of vasomotor symptoms alongside irregular menstruation are usually sufficient to diagnose perimenopause and menopause. Laboratory testing is not usually required but blood test for follicle stimulating hormone levels may be appropriate if women aged 40 years present with symptoms [40].

Time out activity 6

The PRIME Study was published in 2018 and is one of the largest to look at the health and well-being of women living with HIV aged 45–60 years [41]. It collected data on nearly 900 women. Go to www.menopausematters.co.uk/newsitem.php?recordID=192 and read the summary of key findings. Make a note of the six recommendations that are made.

In 2016, there were 10,350 women living with HIV aged 45–56 years attending for HIV care in the UK: a five-fold increase over 10 years [41], yet there remains a perceived complexity of managing menopause in WLH by general practitioners resulting in many women finding it difficult to access appropriate care and support. HIV physicians may also feel they lack experience in managing menopause and in addition there is a relative paucity of data on the subject with some conflicting results. Furthermore, women living with HIV often have unique considerations such as potential interactions between ART and other physiological

concerns, such as a propensity towards reduced BMD and increased cardiovascular risk [42, 43].

One literature review found six robust studies looking at the average age of menopause in WLH and comparing the mean age with that of women without HIV. Overall the average age ranges of occurrence of menopause were similar for the general population and WLH: 47.7–52.0 years of age. Some data suggest that WLH experience more vasomotor and psychological symptoms during the menopause but there is no evidence that menopause affects either CD4 cell count or response to ART [44].

Significantly women lose about 10% of their bone mass during the menopause process, increasing the risk of osteoporosis and fractures [45]. Women living with HIV may be more likely to lose bone mass than other women for reasons given in the previous CPD article on bone health [46]. Furthermore oestrogen deficiency also makes post-menopausal women vulnerable to heart disease and stroke in combination with the HIV-related enhanced risks for these conditions, as previously described [47]. Treatment options designed to lessen symptoms during the menopausal transition are the same for WLH as for other women. Box 6 outlines the most commonly used treatments as advised by NICE [40].

Box 6. Treatment options for relief of menopausal symptoms

- Oestrogen and progestogen replacement (HRT) for vasomotor symptoms and(or) mood disturbances
- Selective serotonin reuptake inhibitors (SSRIs) can be used as second line-treatment for vasomotor symptoms but only advised when depression has also been diagnosed
- Cognitive behavioural therapy (CBT) to alleviate low mood or anxiety
- Testosterone supplementation for low sexual desire
- Vaginal lubricants can be used alone or in addition to vaginal/topical oestrogen
- Isoflavones or black cohosh may relieve vasomotor symptoms

Source: NICE, 2015 [40].

On the whole, hormone therapy is probably underutilised in menopausal women who are living with HIV due to perceived concerns around drug–drug interactions as well as fears shared with women in the general population about hormone therapy. Menopausal women should be given adequate information on symptoms, lifestyle modification and treatment options including hormone therapy. A sensitive and holistic approach, which also considers the impact on mental health in this population is essential [43].

M. The nurse's role in meeting the healthcare needs of women

Many women living with HIV have an unmet need for contraception, counselling on pregnancy planning, addressing infertility and information about sexuality, among other needs [48]. As for all women, they have the right to decide freely on their sexual and reproductive health, including having children, and they require access to information, education and means to enable this.

In order to be able to work effectively with women and collaborate with other health and social care professionals in addressing some very challenging and specific needs across a range of clinical settings, nurses must receive specific education and training. Sensitive and challenging matters such as intimate partner violence and sexual dysfunction, for example, require robust practice protocols, guidelines, policies and prompts in order to identify and support those affected, along with actual services to which women can be referred for social, legal and clinical support.

N. Conclusion

Educating and empowering women to determine their own reproductive and sexual health requires global, national and front-line investment and commitment, alongside cultural awareness, vigilance and advanced communication skills amongst healthcare professionals. New technology, while it does not preclude traditional care, can open up a range of creative options to educate women in an increasingly personalised way. Information technology can be empowering and social media can create opportunities for women to present a cohesive voice and be heard. Further efforts are also needed to educate men, for example, in contraception methods. Alongside all of this the fundamental role of the nurse will remain as caregiver and advocate for the vulnerable and sick, and as a promoter of good health and well-being.

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Conflicts of interest

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