GUIDANCE ON THE MANAGEMENT OF SEXUAL AND REPRODUCTIVE HEALTH FOR ADOLESCENTS LIVING WITH HIV 2011. HYPNET / CHIVA / BASHH / BHIVA

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1.0 Contributors

1.1 Contributors and their Affiliations

- **Chair: Melinda Tenant-Flowers – King's College Hospital NHS Foundation Trust, London, Consultant HIV / Sexual Health**
- **Fiona Boag – Chelsea and Westminster Hospital NHS Foundation Trust, Imperial, London, Consultant GUM / HIV**
- **Rita Browne – Haringey NHS Trust Consultant GUM / HIV. BASHH Adolescent Special Interest Group (ASIG)**
- **Caroline Foster –Imperial College Healthcare NHS Trust, London Consultant Paediatrician HIV**
- **Eva Jungmann – Archway Sexual Health, Camden Primary Care Trust, London, Consultant GUM / HIV**
- **Elaine Pearson Scott – Positive Parenting Children (PPC) (Lambeth)**
- **Maria Phelan – Children and Young people HIV Network Coordinator, National Children's Bureau**

- **Katia Prime – St George's Hospital NHS Trust, London, Consultant GUM / HIV**
- **Ella Sherlock – Clinical Psychologist HIV Child and Family Psychology Service CASCAID (Lewisham and Southwark), Paediatric HIV Psychology Group**
- **Rebecca Wilkins – Community Matron, Diabetes Centre Newbury park Redbridge PCT**

1.2 Competing Interests

None declared

1.3 Stakeholder involvement

HIV Young Persons' Network (HYPNET) - Caroline Foster - Chair
Children's HIV Association (CHIVA) - Paddy MacMaster - Chair
British Association for Sexual Health and HIV (BASHH) - Karen Rogstad, Dawn Wilkinson, BASHH Adolescent Special Interest Group - Rita Browne, BASHH HIV Special Interest Group - Simon Edwards
British HIV Association (BHIVA) – BHIVA Guidelines Committee - Sarah Fidler

1.4 Thank you for additional comments received from the following:
Marge Berer, Daniella Chilton, Annemiek de Ruiter, Steve Higgins, Brett Marrett, Susan Mitchell, Pamela Morrison, Nneka Nwokolo, Steve Welch

2.0 Scope and purpose of Guidance

Excellent evidence-based guidelines on adolescent sexual and reproductive health (SRH) and HIV and Sexual Health already exist. (1) (2) (3). However, to date, specific guidance on the management of sexual and reproductive health for adolescents living with HIV is lacking. With highly active antiretroviral therapy (HAART), increasing numbers of children with perinatally acquired HIV infection are surviving to adolescence. In addition, more adolescents with HIV are being diagnosed who have acquired their infection through either consensual or non-consensual sexual contact or via other routes. These adolescents also require sexual health advice and guidance.

In response to requests from Paediatric Healthcare Professionals (PHCP), this document primarily aims to provide guidance and knowledge for PHCP managing adolescents diagnosed with perinatally transmitted HIV. This is to enable PHCP to start discussions

about sexual and reproductive health (SRH), tell them what to expect from Genitourinary Medicine (GUM) and SRH Services and to provide information on where to access existing guidelines.

The Guidance is not intended to train PHCP as SRH experts but to inform their discussions with adolescents and enable them to initiate a discussion about their specific SRH needs. This includes being able to answer basic questions about sexually transmitted infections (STIs), sexual health, conception and contraception-related issues within a legal and ethical framework and, in an informed and frank way. PHCP can also refer adolescents to GUM / SRH services within care pathways as required (4) (5).

More than a quarter of young people are sexually active before the age of 16 and the median age of transfer to adult HIV services within the UK is 17 years. Therefore, the onus must be on PHCP to initiate sexual health discussions. In addition, PHCP will, in many cases, have been caring for these adolescents for many years. Therefore it is to be expected that, sometimes, adolescents will ask their PHCP first about SRH matters because of the long term and trusting relationship that has developed.

The development of HAART for HIV and the improved life-expectancy this brings has changed the outlook for all adolescents with HIV. They are now growing through into adulthood, enjoying sexual relationships and having families of their own. Their chances of ensuring that their children are not infected with HIV have increased markedly, an option that was not available to many of their parents. In addition, as vertically-infected adolescents are at risk of transmitting HIV from the onset of sexual activity, it is vital that sexual health education discussions start before puberty and continue thereafter. This is therefore a unique cohort of young people who require specific management from the health care professionals who work with them.

3.0 Definitions

3.1 Definition of Adolescence

Various definitions of the term adolescence in the literature relate to age, growth or the onset of puberty. The term adolescent will be used throughout these guidelines to denote young people aged 10-24 years old, which covers the age from the onset of menarche in the UK to the upper limit of the definition of young adult used by the HPA (6).

3.2 Definition of Sexual and Reproductive Health

The WHO defines sexual and reproductive health as follows:

Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled (7).

Genitourinary Medicine (GUM) and Sexual and Reproductive Health (SRH) services aim to prevent sexually transmitted infections (STIs) and unwanted pregnancies as well as screen for, diagnose and manage STIs and their sequelae to minimise morbidity and mortality. In some parts of the UK these functions are performed in fully integrated SRH services. Traditionally the management of STIs and basic contraceptive services are provided by GUM clinics, with SRH services providing all aspects of contraception and basic STI screening. Therefore, in this guidance services are referred to as GUM / SRH services to take account of local differences in service provision.

Key point: PHCP should be familiar with sexual health services for young people which are available locally.

4.0 Epidemiology

4.1 Epidemiology of Sexual Health in Adolescents in the UK

Around one quarter of UK adolescents have had sex before their sixteenth birthday (8). Early sexual debut has been associated with lone parent families, having mothers who were teenagers when they were born, being a “looked after “child and being a young black male. Boys report earlier sexual debut than girls and younger adolescents are less likely to use a condom at first sex than older adolescents (9).

Despite a downward trend since 1998, the UK has the highest rate of teenage pregnancy in Western Europe with a conception rate in England of 41 per 1000 girls aged 15-17 during 2007, half of which ended in legal termination (10). Additionally, in the UK in 2009 (11), 57% of all STI diagnoses occurred in 16-24 year olds accounting for 64% of all chlamydia, 50% of all gonorrhoea and 55% of all genital wart diagnoses. New diagnoses

of chlamydia in 16-19 and 19-24 year-olds increased by 76% and 85% respectively between 2000 and 2009 (11) (12).

KEY MESSAGES

- **Sexually transmitted infections are increasing among young people in the UK**
- **The UK has a high unwanted pregnancy rate**

4.2 Epidemiology of HIV in Adolescents in the UK

The majority of adolescents living with HIV in the UK have either acquired HIV perinatally (vertical transmission), or through sexual contact (horizontal transmission). Of 86,500 people living with HIV in the UK in 2009 (13), 2,262 young adults aged 16-24 accessed HIV care (14). In 2010, there were 629 new HIV diagnoses in young adults aged 16-24 years out of 6,630 new HIV diagnoses in all age groups (13)

Ninety-one percent (91%) of children diagnosed with HIV, reported to the National Study of HIV in Pregnancy and Childhood (NSHPC) since 1996 in the UK and Ireland are followed up in the Collaborative HIV Paediatric Study (CHIPS) cohort (15). By the end of March 2010, 1,645 children had been reported, 97% of whom were infected perinatally and 79% of whom were of Black African ethnicity. Of 1,245 in current paediatric follow-up, (65%) are aged ten years or above and (23%) are aged 15 years or above. Two hundred and six have already transferred to adult services. In 2009, the median age at transition was 17 years (16). Forty-two adolescents had been newly diagnosed aged 13 years and over (17) representing an emerging asymptomatic cohort of late presenters (18).

Seven hundred and two 16-24 year olds acquired HIV via sexual transmission in 2007 (6). The mode of transmission in 48% was heterosexual - mainly Black Africans infected abroad and, 48% through men having sex with men (MSM) - mainly white and infected in the UK. The case numbers in the young MSM group showed a doubling of HIV diagnoses from 1998 to 2007 (from 128 to 271). During 2009, HIV infection was recently acquired in 18% of MSM and in 16% of heterosexuals aged 15-24 (13)

KEY MESSAGES

- **While most of the HIV-infected adolescents aged under 25 in the UK were sexually infected, a substantial proportion remain who were perinatally infected**

- **The number of HIV infected adolescents accessing care is increasing as the perinatally infected cohort ages, asymptomatic older adolescents are diagnosed late and, adolescents are acquiring their HIV through sexual transmission**
- **Transfer to adult HIV services occurs at an average age of 17 years**

5.0 HIV Transmission

5.1 HIV Transmission Risks

It is not envisaged that, in discussions with adolescents, these transmission-risk statistics should be quoted directly. The figures can, however, be used as a source of information on which to base discussion about which type of sexual activity carries the most risk such as:

"Unprotected sex carries more risk of transmitting HIV than when a condom is used"

"Kissing is very safe"

The transmission risk associated with any type of sexual activity is dependent on how often that activity is carried out, multiplied by the risk per exposure and other factors listed after the table. The commonest route of HIV transmission worldwide remains heterosexual sex **(See 5.2, 5.3.1, 5.3.2)**. Therefore the figures in the table below, which illustrates the transmission risks associated with different sexual acts, need to be considered in context (19).

Type of sex act	**Risk of HIV transmission per exposure**
Receptive Vaginal	0.1% or 1 in 1,000
Insertive Vaginal	0.05% or 1 in 2,000
Receptive Anal	0.5% or 1 in 200
Insertive Anal	0.065% or 1 in 1,538
Receptive oral with ejaculation	0 - 0.0004% or 4 in 1,000,000

5.2 Routes of HIV transmission

- Blood products that are not screened for HIV
- Mother to child transmission – is preventable in women when aware of their status and receiving HAART
- Shared needles for intravenous drug use
- Oral sex - less risky than anal or vaginal sex but not risk-free – condoms or dental dams can be used.

- Unprotected sex carries a greater risk with anal rather than vaginal sex per exposure. Anal sex is practised by both (MSM) and some heterosexuals however, condom use for anal sex is always recommended. During unprotected vaginal sex, HIV passes more easily from men to women than from women to men.
- Therefore good adherence to HAART regimens is vital in order to reduce the risk of HIV transmission by maintaining a undetectable viral load

5.3.1 Factors which increase the risk of HIV transmission

- High plasma and genital secretion HIV viral load due to asymptomatic:
    - Primary HIV infection (Seroconversion)
    - Advanced untreated HIV disease
- Concomitant sexually transmitted infections – especially ulcerative conditions
- Menstruation
- Trauma due to e.g. non-consensual sex

5.3.2 Factors which decrease the risk of HIV transmission

- Condoms
- Male circumcision
- HAART with good adherence to maintain an undetectable HIV viral load

5.4 HIV transmission risk when stable on HAART and viral load undetectable. (Is it safe to stop using condoms?)

The “Swiss statement” based on mathematical modelling of HIV infectivity in adults (20), suggests that condoms need not be used when a person on stable HIV therapy, has an undetectable HIV viral load in their blood and no STIs as, under these circumstances, the risk of transmission of HIV through vaginal sex is negligible.

Current opinion in the UK is that it is not safe to stop using condoms in these circumstances as there may still be a small risk of transmitting HIV through sex. This is because the HIV viral load measured in the blood may not reflect the viral load in semen or the genital tract which can be higher. Also, individuals with usually undetectable viral loads occasionally show ‘blips’ when the viral load transiently rises to detectable levels. This may be due to lapses in adherence (21) or viral release from latently infected cells. Therefore, transmission might occur during one of these asymptomatic and undetected ‘blips’, which an infected person might be unaware of.

KEY MESSAGES

- **Unprotected anal and vaginal sex are both high risk activities for HIV transmission**
- **Condoms reduce HIV transmission risk**
- **Good adherence to ART reduces HIV transmission risk**
- **A high HIV viral load increases the risk of transmission**
- **Transmission may occur even when the HIV viral load in blood is low**
- **Transmission may occur while HIV infection is asymptomatic**

6.0 Consent and Confidentiality

6.1 The legal framework on consent, confidentiality and child protection

- Regarding consent and capacity, the Fraser Ruling applies only to contraception. Gillick competence applies to wider aspects of care, management and consent. The term Gillick competence will be used hereafter to encompass both terms.
- The General Medical Council (2007) publication 0-18 years: guidance for all doctors (22) outlines the legal framework on child protection, consent and confidentiality and clearly states the right of a young person to confidentiality when accessing clinical services.
- The GMC guidance also reaffirms the right of health care providers to provide sexual health services, without disclosure to an adult with parental responsibility, provided the young person is deemed Gillick competent. Sexual Health information from the records of adolescents with capacity should not be disclosed to others (including parents) without their explicit consent, unless there are exceptional circumstances
- If a young person is accompanied by an adult with parental responsibility, it is not a legal requirement to establish competence. However, in practice, every young person under 16 should be given the opportunity to be seen alone and have competence assessed.
- 18-year olds need to be assessed according to nationally agreed risk assessment frameworks e.g. Safeguarding Children Boards
- All under-18 year olds are subject to child protection regulations
- All under 16-year olds and under 18s with learning disabilities must be assessed for Gillick competency

6.2 Assessment of Gillick Competency in sexually active under-16 year olds

- Young people between the ages of 13 and 15 who attend SRH services need to be assessed for competency at each visit to establish whether they are able to consent to genital examination, investigations, medical treatment and provision of contraception. Their competency may change with time. **(See Appendix 2).**
- Fraser criteria also need to be met for a PHCP to be able to prescribe treatment to a competent under-16 year old. These criteria mean that the patient:
    1. Understands the PHCP's advice
    2. Is encouraged to inform their parent / guardian of the consultation
    3. Would begin or continue sexual activity without contraception or sexual health advice
    4. Might suffer harm to their physical or mental health if they do not receive advice and / or treatment
    5. AND It is in the patient's best interests to give advice and / or treatment without parental consent
- Although the young person should always be encouraged to discuss their sexual activity with an adult with parental responsibility they often do not wish them to be informed.

6.2.1 Special Considerations

- **Age Difference** - If there is an age or power imbalance between the adolescent and a sexual partner, this should give cause for concern and be explored to exclude coercion.
- **Children under age 13 -** Children under the age of 13 are by law not competent to consent to sex. This should always give rise to concern and must always be discussed with the local child protection lead.
- **Children with Learning Difficulties** - Children aged 16 and over who have learning difficulties need to be assessed for competency by the relevant services as appropriate for their learning age and cognitive abilities.
- A risk assessment for child sexual abuse (CSA) and / or coercion should always be included whenever taking a sexual history from sexually active under-16's
  This might start by asking asking questions such as "Have you ever had sex when you did not want to? **(See 9.3)** and **(See Appendix 4)**
- Guidance is provided by the DFES publication 'Working together to safeguard children 2010' (23) and the RCPCH CSA Guidelines 2008 (24).

6.3 The Sexual Offences Act 2003

- The Sexual Offences Act 2003 (England) states that sexual activity under 16 years is illegal and those under the age of 13 (age 12 in Scotland) are not competent to give consent to sexual activity (ie sexual activity constitutes rape).
- The Government publication 'Working together to safeguard children' 2010 (23), indicates that CSA including coercion, prostitution and grooming should be considered in every child under the age of 18 who is sexually active and those under 16 years should have a risk assessment for CSA.
- However, this document does not advocate mandatory reporting to police or social services of every sexually active under 18 if there is no cause for concern.
- All assessments must be fully documented **(See Appendix 3).**

6.4 Healthcare Professionals working with sexually active adolescents – the legal position

The Sexual Offences Act 2003 states clearly that sexual health care providers are protecting a child if they are preventing STIs or pregnancy, whether children are under 16 or under 13 years old and are therefore not liable to prosecution for doing so. Further guidance is provided by the BASHH National Guideline on Management of STIs in Children and Young People 2010 (1).

KEY MESSAGES

- **Adolescents have rights to confidentiality**
- **Gillick competence must be assessed for each adolescent under 16 at each visit as it may change with time**
- **CSA including coercion, prostitution and grooming should be considered in every child under the age of 18 who is sexually active and those under 16 years should have a risk assessment for CSA**
- **There is no need for mandatory reporting of every sexually active 13 -16 year old if there is no cause for concern and this has been fully assessed and documented**
- **There is an assumption that any sexual activity in those under 13 years old will be discussed with the local child protection lead**

7.0 Disclosure

7.1 Disclosure of HIV status and Criminalisation

To date, there have been 14 prosecutions of adults under Section 20 of the 1861 Offences Against the Persons Act for “reckless transmission” of HIV when condoms were not used consistently. Prosecution technically requires the four following criteria to have been met. However, prosecution procedures have been known to commence while proof is being established.

1. Transmission of HIV must have occurred - having unprotected sex is itself not a crime.
2. The adolescent needs to be aware of their status
3. The adolescent needs to have engaged in a risky behaviour
4. The adolescent needs to understand the risks of transmission

- HIV-positive adolescents should ideally disclose their status to sexual partners even when they are having protected sex. This will allow partners to make their own risk assessment and will ease discussions about post exposure prophylaxis for sexual exposure (PEPSE). PHCP should raise the disclosure issue at each visit when status has not been disclosed to a partner or partners. **(See Appendix 6)**
- If an HIV positive adolescent is having unprotected sex or there has been a risk of exposure (e.g condom splits) they need to disclose their HIV status to that partner so that they can obtain PEPSE to lessen the risk of HIV transmission. If disclosure does not happen in a timely manner, PHCP need to seek specialist advice as outlined in the CHIVA PEPSE Guidelines, 2009 (25).
- Adolescents need to be aware of the law, how they can stay within it and, what behaviour may be interpreted as breaking the law.
- If adolescents are not given this knowledge and then are involved in activities that may be thought of as illegal, it could be that those who have neglected to inform them are vulnerable to prosecution.
- Education around HIV and onward transmission is a continuous process for adolescents and Criminal Prosecution Service (CPS) guidance for adults recognises that proof of knowledge is likely to be difficult.
- CPS guidance states that, “appropriate and reasonable safeguards” are a defence. It is not clear, however, on what happens if a condom breaks, and around oral sex.
- If an allegation is made against an adolescent, early discussion with specialist agencies such as NAT, THT, HYPNET, CHIVA, BASHH or BHIVA is advised.

- Further guidance is available from the NAT / THT Document on criminalisation 2009 (26).

7.2 Disclosure of HIV status to other people

- Many adolescents living with HIV have not disclosed their status to anyone - only their family and health professionals are aware they are infected with HIV. PHCP need to consider the need for support and the possible need for disclosure as young people move physically and emotionally away from their family or guardians
- Further guidance is available from the CHIVA Guidance - Talking to children about their health and HIV Diagnosis 2009 (27).
- Adolescents do not often have a full understanding of the nature of their health condition until they are older and, over time, they learn to make decisions about keeping personal information private.
- Adolescents may need support, discussion, time to weigh up and think through their options and, opportunities to practice disclosure. This may well be an area that has great fears for them
- PHCP need to model disclosure to these adolescents by openly naming HIV
- How accepting adolescents are of their own diagnosis will affect their ability to disclose to others.
- Whilst many disclosures go well, it is impossible to predict the response of an individual. Adolescents therefore need to think carefully about where and when and to whom they are going to disclose, as well as what they will do for immediate support if something goes wrong.

7.3 Disclosure of HIV status to sexual partners

- After some time in a relationship, adolescents with HIV may want to disclose their status to their partner. It will be helpful to talk through this process with them. This might involve discussing the advantages, (closeness, sharing, not living a “double life”) and also the potential disadvantages, (rejection, anger, and wider disclosure of their status by their partner to others).
- This may be a particular worry for adolescents whose first relationships are often with other youngsters living nearby, or attending the same school. In addition, relationships may be short-lived **(See 7.1)**.

KEY MESSAGES

- **HIV-positive adolescents should ideally disclose their status to sexual partners even when they are having protected sex. This will allow partners to make their own risk assessment and will ease discussions about PEPSE**
- **If an HIV-positive adolescent is having unprotected sex or there has been a risk of exposure (e.g a condom splits) they need to disclose their HIV status to that partner in order for the partner to obtain PEPSE**
- **If an allegation is made against a young person, early discussion with specialist agencies is advised**

8.0 Sexual Health Education

8.1 Sexual Health Education Needs of HIV-Positive Adolescents

- **PHCP need to take responsibility for seeing that Sexual Health needs, if not brought up by the adolescent, are raised in consultations, starting well before sexual maturity is reached, The age at which this should start will depend on individual children / adolescents and should compliment SRE provision within other settings such as the schools PHSE programmes.**
- Services should have a named individual responsible for SRH needs of these adolescents with individualised plans and records for each young person to ensure sexual health education is addressed at each visit and progress documented.
- Education around sex and relationships needs to begin before the adolescent is considering becoming sexually active to ensure that they have the information required to manage their behaviour appropriately.
- Adolescents' level of maturity and cognitive ability will determine what information should be shared with them at any time. All information should be reinforced and understanding checked at each visit.
- HIV-positive adolescents require the same sexual health information as their HIV-negative peers around puberty, STI's, contraception and the mechanics of sex. This information-giving needs to be followed up with further discussions on how to apply it in the context of living with HIV.
- If PHCP are unable to meet the sex education needs of their client group then it is necessary to know what other local sexual health services are available, how to access them and refer adolescents to them ie established care pathways or sexual health networks.

8.2 Negotiating Sexual Relationships

- Discussions with HIV-positive adolescents need to focus on the fact that sexual relationships are possible, achievable and to be expected. This will be complicated for these adolescents but these issues can be talked about and managed.
- HIV-positive adolescents should be encouraged to seek out and negotiate the type of relationships and sex that they would like. PHCP should be aware of risk reduction techniques using behavioural modification techniques as outlined in the 2010 NICE guidance on preventing STIs and under 18 conceptions (5).
- Adolescents with HIV should be aware that they do not need to participate in any relationship or sexual behaviour that they are not comfortable with, they may require assistance with talking about and negotiating this. Some forms of sexual exploitation and coercion may be very subtle. PHCP need to be aware of local sexual health services that can meet this need.

8.3 Psychosexual issues including erectile dysfunction and vaginismus and services available

- Psychosexual issues may arise from cultural and religious beliefs around sexual behaviour such as condom use, female circumcision, sexuality and anxiety about onward transmission of HIV.
- It is important that PHCP know where to refer young people locally who may be suffering from sexual difficulties or dysfunction e.g. erectile dysfunction or vaginismus. This may require Psychosexual, GUM, RSH, Gynaecology, Urology or Endocrinology services.

8.4 Sexual Assault

- PHCP need to know where to refer adolescents for advice, support and counselling around sexual assault and domestic violence (Local Child Protection Officer in Trust, Social Services, Local Sexual Assault Referral Centre (SARC)
- Further guidance is available from the RCPCH CSA Guidelines 2008 (24) and the BASHH National Guideline on the Management of STIs in Young People 2010 (1).

KEY MESSAGES

- **PHCP need to take responsibility for seeing that Sexual Health needs, if not brought up by the adolescent, are raised in consultations, starting well before sexual maturity is reached.**

- **It is important that PHCP know where and how to refer adolescents for specialist help relating to issues concerning negotiating sexual relationships, psychosexual and sexual assault.**

9.0 Talking about Sexual Health

9.1 How to Start Talking about Sexual Health

When adolescents with HIV were asked (CHIVA Conference Adolescent forum 2008) what they wanted from an adult when talking about sex, their top three requirements were someone who was:

- Non-judgemental
- Had correct information
- Maintained confidentiality

Adolescents with HIV also commented that often the words used were "too long", "confusing", that "they did not ask me what I wanted" and that assumptions were made about their being sexually active and their sexual orientation. Further guidance can be found in the HYPNET / PPC Guidance on speaking to young people about sex and relationships 2009 (28).

- When an adolescent is fully aware of their HIV diagnosis, they should be encouraged to spend part of the consultation alone with the PHCP. Whilst encouraging independence and responsibility this will also provide an opportunity for discussion, education and questions around topics such as sex and the future which young people may not wish to talk about in front of their parents / carers.
- PHCP should at all times, use simple language and check understanding. They should ask adolescents what they would like to know about sex and relationships and whether they have any questions relating to with sex or sexual health.
- PHCP should not overload adolescents with too many questions at once, confusing facts or statistics until asked for them.
- PHCP should not assume the sexuality of the adolescent or, that they are or are not sexually active

For examples of questions to ask (See Appendix 1)

KEY MESSAGES

- **PHCP to ensure that Sexual Health needs are raised in consultations, starting well before sexual maturity is reached.**
- **Adolescents value consultations which are non-judgemental, give them**

the correct information and which maintain confidentiality

- **Ensure privacy and encourage independence by offering to see them by themselves**
- **Use simple language and check understanding**
- **Do not overload adolescents with too many questions, confusing facts or statistics.**
- **Do not assume their sexuality**
- **Do not assume they are, or are not, sexually active**

9.2 Checklist for sexual health discussion:

These issues will be discussed over several sessions and often with different professionals. Also, young people may need different elements of this list at different stages of adolescence. This is a continuous process.

1. Preventing HIV and sexually transmitted infection (STI) transmission; condom use (includes provision of both male and female condoms and demonstration of use). The young person should be aware of where they can get free condoms from outside the clinic. How to access sexual health services.
2. All methods of contraception, including emergency contraception, interactions with HAART and long acting contraception. The concept of dual protection - using condoms with other methods of contraception.
3. Symptoms of STIs and how to access testing and treatment
4. Awareness that some STIs may be asymptomatic, therefore STI screening with each new partner change is recommended
5. Vaccination against preventable STIs; Hepatitis A and B vaccine and HPV vaccine (depending on age).
6. Disclosure of HIV status to partners
7. Post exposure HIV prophylaxis after sexual exposure (PEPSE)
8. Effect of HIV on fertility and options for serodiscordant couples (sperm washing if positive male and self insemination if positive female).
9. Pregnancy in HIV positive women, <1% risk of transmission if pregnancy and initial care of the baby is managed appropriately.
10. Managing an unplanned pregnancy. Options of continuing with pregnancy, adoption or termination of pregnancy; methods of termination.
11. Identifying through using clinic proformas and protocols any sexual violence or exploitation the young person may be experiencing and providing counselling, STI testing and support. Referral to other agencies (eg Sexual Assault Referral Centres or Social Services) as required.
12. Facilitating discussions around sexual difficulties (eg sexual desire, erectile dysfunction and vaginismus).
13. Psychological support as needed with regard to negotiating safe sex; self assertion or dealing with bullying.
14. Awareness of all the consequences of unprotected sex: STIs, unwanted pregnancy, subfertility due to STIs and transmission of drug–resistant HIV.

9.3 Taking a sexual history

Whilst PHCP are not expected to undertake sexual health screens unless specifically trained, they should be able to take a sexual history as part of the wider medical history taking. It is important to first establish whether adolescents are sexually active and their risk of STIs, unwanted pregnancy and inadvertent onward sexual transmission of HIV.

- Further guidance is available in the BASHH Guidance on Sexual History Taking 2006 (29).

Further discussion should be guided by the maturity and level of sexual activity of the young person and should include an assessment of:

- Do they have any sexual partners?
- What was the gender of their partner(s)? e.g. To a male: “Was that partner a boy or a girl / male or female?”
- How old was their partner(s)?
- How long have they been together?
- Is their partner HIV-positive?
- Is their partner aware of their HIV status?
- Which country is their partner from? (risk of resistant gonorrhoea or Hepatitis B)
- When they had sex did they use condoms? Always?
- Did the condoms ever break? (need for partner PEPSE or emergency contraception)
- Males and females - Are they or their partners using any contraception as well as condoms? (If so, which?)
- What type of sex did they have? (oral / vaginal / anal)
- Females - Have they ever been pregnant?
- Females - First day of last menstrual period?
- Any symptoms suggestive of a STI? (eg vaginal discharge, intermenstrual or post coital bleeding, abdominal pain and dyspareunia in females and urethral discharge and testicular pain in males)

  Have they ever had sex when they did not want to? / with someone against their will? / when they did not feel comfortable with the idea?”
- Any history of recreational drug use or excess alcohol consumption and the influence of this on sexual activity
- **For detailed sexual history proformas and questions to ask when an STI has been diagnosed (See Appendices 2-4)**

KEY MESSAGES

- **Establish whether adolescent is sexually active**
- **Assess the risk of STIs, unwanted pregnancy and inadvertent onward sexual transmission of HIV**

10.0 Service Provision

10.1 Service Provision for Sexual Health, Sexually Transmitted Infection (STI) Screening Contraception and Conception advice

- Screening for STIs can be accessed in a variety of community and hospital settings.
- In the community: General Practice, Community Pharmacies, Sexual and Reproductive Health Clinics (SRH) - previously called Family Planning Clinics and, increasingly in non-traditional settings such as youth centres, sports centres, sixth form colleges and record shops.
- In hospital settings: Genitourinary Medicine (GUM) or SRH clinics.
- Many of these services are open access (no referral needed) and treatment for STIs and contraception in hospital and in many community settings is free.
- Termination of Pregnancy clinics also often screen for STIs and offer prophylaxis.
- These services are confidential within the legal framework of child protection and consent and operate according to GMC guidelines (22). Further guidance can be found in the NICE guidelines on reducing STIs and under-18 conceptions (5).
- To find out the location of and opening hours of the nearest GUM / SRH clinic, PHCP and adolescents can access this information on Hospital intranet sites or on www.nhs.uk/livewell/sexandyoungpeople (30).

10.2 Types of tests offered and obtaining results

- Screening tests for gonorrhoea and chlamydia in GUM and SRH clinics are usually non-invasive (do not require a speculum examination or urethral swab)
- They would usually require a urine sample or a self taken vaginal swab
- Results are usually available in 7 working days or less and many clinics offer a results by text service to adolescents and others with their consent
- When symptoms are present, more invasive tests e.g urethral swabs for males and speculum examination for females may be necessary. However these and the need for them will be discussed fully in the clinic. See the BASHH Standards for the management of STIs. 2010 (4).

KEY MESSAGES

- **Screening and treatment for STIs, contraception advice and provision is widely available**
- **Treatment is free in hospital and many community settings**
- **Tests for gonorrhoea and chlamydia are mostly non-invasive and these are widely available**

11.0 Genital Conditions

11.1 Genital infectons including sexually transmitted infections

This is a very brief guide to common genital conditions including STIs to aid discussions with young people in order to inform them about what investigations and treatment to expect. This section aims to inform PHCP about the most common presentations of genital infections which may present in young people.

Infections with gonorrhoea, chlamydia, trichomonas, syphilis, genital wart virus, genital herpes simplex virus are sexually transmitted. Hepatitis A and B can be sexually transmitted. Infections due to candida or bacterial vaginosis are not sexually transmitted. **It is important to remember that most STIs are ASYMPTOMATIC most of the time.** Therefore, diagnosis depends on ascertainment that an adolescent is sexually active and offering appropriate screening investigations whether symptoms are present or not. **(See Appendix 5).** The presentation of STIs in immunocompromised patients may be atypical, associated with more complications, require longer courses of treatment and be resistant to treatment.

The usual screening investigations for STIs in HIV-infected adolescents test for chlamydia, gonorrhoea, trichomonas and syphilis. Screening of asymptomatic sexually active adolescents is vital to diagnose STIs, prevent severe sequelae e.g. subfertility and sexual transmission. More than one STI may coexist and, if screening for any STI or if any STI is diagnosed, it is recommended that no sexual intercourse takes place (even with condoms- in case they break), until the all the test results are known and the index case and partners have been fully treated. As well as screening, testing for, diagnosis and treatment, most STIs require contact tracing of sexual partners to reduce onward transmission or re-infection.

We recommend that, where possible, all adolescents requesting STI screens or who have symptoms or signs suggesting an STI or other genital condition be signposted to the local GUM / SRH service for screening investigation, treatment and contact tracing. If STI tests carried out by PHCP are positive, we recommend onward referral to Sexual health Servcies. **Robust and rapid referral pathways need to be established with local GUM / SRH Services.** See the BASHH National Guidelines on Management of STI in Young People, 2010 (1), the BHIVA, BASHH and FSRH Guidelines on management of the sexual and reproductive health for people living with HIV, 2008 (2) and the BASHH National Guideline on the Sexual Health of People with HIV: STIs, 2006 (3).

KEY MESSAGES

- **Most STIs are ASYMPTOMATIC – so they can only be detected by screening**
- **Screening can reduce the chance of sequelae and sexual transmission**
- **The usual screening investigations for STIs in HIV-infected adolescents test for chlamydia, gonorrhoea, trichomonas and syphilis.**

11.2 Common Presentations of Genital conditions and Causes (See Appendix 5)

ASYMPTOMATIC

- **ALL STIs**
- **Most commonly chlamydia and gonorrhoea in females**

Vaginal Discharge

- Physiological discharge
- Candida – not an STI
- Bacterial vaginosis – not an STI
- Trichomoniasis

Female Pelvic Pain

- This has many gynaecological causes but pelvic inflammatory disease (PID) due to sexually transmitted infection must always be excluded
- PID - Chlamydia or gonorrhoea
- PID – Non-chlamydial and non-gonorrhoeal

Male Urethral Discharge with or without Dysuria

- Chlamydia

- Gonorrhoea
- Non specific urethritis (NSU) / Non-gonococcal urethritis (NGU)

Male Rectal Discharge (MSM)

- Chlamydia including Lymphogranuloma venereum (LGV)
- Gonorrhoea
- Non specific proctitis

Epididymo-orchitis

- Chlamydia
- Gonorrhoea
- Non specific

Genital Ulcer Disease

- Herpes simplex virus
- Syphilis
- Rarely tropical ulcer disease

Genital lumps

- Genital warts
- Molluscum contagiosum

Hepatitis

- Hepatitis A
- Hepatitis B
- Hepatitis C
- Syphilis

Genital infestations

- Pubic lice
- Scabies

11.3 Asymptomatic screening

- **Females** – self taken vaginal swab for chlamydia and gonorrhoea NAAT

- **Males** – Urine for chlamydia and gonorrhoea NAAT
- **All** – Blood for syphilis serology, Hepatitis B and C according to risk assessment

- **If an STI is diagnosed: refer to GUM / SRH for investigation for other STIs, treatment and partner notification**

11.4 Vaginal Discharge

11.4.1 Physiological

- This is a cyclical change in the discharge or noticing a normal discharge as the menses regulate or if a young woman discontinues the contraceptive pill.

11.4.2 Vaginal Discharge due to Candidiasis (*Candida albicans*)

Presents with a thick, white vaginal discharge and is typically associated with vulval itching. It may also be associated with genital redness and swelling.

- Send high vaginal swab for candida microscopy and culture
- If sexually active send self taken vaginal swab or urine for nucleic acid amplification test (NAAT) for both chlamydia AND gonorrhoea or refer to GUM / SRH for this (they may additionally test for trichomonas using microscopy and/or culture)
- Consider referral to GUM / SRH for treatment. (Fluconazole 150mg capsule or Clotrimazole cream with vaginal pessary - 500mg or pessaries 200mg nocte 3 nights)
- Severe recurrent episodes associated with Diabetes mellitus or advanced immunosuppression
- Vaginal candida infection can occur in girls who are not sexually active

11.4.3 Vaginal Discharge due to Bacterial vaginosis

This condition is caused by overgrowth of aerobic and anaerobic bacteria in the vagina which is often associated with frequent genital washing, douching or a new sexual partner. The discharge classically has a fishy odour and is watery, whitish/grey in colour. Bacterial vaginosis is associated with preterm delivery and symptomatic women receive treatment in pregnancy.

- If sexually active send self taken vaginal swab or urine for NAAT test for both chlamydia AND gonorrhoea or refer to GUM / SRH for this
- Refer to GUM / SRH for diagnosis and treatment (Metronidazole)
- Avoid vaginal washing/douching, bubble bath

- Use soap substitutes such as aqueous cream

11.4.4 Vaginal discharge due to Trichomoniasis (*Trichomonas vaginalis*)

Presents with a frothy white or yellow discharge, genital irritation, redness and swelling. Refer to GUM service for microscopy vaginal wet prep

- Send high vaginal swab for trichomonas culture / PCR
- If diagnosis confirmed, refer to GUM / SRH for investigation for other STIs, treatment (Metronidazole) and **partner notification.**
- Usually asymptomatic in males who can still carry the infection and infect female partners
- **Contacts – refer to GUM / SRH**

KEY MESSAGES

- **Candida and bacterial vaginosis are NOT sexually transmitted**
- **Vaginal candida infection can occur in females who are not sexually active especially if HIV positive**

11.5 Female Pelvic Pain

11.5.1 Pelvic inflammatory disease (PID) due to Chlamydia or Gonorrhoea or Non-chlamydial and Non-gonorrhoeal infection

The initial infection with chlamydia, gonorrhoea or other organisms is often asymptomatic. Some time later, as the infection ascends the genital tract, PID presents with lower abdominal pain, irregular periods, intermenstrual bleeding, postcoital bleeding or pain on having sex. Ectopic pregnancy must be excluded. Other differential diagnoses include acute appendicitis, endometriosis, ovarian cysts and urinary tract infections (UTI). The diagnosis is made clinically. There is a low threshold for treatment to prevent sequelae including ectopic pregnancy, chronic pelvic pain and subfertility.

- Pregnancy test to exclude ectopic pregnancy
- MSU to exclude UTI
- Admit if fever
- If acute abdomen surgical opinion required to exclude appendicitis
- Refer to GUM / SRH for examination (Bimanual examination to look for cervical excitation, pelvic pain and masses), investigations (cervical swab), investigations for other STIs, treatment (Cefixime or Ceftriaxone / Ofloxacin / Doxycycline / Metronidazole and analgesia) and **partner notification**

- **Contacts – refer to GUM / SRH**

11.5.2 Dyspareunia

- Pain felt by women on sexual intercourse – this has many causes including genital infections and requires specialist investigation, including GUM / SRH clinic referral.

11.5.3 Post-Coital Bleeding

- This has many causes in females including genital infections and requires specialist investigation, including GUM / SRH clinic referral.

11.6 Male Urethral Discharge

11.6.1 Male urethral discharge due to Chlamydia (*Chlamydia trachomatis*)

In males chlamydia is also often asymptomatic but can cause urethral discharge and dysuria. These symptoms may be caused by other organisms - mycoplasmas and ureaplasmas, which are currently not routinely screened for in most laboratories.

- If diagnosed: refer to GUM / SRH for investigation for other STIs, treatment (Azithromycin) and partner notification
- If symptomatic: refer to GUM / SRH for examination for other STIs, treatment (Azithromycin) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.6.2 Male urethral discharge due to Non-specific urethritis (NSU) / Non-gonococcal urethritis (NGU)

This condition presents with a male urethral discharge with or without dysuria. Pus cells on microscopy of urethral smear but no organisms are found on microscopy, by culture or PCR. Mycoplasma and ureaplasma, which are not screened for routinely in most laboratories, are thought to be a major cause of non-specific urethritis (NSU) in males. Chlamydia is also a cause. NSU is managed as an STI requiring **partner notification**

- If symptomatic urethral discharge : refer to GUM / SRH for examination and testing and , treatment (Azithromycin or Doxycycline) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.6.3 Male urethral discharge due to Gonorrhoea (*Neisseria gonorrhoea*)

In males gonorrhoea is also often asymptomatic but can cause urethral discharge and dysuria.

- If symptomatic: refer to GUM / SRH for investigation for other STIs, gonorrhoea at other sites (throat /rectum), treatment (Cefixime or Ceftriaxone and Azithromycin) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.7 Male Rectal Discharge.

11.7.1 Male rectal discharge due to Chlamydia (*Chlamydia trachomatis*) and Lymphogranuloma venereum

In MSM, chlamydia may be asymptomatic or cause rectal discharge, bleeding and pain due to a variant which causes genital ulceration or severe inflammation - Lymphogranuloma venereum (LGV).

- If symptomatic: refer to GUM / SRH for examination, investigation (rectal swab), investigation for other STIs, treatment (Azithromycin for chlamydia, Doxycycline for LGV) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.7.2 Male rectal discharge due to Gonorrhoea (*Neisseria gonorrhoea*)

Rectal gonorrhoea may be asymptomatic or cause similar symptoms to Chlamydia

- If symptomatic: refer to GUM / SRH for examination, investigation (rectal swab), investigation for other STIs, treatment (Cefixime or Ceftraxone with Azithromycin for chlamydia) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.7.3 Male and Female throat infection due to Gonorrhoea

Gonorrhoea infection in the throat is usually asymptomatic. If suspected due to sexual contact:

- Refer to GUM / SRH for examination, investigation (throat swab), investigation for other STIs, treatment (Ciprofloxacin or alternative depending on drug sensitivities) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.8 Epididymo-orchitis due to Chlamydia or Gonorrhoea

The initial infection is often asymptomatic. Later, as the infection ascends the genital tract, epididymo-orchitis presents with swelling and pain affecting one or both testicles. Important differential diagnoses include testicular torsion and neoplasia.

- Surgical opinion if required to exclude torsion and neoplasia
- Analgesia
- Refer to GUM / SRH for examination, investigations (urine, urethral swab, MSU), investigations for other STIs, treatment (Doxycycline) and **partner notification**
- **Contacts – refer to GUM / SRH**

11.9 Genital Ulcer Disease

All genital ulcers must be investigated for herpes simplex virus and syphilis

11.9.1 Genital herpes (Herpes simplex virus - HSV)

This typically presents with clusters of small vesicles (blisters) which evolve into painful ulcers. However, it may be asymptomatic. Herpes simplex virus type-2 (HSV-2) virus is usually associated with infections in genital sites and is associated with a higher risk of recurrences than Herpes simplex virus type-1 (HSV-1). HSV-1 may be transmitted by oro-genital sex. The primary infection is typically the most symptomatic and painful and may be associated with a flu-like illness and, in severe cases, with urinary retention. HSV with HIV infection may present with more frequent, severe recurrences.

- Give analgesia (oral and topical eg Instillagel^{TM})
- Refer to GUM / SRH for Investigation for HSV, syphilis and other STIs, and treatment (Aciclovir)
- If in urinary retention, may require admission for suprapubic catheterisation and monitoring of renal function
- Recurrences if very frequent can be reduced with Aciclovir prophylaxis

11.6.2 Syphilis (*Treponema pallidum*)

This infection may be asymptomatic or present as genital ulceration, (single or multiple), ulceration at other sites e.g mouth or nose or, a rash with lymphadenopathy during systemic infection. Neurological complications are more common in HIV disease. Early neurosyphilis can present with acute nerve deafness, eye disease e.g uveitis, cranial nerve palsies, memingitis and encephalitis. Later neurological disease presents with, dementia, Argyll Robertson pupils, loss of dorsal column sensation, lightning pains. Late cardiovascular disease with aortic heart valve damage, coronary ostial stenosis and angina and late skin disease with chronic ulcers (gummata) which may occur anywhere in the body. Syphilis can be transmitted by orogenital sex from a mouth ulcer.

- Refer to GUM / SRH for Investigation for Syphilis, HSV and other STIs, treatment (Penicillin based), follow up and **partner notification**

- **Contacts – refer to GUM / SRH**

All adolescents with HIV infection should have a baseline serological assessment for syphilis and annual serological screening when sexually active. If at increased risk for syphilis e.g. MSM with many changes of partner, perform serology every 3-4 months with regular HIV monitoring bloods.

11.10 Genital lumps

11.10.1 Genital warts (Human papilloma virus)

Present as lumps on anogenital skin and vagina, cervix, urethral meatus and anal canal. Warts may be more persistent and extensive in HIV infected individuals.

- Refer to GUM / SRH for diagnosis, investigation for other STIs and treatment (Cryotherapy / Podophyllotoxin / Imiquimod / surgical removal)
- HIV-infected females who are sexually active should ideally have a baseline colposcopy and undergo annual cervical screening , at present whether HPV vaccination has been given or not. **(See 15.0)**

11.10.2 Genital Molluscum contagiosum Pox virus

Spread by skin to skin contact. Presents as pearly umbilicated papules.

- Refer to GUM / SRH for diagnosis and treatment (Cryotherapy)

11.11 Hepatitis viruses

11.11.1 Hepatitis A

This can be sexually transmitted between MSM. The commonest mode of transmission worldwide is faeco-oral, often waterborne infection. Incubation period 15-45 days. Fifty percent of cases asymptomatic. Presents with flu-like illness, jaundice, liver tenderness, pale stools and dark urine. Preventative vaccine is available **(See 14.1)**

- Refer to GUM / SRH for diagnosis and **partner notification**
- **Contacts – refer to GUM / SRH**
- **Notifiable disease** if acute presentation

11.11.2 Hepatitis B

This can be sexually transmitted between MSM. Other common modes of transmission worldwide include sharing blood products and mother to child transmission. Incubation period is 40-160 days. Hepatitis B is asymptomatic in up to 50% of cases, but may present with fatigue, jaundice, liver tenderness, pale stools and dark urine. A chronic carrier state

exists in 20% of those infected worldwide. Sequelae include cirrhosis and hepatocellular carcinoma. A preventative vaccine is available **(See 14.2)**

- Refer to GUM / SRH for diagnosis and **partner notification**
- **Contacts – refer to GUM / SRH**
- **Notifiable disease** if acute presentation

11.11.3 Hepatitis C

This may be sexually transmitted, mainly in MSM. The other common mode of transmission worldwide is sharing blood products. In many cases, the mode of transmission is unknown. Incubation period is 4-20 weeks. Asymptomatic in 60% of cases. Presents with jaundice, liver tenderness, pale stools and dark urine. Chronic carrier state develops in 50-85% of cases. Sequelae include cirrhosis and hepatocellular carcinoma. No preventative vaccine is available.

- Refer to GUM / SRH for diagnosis and **partner notification**
- **Contacts – refer to GUM / SRH**

11.12 Genital infestations

May be transmitted by sharing infested bedding or clothes or by close body contact or sexual contact

11.12.1 Genital pubic Lice (*Phthirus pubis)*

Presents as itching in pubic area and on hairy areas of the body below the scalp. Eggs (nits), attached to hair shafts and lice may be found on examination.

- Treat or refer to GUM / SRH for treatment (Malathion)

11.12.2 Scabies (*Sarcoptes scabiei)*

Present as itching in finger webs, wrist creases and as itchy papules in genital area as Scabies mites burrow into the skin to lay eggs.

- Treat or refer to GUM / SRH for treatment (Malathion)

12.0 Partner notification for STIs

This is the process of trying to ensure that all sexual contacts receive testing and treatment to prevent onward transmission of infections, disease progression and morbidity including damage to fertility. This is important as many infections are asymptomatic but can still cause complications later. Referral to GUM or SRH clinics if the infections listed

below are diagnosed will achieve this. These clinics can also offer help with contact tracing and provider referrals

This applies to all persons with the following STIs:

- Chlamydia, gonorrhoea, (including pelvic inflammatory disease, epididymo-orchitis, Lymphogranuloma venereum), syphilis, trichomonas, HIV, hepatitis B, hepatitis C and hepatitis A in MSM
- This does not apply to herpes simplex virus (HSV), or genital warts (HPV)
- Candida, bacterial vaginosis, molluscum contagiosum and, sometimes, genital infestations are NOT STIs and hence do not require partner notification

13.0 Interaction between HIV transmission and STIs

- Genital ulcer disease (syphilis and HSV) and trichomonas infection theoretically increase the risk of acquiring or transmitting new strains of HIV in those already infected. This is due to localised inflammation resulting in increased local numbers of CD4 cells and macrophages and via breaches in the genital tract epithelium or mucosal surfaces. New HIV strains acquired in this way (superinfection) may be more virulent and resistant to HIV therapy, therefore reducing future treatment options

14.0 Vaccination prior to sexual activity

14.1 Hepatitis A Vaccination

Whilst Hepatitis A disease does not appear to be worse in adults with HIV, Hepatitis A vaccination (HAV) is recommended for at risk groups including travellers to high risk countries (South/Central America, Africa, Asia and Eastern Europe), MSM and drug users. Patients with chronic liver disease, Hepatitis B and C are at risk of complications and should also receive vaccination.

14.2 Hepatitis B Vaccination

Hepatitis B vaccination (HBV) in childhood is not currently offered in the UK. HIV positive adults have an increased risk of HBV infection, persistent HBV viraemia and higher rates of progression to cirrhosis, hepatocellular carcinoma and death. HBV vaccination in HIV infected individuals significantly reduces the risk of HBV infection. However reduced response rates to vaccination, lower Hepatitis B Surface antibody (HBsAb) levels and

durability are seen in HIV positive individuals when compared to healthy individuals, related partially to CD4 levels.

Vaccination schedules should follow national guidelines. HBsAb titres should be measured at least six weeks after vaccination via standard (0, 1 and 6 months) or rapid (0,1,2 and 12 month) schedules. Revaccination of non-responders should be considered and those with a poor response (HBsAb <100IU/L) and may receive an additional single vaccine dose. The duration of protective immunity following vaccination is uncertain in this population and HBsAb titres should be measured annually and boosters offered when levels fall below 100 IU/L. See the BHIVA Guidelines for immunisation of HIV-infected adults, 2008 (31).

14.3 Human papilloma virus (HPV) Vaccination

Infection with HPV occurs shortly after sexual debut and is associated with number of sexual partners, and is reduced, but not eliminated by condom use. Most infections are asymptomatic and self limiting, persistent infection is associated with anogenital and oral cancers and genital warts. HPV viral strains can be classified as 'high-risk' or 'low-risk' types depending on their oncogenic potential. Persistent infection with high-risk types is found in 99% of cervical cancers, with up to 70% attributable to types 16 and 18. In genital warts 90% are attributed to HPV types 6 and 11. Adults living with sexually acquired HIV infection are at increased risk of anogential cancers and genital warts associated with persistent HPV infection.

Two recombinant virus-like particle (VLP) HPV vaccines are licensed:

Cervarix® : Bivalent vaccine against HPV types 16 and 18- protection against anogenital cancers.

Gardasil® : Quadrivalent vaccine against HPV types 6, 11, 16 and 18- protection against anogenital cancers and genital warts.

Both vaccines require 3 doses and can be given at the same time as HBV vaccination (0, 1 and 2 months).

Currently, girls with HIV infection receive bivalent HPV vaccination as part of the English national vaccination programme. A common sense approach, noting that evidence in this population is lacking, would be to recommend the quadrivalent vaccine for both boys and girls with perinatal HIV infection due to their increased risk of HPV-associated disease. All

HIV infected girls who are sexually active should still undergo annual cervical screening despite HPV vaccination as only high risk serotypes 16 and 18 are covered in the vaccine. PHCP should therefore refer all HIV-infected adolescents to the sexual health clinic to discuss vaccination options if they have not been offered this as part of routine prevention programmes. Regarding vaccination for boys (currently not available from General Practitioners however may be available by private prescription), as HPV vaccination has not yet been fully researched in this group Sexual Health teams will consider each case on its own merits, in the light of evidence as it becomes available.

15.0 Cervical screening

The National Cervical screening programme commences at 3 yearly intervals from the age of 25. Screening at a younger age in the general population is not recommended due to the high rates of low grade abnormalities that spontaneously resolve and low rates of cervical cancer below this age. Due to the increased risk of cervical carcinoma and pre-invasive lesions of the cervix in women with horizontally acquired HIV infection annual cervical smears are recommended. Whilst data is sparse in the evolving cohort of young women with perinatally-acquired HIV, an early study from the USA suggests high levels of pre-invasive lesions in this population that are persistent despite treatment (32). Therefore, at present ,it would seem prudent to begin annual cervical screening when a young woman with HIV becomes sexually active with a baseline colposcopy if resources permit. See the BHIVA Guidelines for the Management of the sexual and reproductive health of people living with HIV, 2008 (2).

KEY MESSAGES

- **Hepatitis A, Hepatitis B and some serotypes of genital HPV (wart) infection are preventable by vaccine**

16.0 Reproductive Health

16.1 Fertility

16.1.1 Female

- Females with HIV infection may have reduced fertility due to repeated infections with chlamydia or gonorrhoea or, as a result of reduced ovarian reserve (33).
- Females who have not conceived within 6-12 months of self insemination should be referred for fertility evaluation.

16.1.2 Male

- There is little published evidence on the direct effect of HIV on the semen quality of infected males.
- Optimising HIV treatment to improve CD4 count in this group may be important but other causes of subfertility should also be excluded. See NICE Guidance on Fertility 2004 (34).

16.2 Conception

- In the UK, the risk of mother to child transmission (MTCT) of HIV can be reduced to <1% in women who are tested and therefore aware of their status prior to pregnancy or early in pregnancy and are able to access and employ appropriate interventions to reduce transmission. This is still important as, in 2009, 2.2/1,000 pregnant women were infected with HIV (HPA 2010) (13) and, in 2009 74 children were diagnosed with HIV in the UK, 22% of whom were UK-born. The estimated proportion of exposed infants (born to both diagnosed and undiagnosed HIV-infected women) who became infected has decreased from 12% in 1999 to 2% in 2008. All adolescents considering future pregnancies should be referred to a specialist HIV centre to discuss safe conception, whether their partner is HIV infected or not, to reduce transmission to their partner and baby.
- Options available for sero-discordant couples to conceive include both natural and assisted conception methods. These include insemination with donor or HIV-uninfected partner sperm and sperm washing.

16.3 Pregnancy and HIV

Interventions to reduce MTCT include HAART during pregnancy, caesarean section, short-term HAART for the baby post partum and, in the UK, not breastfeeding.

- All pregnant adolescents with HIV should be managed in a Specialist HIV Antenatal and Obstetric service as well as receiving routine care from their regular HIV physician.
- See the BHIVA guidelines on the Management of HIV infection in pregnant women 2008 (35).

16.4 Unwanted Pregnancy

- To discuss options, adolescents should be referred to local GUM, RSH or GP services. A variety of services are available from other agencies such as the BPAS,

Central Booking for TOP. Future contraception should be discussed and plans made for contraceptive provision post TOP.

16.5 Emergency Contraception

- If using Levonelle 1500mcg, prescribe 3000mcg stat PO if on HAART or any other drug regime which contains an enzyme inducer e.g. Efavirenz, Rifampicin. This is outside the product license and should be documented in the patient's notes.
- Levonelle can be used within 72hrs of unprotected sex within the product license or within 5 days of unprotected sex off-license.
- An emergency IUD has greater efficacy than Levonelle and is the preferred option. This can be used up to 5 days after the earliest expected date of ovulation **(See Appendix 7)**.

16.6 Contraception, including long acting reversible contraception (LARC)

- All adolescents considered for contraception must routinely have an appropriate medical and sexual history taken and should be advised to undergo screening for STIs if sexually active.
- All available contraceptive methods are suitable, and should be discussed, if adolescents are not taking HAART
- Encourage consistent condom use in males and females, together with additional contraceptive methods in women. When condoms are used perfectly, they prevent 98% of pregnancies. In practice with typical use, a failure rate of 15-21% is anticipated (36). However, although condoms do not completely prevent pregnancy, they do provide significant protection against the transmission of STIs (37) and HIV (38, 39).
- Condom use must be continued even if hormonal contraception is being used as well in order to prevent co-infection with other STIs and superinfection with new HIV strains.
- Condom demonstration. Education on proper use is more important than the thickness of the condom. Most condom failures are due to improper or non-use.
- The spermicide Nonoxinol-9 irritates vaginal mucosa and can increase the risk of transmission of HIV. This should therefore not be used with condoms or other barrier methods.
- There are no known adverse interactions between HAART and Depo provera, the intrauterine system (IUS) and intrauterine devices (IUDs). There is a risk of lower

bone mineral density with prolonged Depo Provera use therefore close monitoring may be prudent with Tenofovir-containing HAART regimens. See FPA leaflets (40).

16.7 Drug interactions between HAART, STI treatment and Contraception

- For the latest data check the HIV Drug Interactions website www.hivdruginteractions.org (41) and the SPC of individual ARVs.
- Emergency Contraception **(See 16.4)**
- If on HAART or other liver enzyme inducing drugs e.g. Efavirenz or Rifampicin, the efficacy of the Combined oral contraceptive pill (COCP), Contraceptive Ortho Evra patch, the Progesterone only pill (POP) and Progesterone implants may be reduced. Adolescents should be referred to a specialist contraception or HIV Gynaecology clinic for advice as to whether HAART can be switched or an alternative form of contraception used. Condom use must be continued. New data suggests boosted Atazanavir can be used with COCPs containing 30mcg ethinyloestradiol and norgestimate eg Cilest (42).
- If not on HAART and using hormonal contraceptives, give advice about potential interactions and reduced efficacy of hormonal contraceptives with other liver enzyme inducing medication . Follow the guidelines set out in the FPA Leaflets (40) and the BNF (43) regarding use of extra contraception during and for 7 days after antibiotic use and when avoidance of a break in the current contraceptive pill cycle is recommended. Refer to GUM / SRH service for advice if required.
- Further guidance can be found in the BHIVA Guidelines for the management of the sexual and reproductive health of people living with HIV infection 2008 (2), the FSRH Clinical Effectiveness Unit Guidance on UK Medical Eligibility Criteria for contraceptive use, 2006 (44) and the NICE Guidelines on Fertility, 2004 (34).

KEY MESSAGES

- **In the UK transmission of HIV from mother to child can be reduced to <1%**
- **Manage all pregnant adolescents in a Specialist HIV Antenatal service**
- **If on HAART and prescribing emergency contraception use Levonelle 3000mcg stat PO**
- **Always offer a screen for STIs if unprotected sex is reported**
- **Nonoxinol-9 spermicide can increase the risk of transmission of HIV**
- **HAART does not affect the contraceptive efficacy of and Depo provera, IUS and IUDs**

- **If on HAART or liver enzyme inducing drugs e.g. Efavirenz or Rifampicin, the efficacy of COCP, Contraceptive Ortho Evra patch, POP and Progesterone implants may be reduced**
- **If on HAART, give advice about potential drug interactions**

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18.0 Other useful Guidance

- GMC General Medical Council – Confidentiality Matters (2008)
- GMC General Medical Council – Good Medical Practice (2007)
- GMC General Medical Council – Consent: Doctors and Patients making Decisions together (2008)
- London Safeguarding Children Board. London Child Protection Procedures. 3Rd Edition 2007. www.londonscb.gov.uk/procedures
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18.1 Useful agencies, links and Sources of Information for adolescents, parents, carers, and PHCP

- AIDS and HIV Information www.avert.org
- Body and Soul HIV / AIDS Charity London UK www.bodyandsoulcharity.org
- British Association for Sexual Health and HIV (BASHH) www.bashh.org
- British HIV Association (BHIVA) www.bhiva.org
- British National Formulary www.bnf.org
- Brook Advisory Centres www.brook.org.uk
- Children's HIV Association (CHIVA) www.chiva.org.uk
- CHIPS - Collaborative HIV Paediatrics Study www.CHIPScohort.ac.uk
- Every Child Matters www.everychildmatters.gov.uk/resources-and-practice/IG00200
- Faculty of Sexual and Reproductive Healthcare (FRSH) www.fsrh.org
- Family Planning Association (FPA) Leaflets on contraception methods for young people fpadirect@fpa.org.uk
- GMC Guidelines publications@gmc-uk.org
- GUM / SRH clinic locations in UK www.nhs.uk/livewell/sexandyoungpeople
- Health Protection Agency. STIs Annual Data. www.hpa.org.uk
- HIV Drug interactions website www.hivdruginteractions.org
- HIV Young Person's Network (HYPNET) www.hypnet.org.uk
- London Safeguarding Children Board www.londonscb.gov.uk/procedures
- National AIDS Trust www.nat.org.uk

- NATSAL – National Survey of Sexual Attitudes and Lifestyles www.ucl.ac.uk/sexual-health/research/sex-attitudes.htm
- National Children's Bureau www.ncb.org.uk/hiv
- National Institute for Health and Clinical Excellence (NICE) Guidelines www.nice.org.uk/guidance/
- NSHPC - National Study of HIV in Pregnancy and Childhood nshpc@ich.ucl.ac.uk
- Positive Parenting and Children www.ppclondon.org.uk
- Terrence Higgins Trust www.tht.org.uk
- Trust for the Study of Adolescence (TSA) is now called Young People in Focus info@youngpeopleinfocus.org.uk

18.2 Training Courses in Sexual Health

- STI Foundation (STIF) courses run locally by BASHH see www.bashh.org
- E- Learning for Health. E-lfh.org.uk . e HIV-STI and e-SRH modules

19.0 Sexual development and relationship references

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20.0 Appendices Index