衞生防護中心
Centre for Health Protection

Scientific Committee on AIDS and STI (SCAS)

Recommended Clinical Guidelines on the Prevention of Mother-to-Child HIV Transmission

Purpose

The purpose of this paper is to provide an update on the Recommended Clinical Guidelines on the Prevention of Perinatal HIV Transmission published by the Committee in 2018 in view of the growing evidences and changing international recommendations in the use of antiretroviral therapy (ART) in pregnancy.

Introduction

2. The Universal Antenatal HIV Testing Programme (UATP) was launched in Hong Kong in September 2001. In 2008, the programme was supplemented with rapid HIV testing in labour wards of public hospitals to fill the gap for late-presenting pregnant women without documented HIV status in the antenatal period. Re-testing of HIV infection in late pregnancy for women with ongoing risk exposure was introduced in 2018 as there had been cases of mother-to-child transmission (MTCT) of HIV infection despite of a maternal negative result which had been obtained in early antenatal period. To assist in the management of HIV positive pregnancy and prevention of mother-to-child HIV transmission, the then Scientific Committee on AIDS published its first Recommended Clinical Guidelines on the Prevention of Perinatal HIV Transmission in 2001, which were subsequently updated in 2007, 2012 and 2018 by the Scientific Committee on AIDS and STI (SCAS).[1]

3. In recent years, scientific research and the knowledge base in the area have continued to grow. International recommendations on the use of ART in pregnancy and interventions to reduce MTCT of HIV have also been updated accordingly.[2,3] In view of such, the SCAS embarked on a revision and update of the local clinical guidelines.

4. In the course of review, it was noted that the goal and major principles in the 2018 clinical guidelines continued to hold. However, update is needed in the following:

- Options and recommended use of ART during pregnancy;
- Recommended antiretroviral prophylaxis for infants born to mothers who present late and have not received antepartum ART; and
- Counselling on infant feeding.

Goal

5. These clinical guidelines were developed with a view to supporting prevention of mother-to-child-transmission (PMTCT) of HIV by the combined approach of early diagnosis and timely evidence-based interventions.

Principles

I. Universal HIV antibody testing is offered as an integral part of routine antenatal care for women in Hong Kong, supplemented by rapid testing where necessary. High risk behaviours should be avoided during pregnancy and breastfeeding. Repeat testing in the third trimester is recommended where risk exists.

II. Clinical management should include that of maternal HIV infection as well as prevention of mother-to-child transmission of HIV.

III. Pregnant women with HIV who have never received antiretroviral drugs and present late would still benefit from use of antiretroviral to reduce mother-to-child transmission.

IV. The mode of delivery and its management should be considered on the grounds of HIV status as well as obstetric indications.

V. Paediatric management should be offered to reduce the risk of mother-to-child transmission. Paediatricians with experiences in HIV disease and management should be involved early to assess on the risks of HIV acquisition and use of antiretroviral as prophylaxis or presumptive HIV therapy.

VI. Multidisciplinary and coordinated efforts should be made to strengthen our knowledge base and practice regarding mother-to-child transmission of HIV in Hong Kong.

Recommendations and rationales

I. Universal HIV antibody testing is offered as an integral part of routine antenatal care for women in Hong Kong, supplemented by rapid testing for those with unknown status prior to delivery. Repeat testing in the third trimester is recommended where risks associated with HIV acquisition exist, coupled with counselling to avoid high risk behaviours throughout pregnancy and the lactating period

6. HIV antibody testing has been offered to all pregnant women as an integral part of antenatal care with an opt-out basis since 2001. The consistently high coverage rates exceeding 98% had demonstrated the wide acceptance of testing. In 2022, testing coverage was 100% with an HIV prevalence of 0.007%.

7. In 2005, it was noticed that the proportion of deliveries with known maternal HIV status had fallen to 83.4% (data from the Department of Health), likely due to an increase in women presenting late to obstetric services, e.g. at labour, without prior antenatal care. Rapid HIV test was introduced to all labour wards in year 2008, which was then offered to all late presenting women without prior HIV testing. Although confirmation test is still required, a positive result is highly suggestive of HIV diagnosis and prophylactic interventions should be implemented against MTCT without delay.[2,4] Since

its implementation, the number of women with unknown HIV status at delivery has remained minimal.

8. Despite of the high testing coverage rate and timely interventions, there had been isolated paediatric cases of MTCT with a maternal negative result obtained in early pregnancy. Maternal HIV acquisition likely occurred after the initial antenatal workup and MTCT could have taken place in the late pregnancy period, intrapartum period or in the postpartum period through breastfeeding. Such occurrence reinforces the need to advise against risk behaviors during pregnancy and breastfeeding.

9. To further minimise the gap in the UATP and risks for MTCT, it is recommended that repeat HIV testing be done in the third trimester between 34 and 36 weeks if there is concern over new HIV acquisition, for example in individuals with the following risk factors: (a) women who inject drugs or whose sex partners do, (b) women who exchange sex for money or nonmonetary items, (c) women who are sex partners of people with HIV with unknown or detectable viral load or with ongoing risks for HIV acquisition, (d) women who have a new or more than one sex partner during the pregnancy, (e) women who have newly acquired sexually-transmitted infections during pregnancy, and (f) women who originated from areas of unknown or high HIV prevalence, or whose sex partners did[5,6,7]. If there are signs or symptoms compatible with acute HIV infection or sexually transmitted infections, HIV testing should also be repeated at any time point during the pregnancy period. HIV ribonucleic acid (RNA) testing should be considered if there are high suspicion of acute infection, and liaison with the HIV physician and the laboratory is required in such scenario.

II. Clinical management should include that of maternal HIV infection as well as prevention of mother-to-child transmission of HIV

II.A As part of routine medical care, women of childbearing potential with HIV should receive counselling on contraception to avoid unintended pregnancies. For those who would like to conceive, education and counselling on interventions to prevent mother-to-child HIV transmission should be offered, along with a careful risk assessment.

10. With the availability of effective ART, HIV infection has become a chronic treatable condition with vastly improved prognosis. Nevertheless, it is still important that women of reproductive age with HIV receive counselling on reproductive options and effective contraception to avoid unintended pregnancies. Family planning and reproductive plans should be reviewed during visits. For couples contemplating child-bearing, information on the risks of MTCT, risks of HIV transmission through condomless vaginal sex and effectiveness of various interventions in PMTCT should be discussed. The effect of PMTCT can be maximised when women with HIV are maintained on effective ART with fully suppressed viral load at conception and throughout pregnancy.

II.B A pregnant woman who is diagnosed with HIV during the antenatal period should receive the same standards of care established for non-pregnant women with HIV. ART should be initiated as soon as possible upon the diagnosis. To best deliver maternal care and to minimise the risk of MTCT, management should involve a multidisciplinary team comprising of obstetricians, paediatricians, HIV physicians and microbiologists/virologists with experience in managing maternal HIV infection and in delivering care to newborns with exposure to HIV.

11. Optimal control of maternal HIV disease is beneficial to reducing MTCT. Viral load is directly related to risks of mother-to-child HIV transmission. Current major standards of care in HIV disease[8] are:

(i) prophylaxis against opportunistic infections based on CD4 count and exposure history; and

(ii) immediate, individualised ART with the goal of virologic suppression to undetectable levels.

12. Regular CD4 cell enumeration and viral load testing are indicated and may need to be repeated more frequently to ensure satisfactory control of HIV disease near delivery. Testing for baseline viral resistance and in the event of suboptimal virologic suppression is recommended to optimise antiretroviral regimen.

13. ART is recommended for all pregnant women diagnosed with HIV regardless of CD4 count and viral load due to the established benefits in their own disease prognosis and in reducing MTCT and should be initiated as soon as possible.[9,10,11]

14. Antenatal administration of ART also performs as infant pre-exposure prophylaxis[10]. Transplacental transfer of the ART allows antiretroviral drug level to build up in the foetus which inhibits virological replication during foetal development. Most nucleoside reverse transcriptase inhibitors (NRTI) and integrase inhibitors (INSTI) have high levels of placental passage.

15. A physician experienced in HIV Medicine should be involved to assess for the most appropriate antiretroviral regimen based on the disease stage, pharmacokinetics, toxicity to the mother and foetus, and antiretroviral efficacy, as guided by the CD4 cell count, viral load, viral resistance, and a detailed clinical assessment including that of any known source of infection. Women diagnosed with HIV should be counselled on the importance of long term adherence to ART to halt disease progression and to prevent MTCT.

16. Throughout pregnancy, the HIV physician is responsible for monitoring the response to treatment and applying the usual standards of HIV care. Special considerations should be given to the unique state of pregnancy with its altered pharmacokinetics and propensity to certain adverse effects such as hyperglycaemia[12]. The HIV physician should closely liaise with the obstetric and paediatric team in the event of real or expected antiretroviral toxicity and unfavourable virologic response, as these may impact on the overall management. A long term HIV care plan for both the mother and the newborn should be put in place.

17. HIV screening should be offered to all partners of the woman diagnosed with HIV during pregnancy if their HIV status is unknown. For serodifferent couples, the strong scientific base of "Undetectable equals Untransmittable" (U=U) has demonstrated no risks of HIV transmission through condomless sexual intercourse when the partner infected with HIV remains adherent to ART and virologically suppressed[13,14].

II.C ART including 2 nucleoside reverse transcriptase inhibitors as backbone and a third agent is recommended. Dual therapy is not recommended.

18. The best regimen for both mother and foetus is one that has the greatest antiretroviral potency, minimal teratogenicity and toxicity, and maximal efficacy in treating HIV disease and reducing the risk of MTCT. An ART regimen typically comprises three drugs: two NRTI in combination with one INSTI, one protease inhibitor (PI) or one non-nucleoside reverse transcriptase inhibitor (NNRTI). Backbone with zidovudine (ZDV) and lamividine (3TC) have been used extensively in pregnant women in the past but are now largely replaced by tenofovir disoproxil furmrate (TDF)[15,16], tenofovir alafenamide (TAF)[17,18] and abacavir (ABC)[19] (for those with negative HLA-B*57:01) given their safety and efficacy for use during pregnancy. TDF/TAF plus emtricitabine (FTC), ABC plus 3TC, or ZDV plus 3TC, are all acceptable as the backbone NRTI for pregnant women. TDF/TAF plus FTC or ABC plus 3TC are more preferable with their better tolerability and less toxicities. For women who are co-infected with hepatitis B virus (HBV), TDF or TAF plus 3TC or FTC should be used.

19. INSTI are shown to be safe and well tolerated during pregnancy. It is also associated with rapid viral decay[20] and high level of transplacental transfer[21] which is particularly advantageous for women with a high presenting viral load. Raltegravir (RAL)[22] should be given at 400 mg twice daily as there is limited data on once-daily dosing during pregnancy. Dolutegravir (DTG) was previously avoided for use in women trying to conceive or pregnant due to a safety warning on increased risks for neural tube defect; such warning was subsequently dismissed as further data excluded such association. With its high treatment efficacy, DTG is now listed as one of the preferred regimen[23,24].

Of note, cobicistat-boosted elvitegravir (co-formulated either with TDF/FTC or TAF/FTC), bictegravir, and cabotegravir, both oral and intramuscular forms, are not recommended at the time of publication of this guideline because of limited data on safety.

20. Of the available PIs, ritonavir-boosted darunavir (DRV/r) is the preferred option for use in pregnancy, while ritonavir-boosted atazanavir (ATV/r) can be considered as alternative. DRV/r should be administrated as 600 mg/100 mg twice-daily dosing during pregnancy. If available, therapeutic drug monitoring of PI should be considered. Boosting with cobicistat is not recommended in pregnancy because of insufficient drug levels of the boosted drug in the second and third trimester of pregnancy.

21. NNRTI is now considered as alternative regimen of choice due to lower resistance barrier and more treatment side effects. The use of efavirenz (EFV) is limited due to the associated neuropsychiatric toxicities. Rilpivirine (RPV) should only be offered to those with a pre-treatment viral load of less than 100,000 copies/ml.[25] Only oral form of RPV should be used and intramuscular RPV should be avoided due limited safety data. Doravarine (DOR), the newest NNRTI, is currently not recommended due to limited clinical data on its use during pregnancy.

22. Clinical circumstances such as past medical history, anticipated poor adherence, virologic failure or potential interactions with other drugs may require deviation from the recommended regimen (**Table 1**). Throughout and after pregnancy, close communication among all members of the medical team is required to ensure the best care for the mother and child, and reduce the risk of MTCT to the minimum.

II.D For those pregnant women who has been receiving antiretroviral therapy at conception, evaluation should be made of the treatment regarding antiretroviral potency, potential toxicity to the women and foetus, and prophylactic efficacy against MTCT.

23. For these patients, re-evaluation of the antiretroviral regimen is required with the same considerations applicable to those newly diagnosed in pregnancy. As long as it is potent enough for full viral suppression and well tolerated by the patient, the current ART regimen can generally be maintained during pregnancy including in the first trimester unless contraindicated. Treatment response has to be reviewed with a regular monitoring of HIV viral load at every 3 monthly intervals and at 36 weeks gestation or 4 weeks before delivery to aid decision on mode of delivery. A viral resistance test is recommended for those with detectable viral loads. As a result, treatment may need to be optimised but should not be interrupted. Ideally, all pregnancies should be planned so that evaluation could have been made prior to conception regarding the most appropriate regimen.

II.E Intrapartum zidovudine should be used where viral suppression cannot be achieved at delivery or when the maternal drug adherence is doubtful.

24. Effective ART leading to sustained virologic suppression prior to delivery removes the need of routine intrapartum ZDV. Studies had confirmed IV ZDV given intrapartum in the presence of viral suppression risks hematologic toxicity without additional benefit in reducing MTCT [26]. Nevertheless, in those where viral suppression cannot be achieved at delivery or where drug adherence is suboptimal, IV ZDV continues to be indicated.

III. Pregnant women with HIV who have never received antiretroviral drugs and present late would still benefit from use of antiretroviral to reduce mother-to-child transmission

25. When maternal HIV infection is not diagnosed until labour, or when a pregnant woman known to have HIV infection but has not been receiving prior antiretroviral therapy is in labour, antiretrovirals administered intrapartum to the woman and postpartum to the neonate are still indicated to reduce MTCT.

26. In this scenario, the use of rapid HIV test is critical, without which interventions would not even be contemplated. Although the opportunity of a full course of treatment has been lost, commencement of antiretrovirals in labour is still useful to reduce MTCT. IV ZDV should be started immediately for women presented at labour or with pre-labour rupture of membrane. Other than ZDV, oral antiretroviral drugs should also be given to the woman as far as possible to confer additional pre-exposure prophylaxis for the foetus through transplacental transfer. (**Table 2**)

27. Screening for hepatitis B and syphilis should be done if not otherwise done before. Positive results should be managed promptly.

IV. The mode of delivery should be considered on the grounds of obstetric indications as well as HIV status

28. For the purpose of PMTCT, elective caesarean section confers an independent effect on reducing MTCT in those with a viral load above 1000 copies/ml, and is therefore the preferred mode of delivery in this situation.[27,28] For those who are able to achieve a lower or undetectable level of viral load before delivery, elective caesarean section *per se* does not offer additional advantage. Furthermore, the operation carries risks of its own which may be further increased in women with HIV. Important as it should be, the efficacy of elective caesarean section in reducing MTCT is therefore one of many factors, viral and obstetric, in the final decision on the mode of delivery.[29]

29. For those women who proceed to vaginal delivery, invasive foetal monitoring and instrumental delivery should be avoided to reduce MTCT,

especially if virologic suppression is not ascertained[30]. Artificial rupture of membrane (ROM) could be performed for standard obstetric indications in women with suppressed HIV viral load, however should be avoid when the HIV viral load is above 50 copies/ml.

V. Comprehensive paediatric management is essential to reduce the risk of mother-to-child transmission. Paediatricians with experiences in HIV disease and management should be involved early to assess on the risks of HIV acquisition and use of antiretrovirals as prophylaxis or presumptive HIV therapy for infants with perinatal exposure to HIV

30. All infants with perinatal exposure to HIV should receive postpartum antiretroviral medications to reduce risks for HIV acquisition. Paediatricians experienced in HIV disease and managing infants born to HIV infected mothers should be involved early in care.

31. ZDV alone is recommended for infants born to mother who had received standard ART during antepartum period with suppressed HIV viral load; while multi-drug regimen should be considered when the risks of HIV infection is high, e.g. failure to achieved maternal virologic suppression during antepartum period, inadequate HIV treatment received by the mother at either antepartum or intrapartum. Maturity of infant at birth should also be taken into consideration. Individualised assessment is required (**Table 1, 2 and 3**) for the regimen and duration of antiretrovirals[31].

32. Antiretroviral medications should be completed with monitoring of toxicities such as anaemia secondary to ZDV, lactic acidosis resulting from NRTI, and hyperglycaemia from PI. The infant should also be followed closely for the possibility of HIV infection. Of note, BCG vaccination should be withheld until after HIV infection of the infant is ruled out.[32]

33. Although effective maternal ART coverage during pregnancy and breastfeeding may reduce the post-natal 6-month MTCT rate to the range of less than 1% but not zero, this is still unacceptable in settings where alternative to breastfeeding exists and where the goal is maximal PMTCT. In developing countries, breastfeeding may be justified by its other benefits. In Hong Kong,

it is not. Every effort should be made to assist the mother in replacement feeding.

34. However, should any mother with HIV wish to be considered on breastfeeding, people-centered and evidence-based counseling should be offered by a multidisciplinary team of HIV specialist, obstetrician and paediatrician with discussion on the associated risks of MTCT, benefits of breastfeeding and other feeding options[2]. Viral load should be under close monitoring. Mastitis, thrush, cracked or bleeding nipples should be promptly identified and treated as these conditions may increase risks for MTCT. Breastfeeding should be stopped and switched to replacement feeding when there is a detectable viral load, evidence of mastitis or bleeding nipple.

35. At present, the long term effects of antiretrovirals on the future development of the child are not clear. Thus it is important that all such children should be followed by the paediatrician for an extended period of time. Regimens with less toxicities should be used where possible.

36. Separate guidance would be developed to detail the management of infant born to mothers with HIV, including but not limited to use of antiretroviral prophylaxis, side effects, monitoring and diagnosis.

VI. Multidisciplinary and coordinated efforts should be made to strengthen the knowledge base and practice regarding mother-to-child transmission of HIV in Hong Kong

37. Were the goal of eradicating MTCT to be ever possible, it is imperative that all stakeholders, especially obstetricians and paediatricians, be enlisted for their contribution. The fact that optimal PMTCT requires early diagnosis highlights the importance of a strong overall public health programme. Universal antenatal testing should be supplemented, if indicated, by rapid HIV testing in the labour ward or repeat testing in third trimester. The programme should be closely monitored so that gaps could be filled quickly. Experience of health care providers should also be shared within and across disciplines to identify the model of best practice. It is a most trying time for the mother who often is also beset with difficult psychosocial circumstances. Overlooking this

aspect of care risks non-adherence and failure of otherwise effective interventions. Each and every instance of MTCT is a tragedy and should be reviewed carefully so that improvement can be made.

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Table 1. Recommended antiretroviral prophylaxis against MTCT of HIV

Regimen	Dosing	Remarks
Antepartum		
Preferred NRTI backbone TDF or TAF /FTC TDF or TAF /3TC ABC/3TC	• TDF 300mg daily PO • TAF 25mg daily PO • FTC 200mg daily PO • ABC 300mg BD PO or 600mg daily PO • 3TC 150mg BD PO or 300mg daily PO	• Dual therapy is not recommended • Regimen subject to evaluation by HIV physician • Viral resistance test is recommended • Close monitoring of virological response with repeating of viral load close to delivery • Use of TDM if necessary • For all ethnicities other than Chinese, limit use of ABC only to those without B*5701 • Watch out for the following adverse effects: o Hyperglycaemia o Weight gain
Preferred INSTI regimen DTG + Preferred NRTI backbone	• DTG 50mg daily PO	• Use with caution for individuals with history of CAB exposure as PrEP
Preferred PI/r regimen DRV/r + Preferred NRTI backbone	• DRV 600mg BD PO with RTV 100mg BD PO	• To be taken with meal • Twice daily dose is required during pregnancy
Alternative INSTI regimen RAL + Preferred NRTI backbone	• RAL 400mg BD PO	• Avoid once-daily dosing for RAL
Alternative PI/r regimen ATV/r + Preferred NRTI backbone	• ATV 300mg daily PO with RTV 100mg daily	• Associated with increase in maternal indirect bilirubin, no significant neonatal hyperbilirubinemia reported • Dosage adjustment is required during 2nd or 3rd trimester
Alternative NRTI backbone ZDV/3TC	• ZDV 600mg daily PO or 300mg BD PO • 3TC 300mg daily PO or 150mg BD PO	• Watch out for toxicities e.g. anemia
Alternative NNRTI regimen EFV + Preferred NRTI backbone RPV + Preferred NRTI backbone	• EFV 600mg PO at bedtime • RPV 25mg daily PO with food	• Avoid RPV if baseline HIV viral load >100,000 copies/mL

Regimen	Dosing	Remarks
Intrapartum		
ZDV	• ZDV: IV loading dose of 2 mg/kg in 1 h, then 1mg/kg/h till delivery; begin at onset of labour, pre-labour rupture of membrane or 3 hours before elective caesarean section • Continue antepartum ART regimen	• Consider elective caesarean section only when maternal viral load >1,000 copies/mL close to delivery or due to other obstetric indications • Omit IV ZDV if viral load is suppressed near delivery
Postpartum		

	Mother:
	• Continue antepartum ART regimen
	
	Newborn (to be started as soon after birth as possible and preferably within 6-12 hours):
	• ZDV syrup 4 mg/kg BD PO for 4-6 wk, or
	• ZDV 1.5 mg/kg q6h IV for 4-6 wk
		• Modify dosage in preterm infants <35 wk gestation:
		  ○ 1.5 mg/kg q6h IV or 2 mg/kg q12h PO, then q8h at
		  ▪ 2 wk if gestation >30 wk, or
		  ▪ 4 wk if gestation <30 wk
		  ○ All premature infants <37 wk gestation should receive 4-6 weeks ZDV
		• Breastfeeding not recommended
		• Prolong ZDV to 6 weeks with addition of NVP if maternal HIV viral load is not suppressed or doubtful adherence (Table 2).

cART, combination antiretroviral therapy; TDF, tenofovir; FTC, emtricitabine; ABC, abacavir; ZDV, zidovudine; 3TC, lamivudine; EFV, efavirenz; RPV, rilpivirine; RTV, ritonavir; ATV, atazanavir; DRV, darunavir; RAL, raltegravir; CAB, cabotegravir; TDM, therapeutic drug monitoring; ART, antiretroviral therapy

Table 2. Recommended antiretroviral prophylaxis in women presenting in labour

Regimen	Dosing	Remarks
Intrapartum		
IV ZDV and oral ART (refer back to Table 1 for choice of oral ART)	ZDV - • IV bolus of 2 mg/kg over 1 h, then 1mg/kg/h till delivery	• Oral ART with INSTI (including DTG or RAL) preferred due to transplacental transfer
Postpartum		

3-drug regimen including ZDV, 3TC and NVP to be started immediately after delivery for the newborn#	Mother:
	• Oral ART as listed in Table 1
	
	Newborn:
	ZDV -
	• 4mg/kg BD PO for 6wk
	3TC -
	• 0-4wk: 2mg/kg BD PO
	• 4-6wk: 4mg/kg BD PO
	NVP -
	• >37wk: 6mg/kg BD PO
	• 34-37wk:
	  ■ 0-1wk: 4mg/kg BD PO
	  ■ 1-6wk: 6mg/kg BD PO
		• No breastfeeding
		• Refer to HIV physician for management of maternal HIV disease
		• NVP: 8 mg per dose PO if birth weight 1.5-2 kg; 12 mg per dose PO if birth weight >2 kg
		• The duration of 3-drug neonatal prophylaxis should be 2-6 weeks from birth. If the duration of 3-drug regimen is less than 6 weeks, ZDV alone should be continued to complete a 6-week course of duration

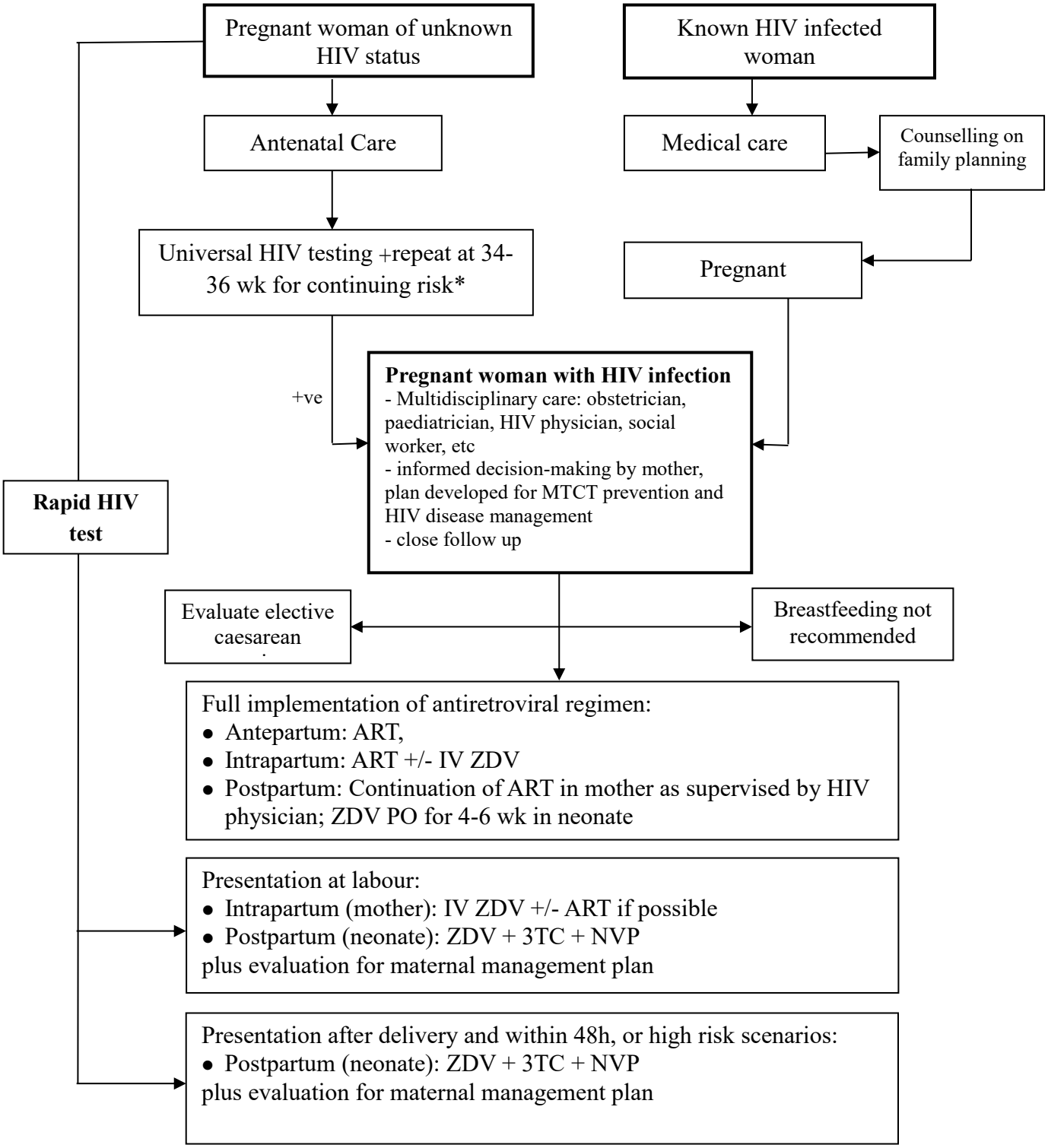
ZDV, zidovudine; 3TC, lamivudine; NVP, nevirapine
#Granule formulation of raltegravir is not available in Hong Kong for infant use

Table 3. Recommended antiretroviral prophylaxis for infants born to women presenting after delivery or scenarios considered to be high risk of MTCT:

Regimen	Dosing	Remarks
Postpartum		
3-drug regimen to be started immediately after delivery for the newborn#	ZDV - ● 4mg/kg BD PO for 6wk 3TC - ● 0-4wk: 2mg/kg BD PO ● 4-6wk: 4mg/kg BD PO NVP - ● >37wk: 6mg/kg BD PO ● 34-37wk: ■ 0-1wk: 4mg/kg BD PO ■ 1-6wk: 6mg/kg BD PO	• No breastfeeding • Refer to HIV physician for management of maternal HIV disease • Consult paediatricians specializes in HIV for care of the infant • Need to monitor for possible side effects, e.g. anemia, rash, GI disturbances

ZDV, zidovudine; 3TC, lamivudine; NVP, nevirapine
#Granule formulation of raltegravir is not available in Hong Kong for infant use

Algorithm. Overview of management principles in preventing MTCT of HIV



*Continuing risk as in women who (i) women who inject drugs or whose sex partners do, (ii) women who exchange sex for money or nonmonetary items, (iii) women who are sex partners of people with HIV with unknown or detectable viral load or with ongoing risks for HIV acquisition, (iv) women who have a new or more than one sex partner during the pregnancy, (v) women who have newly acquired sexually-transmitted infections during pregnancy, and (vi) women who originated from areas of unknown or high HIV prevalence, or whose sex partners did

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