

2022-2025

Polciy Owner: Family Health Unit





CONTENTS

CONTENTS	2
ACKNOWLEDGEMENT	3
1.0 POLICY OBJECTIVES	4
1.1 GOAL	4
1.2 AIM	4
1.3 PURPOSE	4
1.4 OBJECTIVES	4
1.5 SCOPE	4
2.0 POLICY STATEMENT	
3.0 BACKGROUND	
4.0 DEFINITIONS/ACRONYMS	9
5.0 RELEVANT LEGISLATIONS & AUTHORITIES	1
6.0 POLICY IN THE HEALTH SYSTEM	12
6.1 LEADERSHIP/GOVERNANCE	12
6.2 FINANCING	13
6.3 WORKFORCE/HUMAN RESOURCES	13
6.4 MEDICAL PRODUCTS/TECHNOLOGIES	13
6.5 HEALTH INFORMATION SYSTEM	13
6.6 SERVICE DELIVERY	13
7.0 IMPLEMENTATION PLAN	1:
7.1 PREVENTION OF HIV, SYPHILIS AND HEPATITIS B ACQUISITION AMONG WOMEN OF CHILDBEARING AGE (the woman is negative – the partner may or may not be positive)	
7.2 PREGNANCY IN WOMEN INFECTED WITH HIV, SYPHILIS AND HEPATITIS B (the woman positive - may or may not desire Pregnancy)	
7.3 PREVENT TRANSMISSION OF HIV, SYPHILIS AND HEPATITIS B FROM INFECTED WON TO THEIR CHILDREN (the positive pregnant woman – and the baby)	
7.4 PROVIDE CARE FOR HIV, SYPHILIS AND HEPATITIS B-INFECTED MOTHERS, THEIR INFANTS AND FAMILIES (continuum of care)	2
7.5 MONITORING AND EVALUATION	23
8.0 EFFECTIVE DATE	20
9.0 REVIEW DATE	20
10.0 KEY SEARCH WORDS	20
11.0 APPROVED BY:	20
ANNEX 1: HIV Care Teams	2
ANNEX 2: HIV, Syphilis and Hepatitis B Screening, Treatment and Vaccination Services offered during Antenatal, Delivery, Postnatal Care and Well-child Visits.	28
REFERENCES	

ACKNOWLEDGEMENT

The Ministry of Health and Medical Services would like to acknowledge the following for their tremendous contributions towards the completion and implementation of the Policy for the Prevention of Parent to Child Transmission of HIV, Syphilis and Hepatitis B.

HE. Ratu Epeli Nailatikau UNAIDS Pacific Goodwill Ambassador

Dr. Rachel Pillay Head of Family Health
Dr. Torika Tamani Former Head of Family Health

Dr. Torika Tamani Former Head of Family Health
Dr. Dashika Balak Medical Officer In-charge SRH

Dr. Dashika Balak Medical Officer In-charge SRH clinic, Suva
Dr. Lavenia Gaunavinaka Medical Officer In-charge SRH clinic, Lautoka

Dr. Mere Sigawale Medical Officer SRH clinic, Lautoka
Dr. Waisale Turuva Medical Officer In-charge SRH clinic, Labasa

Dr. Jenni Singh Medical Officer SRH clinic, Suva

Dr. Saiasi Caginidaveta Obstetrics and Gynaecology, Labasa hospital
Dr. Eparama Amoe Obstetrics and Gynaecology, CWMH

Dr. Vasitia Cati Obstetrics and Gynaecology, Lautoka hospital

Dr. Raape Diege Paediatric, Labasa hospital
Dr. Priya Kaur Paediatric, CWMH
Dr. Amelita Mejia Paediatric, CWMH

Dr. Asena Tuiketei Paediatric, Lautoka hospital Mr. Joeli Colati , National HIV Program Officer

Furthermore, a special appreciation is extended to Dr. Dennie Iniakwala WHO Pacific Representative and Ms. Renata Ram, UNAIDS Pacific Representative, for their invaluable contribution and support in scaling up STI and HIV care in Fiji.

Further appreciation goes to the team that assisted in finalising the Policy: Obstetrics and Gynaecology Consultants, Paediatric Consultants, SDMOs, DMOs and SRH clinic nurses from the respective divisions.

The National SRHR Program gratefully acknowledges the financial support from WHO that facilitated the editing and printing of the guidelines.

1.0 POLICY OBJECTIVES

1.1 GOAL

All children are born free of HIV, Syphilis and Hepatitis B in Fiji.

1.2 AIM

To prevent, detect and manage holistically and effectively HIV, Syphilis and Hepatitis B in pregnancy and puerperium, and to climinate HIV, Syphilis and Hepatitis B in newborns.

1.3 PURPOSE

This Policy aims to provide a programmatic approach to delivering specialised, standardised, and focused management of HIV, Syphilis and Hepatitis B in pregnant women to ensure the elimination of HIV, Syphilis and Hepatitis B transmission to newborn children.

1.4 OBJECTIVES

- To ensure due attention is given to strengthening primary prevention services (including treatment such as prophylaxis and immunisations), screening, counselling, behaviour change communications and management of sexually transmitted infections (STIs). This will reduce the risk of HIV, Syphilis and Hepatitis B transmission among women of childbearing age.
- To recognise the reproductive choices a woman may need to make when diagnosed with HIV, Syphilis and Hepatitis B, and to guide means to facilitate fulfilling the women's reproductive and health needs.
- For women living with HIV and Hepatitis B, their reproductive health choices require providers to consider appropriate management and strategies to achieve the safe delivery of HIV and Hepatitis B-negative newborns by:
 - > Improving laboratory infrastructure and services
 - > Provision of Antiretroviral Therapy (ART), HBV immunisation, and immunoglobulin
 - > Linkage to service and care
 - Retention in care
 - > Human resource development
- To ensure proper diagnosis, treatment, monitoring, and follow-up is provided for all women (and partners) and children infected with syphilis.
- Provision of care, treatment and support to infants born with HIV and Hepatitis B, and their families
- 6. Strengthening community-based approaches that increase clinical follow-up, client adherence and retention, raising awareness of gender and social norms that will contribute to the acceptance of women and children living with HIV and Hepatitis B, with a strong emphasis on male involvement in PPTCT

1.5 SCOPE

This Policy is intended for use by all healthcare professionals providing maternal, sexual, and reproductive health services to women of childbearing age, particularly pregnant women, their partners and children.

2.0 POLICY STATEMENT

Statement 1	Prevent primary HIV, Syphilis and Hepatitis B infections in women of childbearing age.
Statement 2	Prevent unintended pregnancies among HIV, Syphilis, and Hepatitis B-infected women.
Statement 3	Prevent transmission of HIV, Syphilis and Hepatitis B from infected women to their children and partners.
Statement 4	Provide treatment and care for HIV, Syphilis and Hepatitis B-infected mothers, their children, and families.

3.0 BACKGROUND

HIV

HIV can be transmitted from an HIV-positive woman to her child during Pregnancy, childbirth, and breastfeeding, MCTC) also known as vertical transmission, accounts for the vast majority of infections in children. Without prophylactic treatment, approximately 15–30% of infants born to HIV-positive women will become infected with HIV during Pregnancy and delivery, with a further 5–15% becoming infected through breastfeeding, However, ART and other interventions can reduce this risk to below 5%.

In 2021, around 14,000 children were newly infected with HIV in the Asia Pacific region. About 140,000 children died due to AIDS in the region, with only 49% of pregnant women having access to antiretroviral treatment (. Antiretroviral treatment reduces mother-to-child transmission and restores health, including fertility for people living with HIV, both as a biological process and an option. Most people on ART can resume socially productive and sexually active lives that involve protected and unprotected sex with or without the desire for children.

Preventing HIV infection in all women, particularly those pregnant or breastfeeding, is the most efficient way to avoid infant transmission. Keeping a woman HIV-negative before and throughout her Pregnancy and during breastfeeding protects her infants and children from becoming HIV-infected by eliminating the possibility of HIV transmission from the mother during Pregnancy and the breastfeeding period.

In Fiji, most females with HIV were diagnosed through antenatal clinics, demonstrating the importance of HIV screening amongst pregnant women. Once tested positive, women are counselled to have their partners tested for HIV. Mother-to-Child Transmission (MTCT) of HIV in Fiji is found to be common amongst pregnant women who are diagnosed late in pregnancy, unbooked cases, or not adherent to ART.

In Fiji, an estimated 113 children have been diagnosed with HIV till 2022, of which only 52 are alive. There were AIDS-related death in children in 2022. There were 14 newly diagnosed children in 2022 and all were mother-to-child transmission. ART coverage in children living with HIV is 80%.

All women, including those living with HIV, have the right "to decide freely and responsibly on the number and spacing of their children. Access to the necessary reproductive health information empowers women to exercise their rights appropriately. Improved access to sexual and reproductive health allows women, including those living with HIV better control their reproductive lives, offering safe fertility options with contributions to public health benefits from improved maternal and infant well-being.

The benefits of family planning are far-reaching. Meeting the unmet needs for contraception offers benefits related to preventing early first births, spacing, reducing infant and maternal mortality, and preventing unintended pregnancies. Meeting the contraceptive needs of women of reproductive age living with HIV with reduced illegal and unsafe abortions, the number of HIV-positive births and HIV-related deaths. They ultimately contribute to better health, education, and economic and societal outcomes for families.

Factors that influence and determine the desire of women living with HIV to conceive are multiple and complex. They include age, marital, educational and socioeconomic status, cultural and religious beliefs, sexual behaviour, family size and losses, access to family planning services, and providers' beliefs and attitudes

Ending the AIDS epidemic is more than a historic obligation to the 39 million people who have died. Ending the AIDS epidemic will inspire broader global health and development efforts, demonstrating what can be achieved through international solidarity, evidence-based action and multisectoral partnerships.

Syphilis

Syphilis, a sexually transmitted bacterial infection, affects almost 40 million people worldwide, and WHO estimates that every year 930,000 pregnant women have probable active syphilis. Like HIV, it can be passed from a pregnant woman to her unborn child, especially in the early stages of the disease when the infection is more likely asymptomatic. If untreated during Pregnancy, syphilis can result in adverse birth outcomes, including early foetal loss, stillbirth, prematurity, low birth weight, neonatal and infant death and syphilis in the newborn.

In 2012, an estimated 350,000 adverse pregnancy outcomes worldwide were attributed to syphilis, including 143,000 early foetal deaths/stillbirths, 62,000 neonatal deaths, 44,000 preterm/low-birth-weight babies and 102,000 infected infants. In Fiji, congenital syphilis has declined from 235/100,000 live births in 2014 to 87.9/100,000 in 2015 (WHO Global Health Observatory Data, 2018/03/06). Active syphilis for adults in Fiji remains high, with a prevalence estimated to be 3.89% in 2017.

Early diagnosis and treatment of syphilis during pregnancy effectively prevent most consequences to the foetus, including congenital syphilis. Testing pregnant women and their partners for syphilis also supports the primary prevention of HIV infection, as active syphilis can increase the risk of transmitting and acquiring HIV. WHO guidance, as part of the global plan for the elimination of mother-to-child transmission of syphilis, recommends that 95% of pregnant women who receive antenatal care should be tested for syphilis, and 95% of those women diagnosed should be treated.

Hepatitis B

In 2015, WHO estimated that 257 million people were living with chronic Hepatitis B infection globally, and 900,000 deaths occurred from HBV infection, mainly through the development of cirrhosis and hepatocellular carcinoma. Most individuals with chronic hepatitis B infection and associated deaths in adulthood acquired their infection at birth through mother-to-child perinatal transmission or in early childhood. Therefore, prevention of perinatal and early childhood transmission of HBV is critical to reducing chronic diseases that result in morbidity and mortality. This can be achieved through immunisation against hepatitis B, birth-dose immunisation, and other interventions to prevent mother-to-child transmission of HBV. In May 2016, the World Health Assembly endorsed the Global Health Sector Strategy on viral hepatitis 2016-2021, which calls for eliminating viral hepatitis as a public health threat by 2030 (90% reduction in incidence and 65% reduction in mortality).

A worldwide systematic review of chronic hepatitis B prevalence published in 2015 estimated the HBsAg prevalence in Fiji from 1965-2013 as 4.8%, with a resulting estimate of approximately 41,000 people living with hepatitis B in Fiji. Global modelling led by the Centre for Disease Analysis (CDA) and published in 2018 (5) applied the 2% population prevalence figure for Fiji from the 2008-2009 serosurvey published in 2015 (6) to estimate that 18,000 people were living with hepatitis B in Fiji in 2016. Of these, 380 (2%) were estimated to have been diagnosed, and 3% were estimated to be receiving antiviral treatment.

The rate of liver cancer in Fiji is high, as is the case in other Pacific countries. A 2011 study of cancer incidence in the Pacific found that the age-standardised incidence of liver cancer in Fiji per 100,000 population was 4.7 for females and 11.7 for males. Analysis of estimates for Fiji from the Global Burden

of Disease project mortality results for 2013 suggest 123 deaths were attributable to viral hepatitis, representing 1.6% of all-cause mortality in Fiji for that year – substantially more significant than the combined mortality attributable to HIV and TB. Chronic viral hepatitis was estimated to cause 80% of liver cancer deaths and 75% of cirrhosis deaths. A separate analysis undertaken by the CDA in support of the development of the Fiji National Hepatitis Action Plan suggested that of all the Fijians living with hepatitis B, 1079 would have cirrhosis, 78 decompensated cirrhosis, and 82 hepatocellular carcinomas (HCC). Transmission of hepatitis B has been predominantly mother to child and early childhood, but other potential mechanisms for transmission exist, including sexual transmission. Screening for hepatitis B is undertaken in blood donors, pregnant women, and patients at Sexual Reproductive Health (SRH) clinics.

The global minimum elimination of mother-to-child transmission impact targets are:

HIV	<50 new paediatric infections per 100,000 live births			
	Mother-to-child transmission rate of <5% (breastfeeding populations) or <2% (non-breastfeeding populations)			
Hepatitis B	$\leq \!\! 0.1$ % prevalence of the Hepatitis B surface antigen (HBsAg) among children ($\leq \! 100$ cases per 100,000 live births)			
Syphilis	≤50 cases of congenital syphilis per 100,000 live births			

In 2017, it was reported that 11 countries or territories had achieved validation for EMTCT for HIV, Syphilis and Hepatitis B, providing strong evidence suggesting that PPTCT works when done well.

4.0 DEFINITIONS/ACRONYMS

4.1 DEFINITIONS

Counselling: Counselling is the interaction between a counsellor (helper) and another person or persons to whom the counsellor offers the time, attention, and respect to explore, discover, and clarify ways of dealing with a problem. In the context of HIV and AIDS, a confidential dialogue between a client (or patient) and a counsellor (health care worker) is aimed at enabling the client to cope with stress and make personal decisions related to HIV.

Sero-discordant partners: Where one patient can be HIV positive and his/her partner is HIV negative. A couple refers to two people in an ongoing sexual relationship; each is referred to as a partner in the relationship. How individuals define their relationships will vary according to their cultural and social context

ART: refers to using a combination of three or more ARV drugs to treat HIV infection. ART involves lifelong treatment. Synonyms are combination ART and highly active ART.

Opt-Out: Choosing not to participate in HIV testing.

Prevention of mother-to-child transmission of HIV: The use of ARV drugs to prevent the transmission of HIV from the mother during Pregnancy and breastfeeding. Previous WHO guidelines have used the terms "options A, B and B+" to refer to different approaches to preventing the mother-to-child transmission of HIV.

Provider Initiated Counselling and Testing: The client receives information about HIV testing in a group or individually. The client is also allowed to ask questions, and the healthcare provider ensures that the client understands HIV testing in the context of PPTCT. Unless the client declines, the client is asked to sign a consent form and an HIV test is performed.

Point-of-care testing: HIV/Syphilis/Hepatitis B testing is conducted at or near the site where care is provided. The test results are usually returned rapidly so clinical decisions can be made promptly and cost-effectively.

Prophylaxis: A measure taken for the prevention of a disease or condition.

Pre-test information: Lengthy and intensive pre-test counselling and individual risk assessment is not advised, as they may create barriers to service delivery and require significant healthcare worker time and resources, often with minimal benefit to clients. Pre-test information, which replaces pre-test counselling, can be provided through individual or group-based information sessions and IEC materials such as posters, brochures and short video clips in the waiting rooms, clinics or during outreach sessions.

Post-Test Counselling: The client receives counselling after the blood test and gets counselling done when receiving the results for HIV. Post-test counselling is done regardless of HIV Status.

Rapid diagnostic test: In vitro immunochromatographic or immune-filtration diagnostic test for detecting HIV-1 and -2 antibodies and/or HIV p24 antigen, syphilis (Treponema Pallidum) antibodies, and Hepatitis B surface antigen (HBsAg).

4.2 ACRONYMS

ART Antiretroviral Therapy
CSO Civil Society Organization

EMTCT Elimination of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B

HBV Hepatitis B Virus

HIV Human Immunodeficiency Virus

HTS HIV Testing Services

IEC Information, Education and Communication

MTCT Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B

NGO Non-Government Organization
OBGYN Obstetrics and Gynaecology

PICT Provider-Initiated Counselling and Testing

PMTCT Prevention of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B
PPTCT Prevention of Parent-to-Child Transmission of HIV, Syphilis and Hepatitis B

STI Sexually Transmitted Infection

UNAIDS Joint United Nations Programme on HIV/AIDS

WHO World Health Organization

5.0 RELEVANT LEGISLATIONS & AUTHORITIES

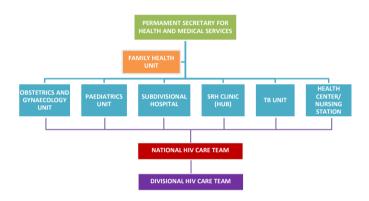
The following legislations, guidelines and key policy documents guide the PPTCT policy document:

- 1. Fiji Constitution 2013
- 2. Fiji HIV/AIDS Act 2011
- 3. Child Welfare Act 2016
- 4. Public Health Act (Health Protection Bill in formulation)
- 5. Crimes Act 2010
- 6. Occupational Health & Safety Act
- 7. Comprehensive Management Guideline for Sexually Transmitted Infections (3rd Edition) 2022
- 8. HIV Care and Antiretroviral Therapy Guideline (3rd Edition) 2022
- 9. Fiji Hepatitis B Care and Management Guideline (2nd Edition) 2022
- 10. Newborn and Infant Feeding Policy 2019
- 11. Fiji Medicinal Products Policy
- 12. National Gender Policy 2013
- 13. Infection Control Policy

6.0 POLICY IN THE HEALTH SYSTEM

6.1 LEADERSHIP/GOVERNANCE

The Ministry of Health and Medical Services is mandated to deliver HIV, Syphilis, and Hepatitis B prevention, control, and continuum of care services for all Fijians, including elimination for children born to parents or women infected.



The HIV Care Team

The HIV Care team will take on the governance role, under the guidance of the Head of the Family Health Unit, ensuring that the services of PPTCT for HIV, Syphilis and Hepatitis B are made available to all parents and women in Fiji regardless of geographical location, ethnicity, religion or age. The HIV care team coordinates the continuum of preventative and clinical health activities, facilitating linkages of the Person Living with HIV (PLHIV) to other services. The details of the National and Divisional Care Teams are further highlighted in **Annex 1**.

The roles and functions of the HIV care team include:

- Coordinate and facilitate HIV services to benefit people infected and affected by HIV from diagnosis, treatment, and long-term chronic care.
- Act as advocates for ART treatment adherence, follow-up, and strengthen initiatives for contact notification, testing, prevention awareness and wellness promotion.
- 3. Ensure processes and procedures are in place for HIV surveillance.

- Meet regularly to ensure that service delivery for PPTCT is rolled out well and service is maintained in Fiji.
- Develop and maintain an updated PPTCT policy, procedure manual, training package, and training Plan for Fiii.

6.2 FINANCING

The budget required for the PPTCT program will be sourced from the annual operating budget through the HIV Allocation within the Family Health Unit in the Ministry of Health and Medical Services.

The MHMS annually allocates a budget for HIV and STI activities managed by the Head of Family Health in consultation with the heads of the clinical services network for Obstetrics and Gynaecology, Paediatrics teams and the respective HIV Care Teams.

6.3 WORKFORCE/HUMAN RESOURCES

The Ministry of Health and Medical Services, through the HIV care team, will ensure that officers providing HIV, STIs and Hepatitis B services in Fiji are professionally trained and continue to undergo capacity-building programmes to ensure competency to practice.

6.4 MEDICAL PRODUCTS/TECHNOLOGIES

The Ministry of Health and Medical Services will ensure that preventative commodities, medicines, consumables, and equipment, including all relevant laboratory and pharmaceutical support, are available to provide HIV. STIs and Hepatitis B care services in Fiji.

6.5 HEALTH INFORMATION SYSTEM

The MHMS will work towards implementing a robust and coordinated system for gathering and electronically reporting PPTCT activities and indicators. The System will support a cohesive and collaborative data management approach within and outside the MHMS. The available data must be evaluated for policy review and decision-making in prevention, treatment and care activities aiming towards EMTCT.

The MHMS affirms that the Official Secrets Act, including the HIV Act and any other relevant Acts of the Government of Fiji, cover all the information that will be collected. This Policy intentionally protects the privacy of individuals and the confidentiality of their data and does not apply to aggregated statistics available in the public domain.

6.6 SERVICE DELIVERY

The PPTCT services ensure that HIV, Syphilis, and Hepatitis B transmission is halted from the mother to the child during Pregnancy, delivery and after birth via breastfeeding. Therefore, this service is provided to the mother, her partner(s) and the newborn.

All first bookings in Fiji should include testing HIV, Syphilis and Hepatitis B apart from the routine laboratory, radiological and examination. Where possible, the MHMS needs to explore the possibility of point-of-care testing of these tests at service delivery points.

Once a pregnant woman is diagnosed positive at any health facility, including private clinics and hospitals (birthing units), she needs to be referred to either the subdivisional (which provides PPTCT services) or the divisional hospital. She will be enrolled in the PPTCT program at the Antenatal Clinic (ANC). The obstetricians will look after the mother, paediatricians, the newborn, and the woman's partner(s) and must be referred to the SRH clinics for follow-up. The list of PPTCT service providers can be confirmed through the SRH Clinics, as this will be a developing space.

After delivery, the woman will be followed at the SRH clinic, and if her partner(s) is also positive, they will continue their follow-ups at the SRH clinics. If the newborn becomes positive, they will be followed up by the paediatricians

When an individual or family opts to be seen by a private practitioner, the divisional SRH clinics will support all necessary prevention, treatment and care needed for individuals. In this instance, all the required medications and routine CD4 and Viral Load tests can be provided by the MHMS.

7.0 IMPLEMENTATION PLAN

7.1 PREVENTION OF HIV, SYPHILIS AND HEPATITIS B ACQUISITION AMONG WOMEN OF CHILDBEARING AGE (the woman is negative –

the partner may or may not be positive)

A) Implementing Behaviour Change Interventions for HIV, Syphilis and Hepatitis B Prevention Targeting Women of Childbearing Age

The Ministry of Health and Medical Services will provide preventative and risk reduction education through planned awareness, advocacy, and Counselling programs targeting multiple levels such as individuals, couples, families, peer groups or networks, institutions, and entire communities.

The development of Risk Communications and Community Engagement, including Social Behaviour Change for HIV and STIs (Syphilis, Hepatitis B and other STIs) prevention, will be made available at all public and private health facilities and partnering civil society and non-government organisations.

A standard package for HIV, STIs (Syphilis, Hepatitis B and other STIs) preventative education will be used, which will include:

- i. Condom use education and promotion of their correct and consistent use.
- ii. Provision of male condoms with lubricants and female condoms.
- iii. Support for disclosure of HIV-positive status to family members and the community.
- iv. Partner referral for testing and counselling.
- Counselling for couples to reduce the risk of transmission between a serodiscordant couple.
- vi. Provision of safe, voluntary male medical circumcision services.
- vii. Provision of ARVs to stop further transmission.
- Provision of Hepatitis B immunisation within 24 hours of birth must be followed by 3 doses
 (6, 10 and 14 weeks) to complete the primary series.
- ix. Provision of Hepatitis B immunoglobulin (if available) for infants born to Hepatitis B positive mothers (especially if HBeAg positive or with high HBV DNA viral load).

B) Managing Sexually Transmitted Infections Effectively and Efficiently Among Women of Childbearing Age

- Screening and testing for HIV, Syphilis, Hepatitis-B, and other sexually transmitted infections will be available to all women of childbearing age at all health facilities and outreach services.
- Following Fiji's comprehensive STI management guidelines, women and their partners will receive adequate and full treatment coverage for STIs.
- Treatment for STIs will be made available in all healthcare facilities where an appropriately trained nurse, nurse practitioner or doctor is available.
- > Contact tracing must be carried out for all positive clients to ensure partner testing and treatment.

- Laboratory services will include relevant and appropriate screening, testing, and monitoring capabilities to ensure timely, effective and efficient diagnostic support for clients.
- Advice on safe sex practices is to be provided as part of the management of positive clients.
- Follow-up of STI-positive mothers after delivery (e.g., Syphilis and Hepatitis B) is mandatory.

C) Improving Women's and Their Partner's Access to STI Testing and HIV Testing Services (HTS)

In all healthcare facilities, the following will be provided:

- Provider Initiated Testing and Counselling (PITC) for HIV should be available at all major health facilities in the divisions and subdivisions offering antenatal care (ANC), utilising group pre-test information sessions and individual post-test counselling.
- Counselling (HIV, Syphilis, Hepatitis B and other STIs)) should be available at all major health facilities in the divisions and subdivisions offering ANC and can be provided by any health care worker (not limited to just a trained counsellor).
- All healthcare workers who have completed the training on STI Syndromic Management, HIV Care and ART Management and PPTCT shall provide STI testing and HTS in the healthcare facilities where they are posted.
- > Male condoms with lubricants and female condoms and IEC materials should be provided.
- > Referral of HIV and Hepatitis B positive women and their partner(s) to the SRH clinics (HUB).
- > Referral of congenital syphilis children to the Divisional Paediatric Unit.

For all patients:

- All pregnant women should be provided STI (Syphilis, Hepatitis B and other STIs) and HIV testing during the first ANC visit.
- Informed consent should always be obtained individually and privately by a health care provider. Verbal consent for HIV testing is sufficient; consent granted by the client must be documented in the client folder or relevant clinic register.
- Ensure confidentiality and appropriate disclosure of HIV results according to the HIV Care and ART Management Guideline.
- Pre-test information and post-test counselling should be provided to all women seeking or consenting to HIV testing services.
- Behaviour change counselling should be provided to all HIV, Syphilis and Hepatitis Bnegative women and serodiscordant couples.
- Re-testing for HIV, Syphilis and Hepatitis B are recommended for high-risk pregnant women (window period). Healthcare workers providing maternity and reproductive health service should be able to assess the client's risk status based on the history and examination done.
- Wilful transmission of HIV, Syphilis and Hepatitis B to the mother or child is considered criminal per section 383 of the Crimes Act 2010:

"A person commits a summary offence if he or she unlawfully or negligently does any act which is, and which he or she knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life."

- > This information must be shared during the post-test counselling session.
- Advice must be given to clients on where to access male condoms with lubricants, female condoms, and IEC materials.

For the community:

- Strengthen and increase community awareness through community-based STI screening and HTS approaches, which include: door-to-door/ home-based testing, mobile outreach campaigns, workplaces, prisons, and educational and social institutions.
- > Strengthen collaborative activities with the private sector, NGOs and CSOs.
- Condom Social Marketing Program to make condoms more accessible (e.g. dispensers at night clubs) and increase awareness through media.

D) Providing PrEP for Sero-discordant Couples (the woman is negative and planning a pregnancy)

PrEP (Pre-exposure Prophylaxis), in the setting of PPTCT, should be offered to an HIV-negative woman who is in a serodiscordant relationship and wants to become pregnant. PrEP will assist in the prevention of transmission of HIV from the HIV-positive partner to the woman and her unborn child.

PrEP should be offered to women who are in a serodiscordant relationship, where she is HIV negative and her partner is HIV positive, and wants to conceive, if:

- her partner's recent viral load (done within the last 6 months) is > 1000 copies/mL, or
- · her partner is not adherent to ART, or
- · her partner is clinically unstable or has OIs/co-infections, or
- her partner has defaulted clinic for at least six months.

Please refer to Chapter 5 of the HIV Care and Antiretroviral Therapy Guideline, 3rd Edition, where the PrEP is further outlined.

7.2 PREGNANCY IN WOMEN INFECTED WITH HIV, SYPHILIS AND HEPATITIS B (the woman is positive - may or may not desire Pregnancy)

A) HIV, Syphilis and Hepatitis B Positive Women with No Intention of Pregnancy

A woman should be offered or referred to family planning services if she does not wish to become pregnant. Unintended and unplanned Pregnancy must be avoided in HIV, Syphilis and Hepatitis B-positive women through family planning information, counselling and service provision.

To provide family planning information and counselling to assist in decision-making for both the women and their partner(s):

- i. Ensure all women access appropriate family planning services and HIV/STI information.
- ii. Ensure access to safe contraception options.
- iii. Involve men in family planning.

- iv. Ensure integration of contraceptive services with HIV/STI Testing Services.
- Provide additional barrier methods, i.e. condoms must be considered in those women using progesterone-only contraceptives.
- vi. Ensure emergency contraceptive pills are readily available at all healthcare facilities.

All health facilities providing sexual and reproductive health services should ensure that reproductive health commodities are always available and accessible to clients, e.g., condoms (both male and female types) and modern forms of contraceptives.

B) HIV, Syphilis and Hepatitis B Positive Women with the intention of Pregnancy

If she wishes to become pregnant, she should be educated:

- about the local prenatal services.
- the risks of HIV, Syphilis and Hepatitis B in Pregnancy,
- > the types of prophylaxis, including ART, available to reduce the risk of transmission to her child,
- > the treatment available for syphilis to minimise the risk of transmission to her child, and
- if in a serodiscordant relationship, HIV prevention approaches reduce the risk of transmission to a partner when trying to conceive (PrEP).

C) HIV, Syphilis and Hepatitis B Positive Woman who is Pregnant and wishes to continue with Her Pregnancy

She should be offered the opportunity to obtain ARVs for HIV and Hepatitis B, and syphilis treatment for her health and to reduce HIV, Syphilis and Hepatitis B transmission risks to the baby (This will be discussed in Chapter 7.4).

D) HIV, Syphilis and Hepatitis B positive woman who are pregnant and wishes to discontinue her Pregnancy

If the woman is currently pregnant and wishes to discontinue her Pregnancy:

- > Consider termination of Pregnancy (TOP) only in cases of sexual assault.
 - Timely confirmation of rape by the police department is needed to facilitate the process of TOP.
 - Advice on risks associated with TOP.
- > If there has been no sexual assault, discuss the benefits of continuing the Pregnancy.

7.3 PREVENT TRANSMISSION OF HIV, SYPHILIS AND HEPATITIS B FROM INFECTED WOMEN TO THEIR CHILDREN (the positive preanant woman – and the baby)

A) Laboratory Services Support

Laboratory services should provide standard, efficient laboratory investigation required, including diagnosis and monitoring of the clinical status of pregnant women, couples and women of childbearing age.

B) Provide Treatment for All Positive Pregnant Women and Their Partners

- A monitoring and management plan, including careful supervision of medication adherence, should be developed for every HIV, Syphilis and Hepatitis B-positive pregnant woman taking treatment.
- In pregnant women with confirmed syphilis infection, treatment for syphilis should be administered immediately. The woman needs to be clinically staged for syphilis to consider further treatment. Where necessary, a discussion needs to take place with a specialist for appropriate treatment.
- In pregnant women with confirmed HIV infection, ART initiation for maternal health is commenced immediately and continued for life, irrespective of the WHO clinical staging and immunological status.
- In pregnant women with confirmed Hepatitis B infection with an HBV DNA viral load ≥ 5.3 log₁₀ IU/mL (≥ 200,000 IU/mL) or HBeAg positive (if HBV DNA viral load is unavailable), tenofovir prophylaxis should be initiated from the 28th week of Pregnancy until at least birth. The mother should be reassessed for long-term maternal tenofovir treatment after delivery and monitored as per the Fiji Hepatitis B Care and Treatment Guidelines.
- The decision about the mode of delivery in HIV-positive mothers should be made according to clinical indicators, including HIV viral load level, taking into consideration the interest of both mother and the unborn baby.
- The decisions about the mode of delivery in Hepatitis B-positive mothers should be made
 according to the specific situations depending on other conditions of the woman, taking into
 consideration the best interest of both mother and the unborn baby.
- All HIV and Hepatitis B-positive pregnant women should deliver in hospitals with easy access
 to facilities for Caesarean Section (BABY consideration). If this is not possible, they should
 consult the obstetric and paediatric teams at the divisional hospital or the medical officer at the
 SRH clinic (HUB Centres).
- Suppose patients are tested positive for HIV and Hepatitis B while seen by a private obstetrician.
 In that case, the patient must be referred to the Public Hospital or another private obstetrician
 who can carry out PPTCT services as per the Policy. The private clinician needs to have
 undergone PPTCT training and seek assistance from the PPTCT care team for appropriate
 management.
- Suppose an HIV and Hepatitis B-positive patient wishes to have a private obstetrician for her Pregnancy. In that case, she may do so with the provision that the obstetrician is trained with

- PPTCT and will have regular consultations with a paediatrician for Infant Feeding Counselling, Infant Prophylaxis and Early Infant Diagnosis.
- The private obstetrician must report the case to their Divisional Care team.
- The Ministry of Health and Medical Services will provide antiretroviral therapy and prophylaxis for private patients, including CD4 count and viral load tests, if available in the country. Any other tests for the private patient will be out of pocket cost.
- The Paediatric Unit can facilitate paediatric prophylaxis and vaccination and Early Infant
 Diagnosis in the private clinic via the divisional, sub-divisional hospitals or any Maternal Child
 Health Clinics (MCH) without cost to the child.
- The partner(s) must be treated for syphilis, even if asymptomatic, and tested for HIV and STIs (Syphilis, Hepatitis B and other STIs).

C) Reduce the Risk of Transmission during Pregnancy, Labour, and Delivery

- To gain understanding and appropriate training in PPTCT, private obstetricians/clinicians can
 work closely with the Government Sector to be trained in PPTCT at the National or Divisional
 training. This opportunity will be provided to private practitioners free of charge. However, any
 other associated cost for accommodation, meals, etc., must be covered by respective individuals.
- For HIV-positive mothers with good adherence of more than six weeks to antenatal ART, a
 cautious approach to planned normal vaginal delivery is mandated.
- For Hepatitis B-positive mothers, planned normal vaginal delivery is mandated unless there are
 obstetric and paediatric contraindications.
- HIV and HBV DNA viral load testing (or HBeAG in the absence of HBV viral load) will be mandatory for all pregnant women.
- Women with poor immune function or presumed high HIV viral load should be selected for elective caesarean section.
- Artificial rupture of membranes (ARM) and instrumental or assisted delivery and amniocentesis should be strictly avoided.
- · Vigorous suctioning of the baby's oropharynx after delivery should be strictly avoided.

D) Implement Intervention to Reduce Transmission through Breastfeeding

- Counselling for "best feeding choice" where the mother is HIV, Syphilis and Hepatitis B
 positive, the best feeding option is exclusive breastfeeding with infected mothers on ART. This
 is in alignment with Fiji's national Policy on breastfeeding. The partner should be encouraged
 to be present during this feeding options counselling.
- The criteria listed in the WHO Infant Feeding Guideline Recommendations should be fulfilled for those opting for replacement feeding.
 - o refer pages 79-86 of the HIV Care and Antiretroviral Therapy Guideline, 3rd Edition
- Close supervision of adherence to the chosen method of infant feeding should be provided during the postnatal period.
- Mixed feeding should be strictly avoided as it carries a very high risk of HIV seroconversion in the baby (i.e., of the baby becoming infected with HIV eventually).
- · Wet nursing is strictly prohibited.

7.4 PROVIDE CARE FOR HIV, SYPHILIS AND HEPATITIS B-INFECTED MOTHERS, THEIR INFANTS AND FAMILIES (continuum of care)

A) Requirements for the Prevention of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B

- 1. All infants born to HIV, Syphilis and Hepatitis B-infected mothers are provided with the following:
 - a. appropriate intrapartum care,
 - early HIV prophylaxis and Hepatitis B immunoglobulin with immunisations (first dose
 within 24 hours of birth followed by 3 doses (6, 10 and 14 weeks) to complete the primary
 series)
 - c. early treatment for congenital syphilis,
 - d. proper feeding practices,
 - e. early syphilis diagnosis and after that, every three months till the test becomes nonreactive, or the titer has decreased fourfold,
 - f. early HIV diagnosis (DNA PCR at 4-6 weeks of life), ART and screening for opportunistic infection, and
 - g. receive appropriate MCH care, including immunisation and nutritional support.
 - 2. Psychosocial support for HIV-infected mothers, their children and families.
 - Quarterly reporting of HIV and STI statistics through the necessary reporting processes identified in this Policy.

B) Procedures for Intrapartum Care

- · Do not milk cord if the mother is HIV positive.
- Only suction if meconium is blocking the airway.

C) Procedures for Neonates and Infants

- 1. Early HIV prophylaxis
 - Start single or dual prophylaxis for an infant of an HIV-positive mother within 6 hours of birth.
 - No need for any blood test at birth for newborns (exceptions with the availability of NAT).
 - c. No need for co-trimoxazole prophylaxis for well babies until six weeks old.
- 2. Early Hepatitis B intervention
 - Hepatitis B birth immunisations (within 24 hours) followed by three doses (6, 10 and 14 weeks).
 - Hepatitis B immunoglobulins for infants born to Hepatitis B positive mothers (especially
 if HBeAg positive or with high HBV DNA viral load).
 - c. For infants born to mothers with unknown status: Give birth dose immunisations (within 24 hours) followed by three doses (6, 10 and 14 weeks) to complete the primary series. Mothers should have blood drawn and tested for HBsAg as soon as possible after admission for delivery; if the mother is found to be HBsAg positive, the infant should receive HBIG as soon as possible but no later than age seven days.
- 3. Proper feeding practices
 - It is recommended NOT to MIX FEE, and mothers should be encouraged to choose a feeding option antenatally.

- Exclusive breastfeeding is still the best option. Complimentary foods can start at six months, but breastfeeding can continue for a year or more.
- c. Examine mothers' breasts at birth for cracks and babies' mouths for lesions. If bleeding from the nipples, allow mum to express and discard milk to relieve engorgement while baby is cup fed with formula. If the baby has lesions in the mouth, the feeding options depend on the mother's virological status.
- d. No wet nursing.
- e. If the mother decides to give a breast milk substitute, the following criteria must be met:
 - · Proper sanitation and tap water.
 - · Good literacy
 - · Good socioeconomic status for substitute affordability for six months

(Refer to Newborn and Infant Feeding Policy 2020-2025)

- Early diagnosis of HIV (DNA PCR at 4-6 weeks of life), ART and screening for opportunistic
 infections. Ensure all siblings are tested, even if born during a negative serology pregnancy (it
 could have been a window period). (Refer to HIV Care and ART Guideline 3rd edition)
- 5. Early diagnosis of syphilis
 - Babies should be evaluated every three months over the first year of life with serological tests at each visit until the test becomes nonreactive or the titer has decreased fourfold.
 - b. The infant's titers should decrease by three months and be nonreactive by six months.
 - c. Re-treatment is needed if titers do not fall or clinical signs of disease persist or develop.
 - d. In cases of neurosyphilis, ongoing serum and CSF analysis should be done every six months until the CSF white cell count and the CSF VDRL is nonreactive. The CSF WCC should decline six months after successful treatment, and all CSF abnormalities should resolve two years after treatment.
- HIV-exposed infants should have paediatric reviews at 2, 6, 10 and 14 weeks; every three months from 14 weeks to 2 years or until status is confirmed.
- Receive appropriate MCH care, including immunisation and nutritional support. Failure to Thrive (FTT) and Severe Acute Malnutrition (SAM) qualify as presumptive positive clinical criteria if testing is unavailable. (Refer to Expanded Programme on Immunization).

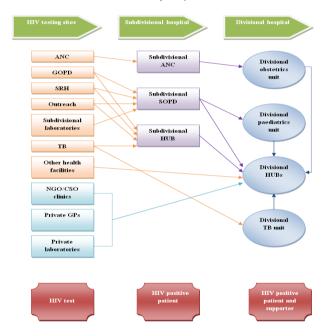
D) Childcare

- Children under 18 can consent to their test, provided the health care personnel thinks they are mature enough.
- Clinical (presumptive) criteria for HIV and syphilis can be used to start respective treatments if tests are unavailable.
- 3. DNA PCR is the HIV test of choice in children up to 18 months.
- If DNA PCR is unavailable, and the child fulfils the presumptive diagnosis criteria of HIV, ART must be started until confirmation can be sought.
- Confirmation can be made by an HIV antibody test done after 18 months and 6 weeks after complete cessation of breastfeeding, provided there is no future breastfeeding; only then is it a true confirmed negative.
- 6. Psychosocial support for HIV-infected mothers, their children and families.
 - Involve counsellors.
 - b. Refer to the child welfare decree, and involve local social welfare officers.

7.5 MONITORING AND EVALUATION

A) Case Referral Structure

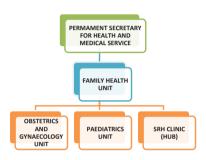
- If the pregnant woman was diagnosed late in Pregnancy with syphilis and cannot complete her follow-ups in ANC since she has delivered, she (and her partner) must be referred to the HUB as early as possible. Her baby must be referred to the Divisional Paediatrics Unit immediately.
- After the patient is diagnosed HIV and Hepatitis B positive and has received post-test Counselling, Counselling is referred to the HUB as early as possible.
- The flowchart below shows the referral pathway to the HUB from the HTS sites and laboratories.



CoC is a network that links, coordinates, and consolidates care, treatment, and support services for PLHIV. These services are provided in their homes, in the communities where they live, and in the health facilities that serve them.

B) Reporting Structure

- PPTCT case reports are from the PPTCT counterparts, including paediatricians, obstetricians, ANC and SRH clinics (HUB).
- The PPTCT program will align all reporting of PPTCT in the country to international requirement standards. This report will be oversighted by the Health Information Unit and the HIV Board of Fiji under the HIV Act 2011.
- It is the responsibility of the Family Health Unit to ensure that all reports are collected and submitted every quarter to the Health Information Unit and presented to the HIV Board during the quarterly meetings for endorsement of the release of data.



C) Program Indicators

The programmatic indicators are derived from the Regional Framework for the Triple Elimination of Mother-to-Child Transmission of HIV, Hepatitis B and Syphilis in Asia and the Pacific 2018–2030. It aligns its targets with the global and regional targets suggested by the Global Health Sector Strategies on HIV, Viral Hepatitis and STI 2016–2021 and the Regional Action Plan for Viral Hepatitis in the Western Pacific 2016–2020. It also aligns with the Global Guidance on Criteria and Processes for Validation: Elimination of Mother-to-Child Transmission of HIV and Syphilis.

The key impact and process indicators are listed below:

Impact Indicators:

- 1. Case rate of new paediatric HIV infections per 100,000 live births
- 2. The mother-to-child transmission rate of HIV
- Hepatitis B surface antigen (HBsAg) prevalence among children Case rate of congenital syphilis per 100,000 live births

Process Indicators:

- 1. Percentage of pregnant women visiting ANC at least once
- 2. Percentage of pregnant women visiting ANC at least four times
- Percentage of pregnant women with known HIV status (include both newly tested and those with known status)

- Percentage of ANC attendees tested for HBsAg (at least one injection of 2.4 million units of intramuscular benzathine penicillin at least 30 days before delivery)
- 5. Percentage of women accessing ANC who were tested for syphilis.
- 6. Percentage of pregnant women living with HIV who received antiretroviral therapy (ART)
- 7. Percentage of pregnant women with a positive syphilis serology who were treated adequately.
- 8. The proportion of births attended by skilled health personnel.
- 9. Stillbirth rate (per 1000 total births)
- 10. Percentage of infants receiving a birth dose (disaggregate for timely birth dose within 24 hours of birth and outside of 24 hours)
- 11. Coverage of the third dose hepatitis B vaccine among infants

The table below present's disease-specific elimination impact and process targets.

	Impact Target	Process Target		
Reproductive,		ANC coverage (at least one visit) ≥ 95%		
maternal,		The proportion of births attended by skilled		
newborn and		health personnel ≥ 95%		
child health				
HIV	≤ 50 new paediatric infections	HIV testing coverage of pregnant women		
	per 100,000 live births	(pregnant women with known HIV status) ≥ 95%		
	Mother-to-child transmission rate of	Antiretroviral therapy (ART) coverage of		
	< 5% (breastfeeding populations) or <	HIV-positive pregnant women ≥ 95%		
	2% (non-breastfeeding populations)			
Hepatitis B	\leq 0.1 % prevalence of the hepatitis B	Hepatitis B birth-dose vaccine coverage ≥		
	surface antigen (HBsAg) among	95%		
	children (≤ 100 cases/100,000 live	Hepatitis B third-dose vaccine coverage ≥		
	births)	95%		
		HBsAg testing coverage of pregnant		
		women ≥ 95%		
Syphilis	≤ 50 congenital syphilis cases per	Syphilis testing coverage of pregnant		
	100,000 live births	women ≥ 95%		
		Treatment of syphilis-seropositive		
		pregnant women ≥ 95%		

8.0 EFFECTIVE DATE

This Policy is effective from the date of signed endorsement in section 11.0 below.

9.0 REVIEW DATE

This Policy should be assessed in accordance with all guidelines and will be reviewed every 3 years or as and when deemed necessary by the MoHMS.

10.0 KEY SEARCH WORDS

PPTCT, HIV, Syphilis, Hepatitis-B, PPTCT Policy, PMTCT

11.0 APPROVED BY:

Permanent Secretary for Health and Medical Services

14/06/2023

Signature Date

Honorable Minister for Health and Medical Services

Audul 14/06/2023
Signature Date

ANNEX 1: HIV Care Teams

The Divisional HIV Care Team

The Divisional HIV care team is recommended to meet every quarter; the secretariat to this committee is to be provided by the Divisional SRH clinics (HUB) (Clinic Nurse, Divisional SRHR Programme Officer & Peer Educator based at the Divisional HUB). The Divisional HIV care team reports to the National HIV care team. The Divisional HIV care team may constitute of the following:

- i. The Divisional Medical Officer
- Sub Divisional Medical Officers
- SRH clinic Medical Officer in Charge of the Division
- A representative of the Paediatricians from the Divisional hospital
- A representative from the Divisional hospital Paediatric Nursing
- A representative of the OBGYN from the Divisional hospital vi.
- A representative of the Divisional Hospital Midwives
- A representative of the Physicians from the Divisional hospital viii.
 - Counselling Representative from the Counselling Unit within the Division
 - TB Physician from the Division
- Lab Technician from the Serology Department in the Divisional hospital or a representative
- xii. Pharmacist in Charge Divisional hospital or a representative
- SRH clinic Nurse Secretariat xiii.
- xiv. Divisional SRHR Programme Officer (or HUB Peer Educator) Secretariat
- xv. Dietician from the Division
- xvi. A person living with HIV from the Division

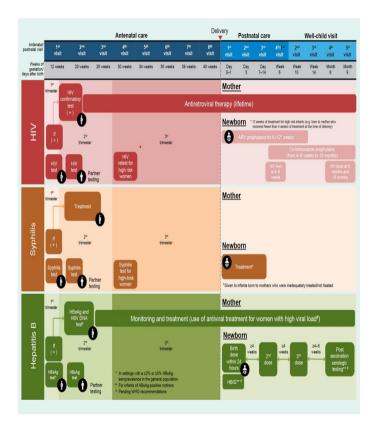
The National HIV Care Team

The National SRHR Programme officer within the Family Health Unit will provide secretariat support to the national HIV care team. The national body will meet twice annually. The national body will also update the relevant national Clinical Services Network. The National HIV care team may constitute of the following:

- i. Head of Family Health
- The representatives of the Paediatricians from the three Divisions
- The representatives of the OBGYN from the three Divisions
- A representative of the Physicians (Hepatitis Medical Officer)
- SRH clinic Medical Officer in Charge from the three Divisions (Labasa, Lautoka and Suva)
- TB Physician based at Tamavua Twomey Hospital vii.
- A representative from the Divisional Laboratories
- viii. SRH Lab and Surveillance Program Officer - Fiji CDC
- National SRHR Program Officer Secretariat ix.
- Χ. Director FPBS or Pharmacist looking after ARVs.
- xi. Divisional Medical Officers
- xii. Divisional Directors of Nursing
- xiii. Dietician
- xiv. WHO
- XV. UNAIDS
- xvi. A person living with HIV

^{*} Members may be co-opted when needed.

ANNEX 2: HIV, Syphilis and Hepatitis B Screening, Treatment and Vaccination Services offered during Antenatal, Delivery, Postnatal Care and Well-child Visits.



REFERENCES

AAP Committee on Infectious Diseases. (2018). Red Book (2018). In Report of the Committee on Infectious Diseases, 31st Edition.

Carol Leach-Lemens 2020. Contraception: Preventing unintended pregnancies in women living with HIV in resource-poor settings. NAM Publications. Available at: http://www.aidsmap.com/Preventing-unintended-pregnancies-in-women-living-with-HIV-in-resource-poor-settings/page/1396517/

Fiji National Hepatitis Action Plan: 2016-2020. Fiji Ministry of Health and Medical Services; 2016.

Foliaki S, Best D, 'Akau'ola S, Cheng S, Borman B, Pearce N. Cancer incidence in four Pacific Countries: Tonga, Fiji Islands, Cook Islands and Niue. Pacific Health Dlalog. 2011;17(1):21-32.

MOHMS 2012. Fiji Policy on Prevention of Parent to Child Transmission (PPTCT) of HIV. Suva, Fiji Ministry of Health and Medical Services.

Mortality GBD, Causes of Death C. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015;385(9963):117-71.

Nishijima, Takeshi & Nand, Devina & Bauri, Mathias & Carney, Robert & Htin, Khin & Shwe, Ye & Gurung, Anup & Mahiané, Guy & Ishikawa, Naoko & Taylor, Melanie & Korenromph, Eline 2020. Prevalence of syphilis, gonorrhoea and chlamydia in women in Fiji. the Federated States of Micronesia, Papua New Guinea and Samoa, 1995–2017: Spectrum-STI model estimates. Western Pacific Surveillance and Response. 11. 1. 10.5365/wpsar.2019.10.2.003.

Polaris Observatory C. Global prevalence, treatment, and prevention of hepatitis B virus infection in 2016: a modelling study. Lancet Gastroenterol Hepatol. 2018;3(6):383-403.

Schweitzer A, Horn J, Mikolayczyk R, Ott J. Worldwide prevalence of chronic hepatitis B virus infection: estimations based on a systematic review of data published between 1965 and 2013. The Lancet, 2015;386(10003):1546-55.

Tsukakoshi T, Samuela J, Rafai EV, Rabuatoka U, Honda S, Kamiya Y, et al. Hepatitis B serologic survey and review of immunisation records of children, adolescents and adults in Fiji, 2008-2009. Virol J. 2015;12:36.

WHO 2014. Global Guidance on Criteria and Processes for Validation: Elimination of Mother-to-Child Transmission of HIV and/or Syphilis. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO

WHO 2017. WHO Guideline on Syphilis Screening and Treatment for Pregnant Women. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO

WHO 2018. Regional Framework for the Triple Elimination of Mother-to-Child Transmission of HIV, Hepatitis B and Syphilis in Asia and the Pacific, 2018–2030. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO

