

Prevention of Mother-to-Child Transmission of HIV How Well Are We Doing ?

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Keys and Principles of PMTCT of HIV



Early Diagnosis



Timely Intervention

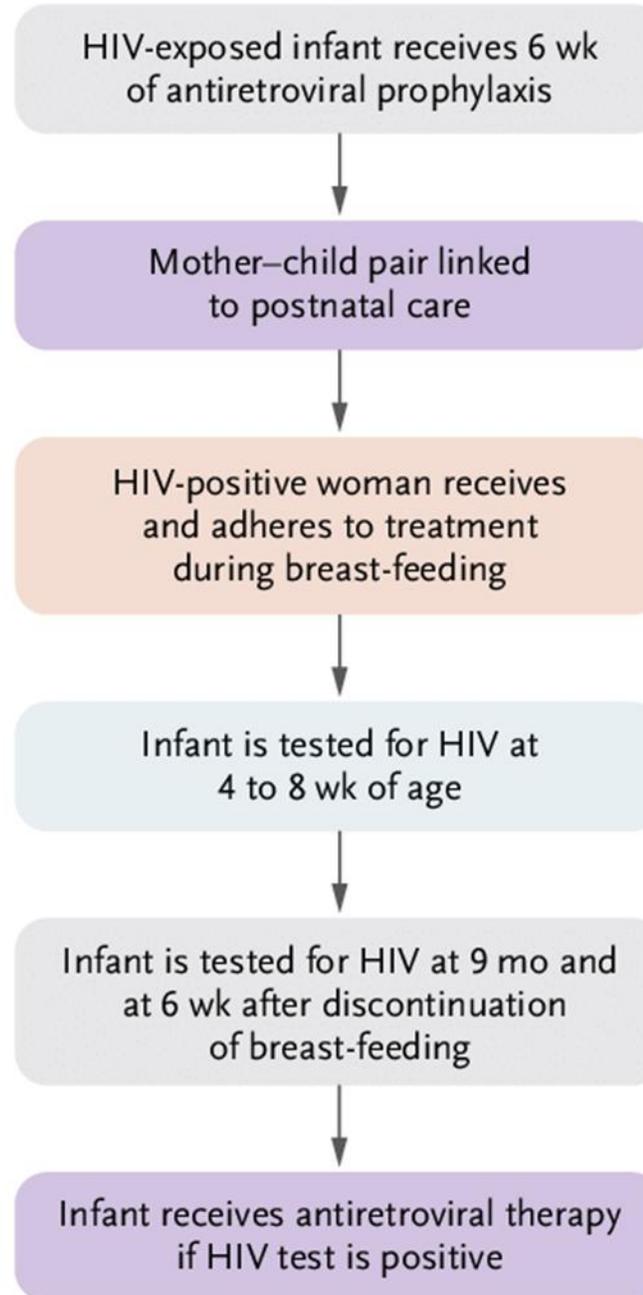
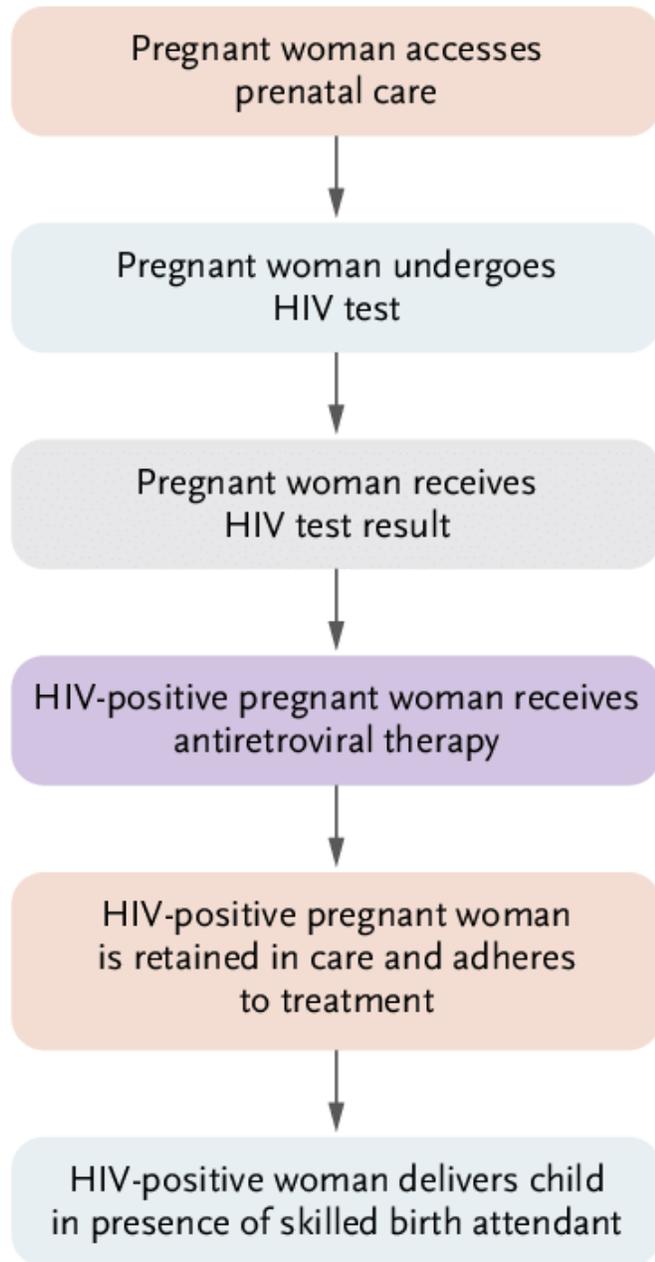
Antiretrovirals +/- Caesarean section +/- Avoid breast feeding



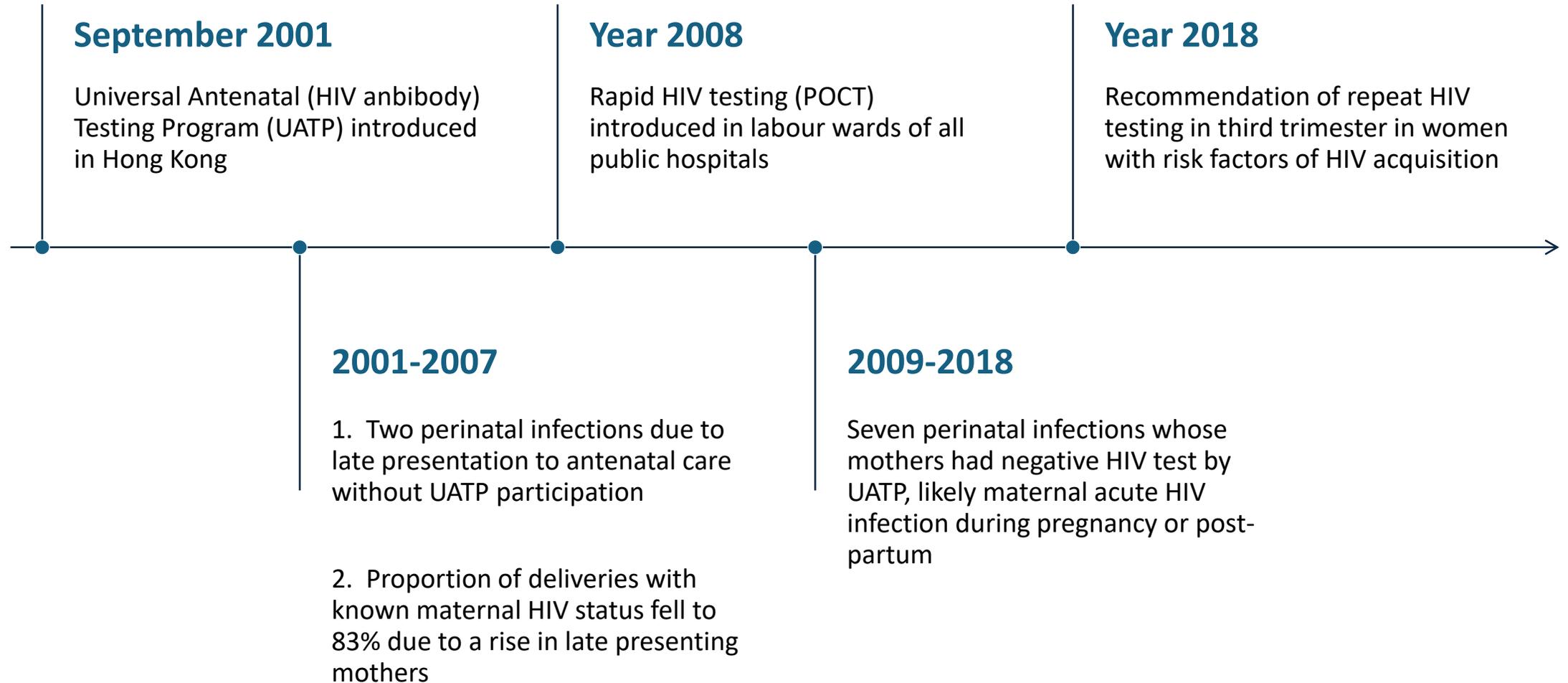
Antiretroviral therapy:

- Treatment as Prevention (TasP)
- Pre-exposure Prophylaxis
- Post-exposure Prophylaxis

Stage of Care



Antenatal HIV Testing Program in Hong Kong



Antenatal HIV Testing Program in Hong Kong

- Universal Antenatal HIV Antibody Testing Program (UATP) - opt-out approach
- Third trimester HIV testing at 34-36 weeks in women who are at high risk of HIV infection during pregnancy
 - intravenous drug user
 - women who exchange sex for money
 - women whose sex partners are HIV-infected
 - new or more than one sex partner during pregnancy
 - newly acquired sexually transmitted infection during pregnancy
 - women who originated from areas of unknown or high HIV prevalence, or whose sex partners did
- Point-of-care test (rapid test) at labour ward of public hospitals

Universal Antenatal HIV Antibody Testing (UATP)

Box 3.8 HIV prevalence among antenatal women from Universal Antenatal HIV Antibody Testing Programme (2012 – 2021)

Year	Number of blood samples	Coverage*	Number of positive tests	Prevalence (%)	95% C.I. (%)
2012	53,117	98.6%	9	0.0169	(0.0077 – 0.0322)
2013	48,871	98.5%	7	0.0143	(0.0058 – 0.0295)
2014	51,263	98.3%	2	0.0039	(0.0005 – 0.0141)
2015	51,338	98.5%	5	0.0097	(0.0032 – 0.0227)
2016	51,519	100%	9	0.0175	(0.0080 – 0.0332)
2017	48,500	100%	7	0.0144	(0.0058 – 0.0297)
2018	45,530	100%	4	0.0088	(0.0024 – 0.0225)
2019	42,670	100%	3	0.0070	(0.0014 – 0.0205)
2020	34,049	100%	5	0.0147	(0.0048 – 0.0343)
2021	31,007	100%	8	0.0258	(0.0111 – 0.0508)

* Coverage is the proportion of women attending public antenatal services who have been tested for HIV.

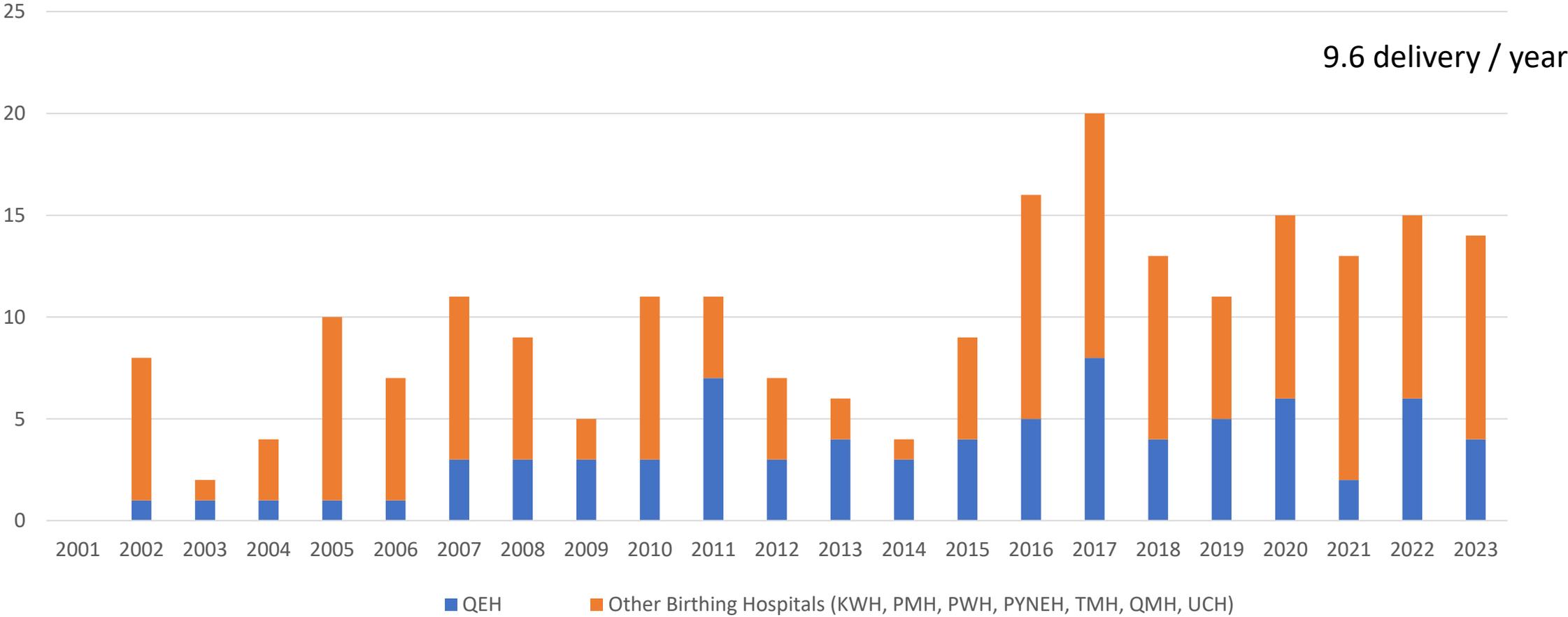
Outcomes of Antenatal HIV Testing Program

- UAPT testing coverage rose from 96% since in 2001 to 100% since 2016
- Since 2008 (UATP + POCT), the proportion of women who had HIV status known before delivery remains above 98%
- Prevalence of maternal HIV remains low (0.01% - 0.025%)
- From 2001/9 till 2021/12, a total of 136 HIV-positive pregnancies were identified by antenatal testing programme

Three Referral Centers in Hong Kong

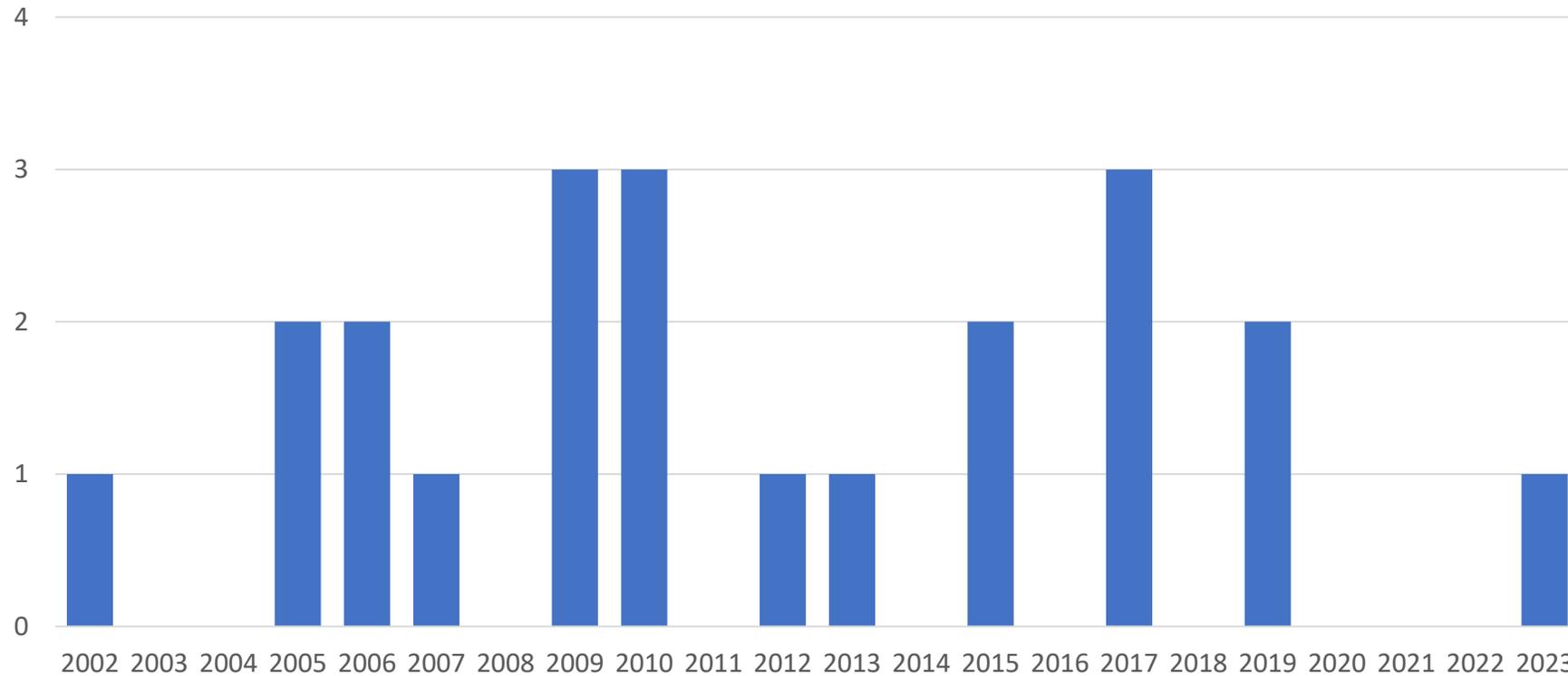
- Kowloon Bay Integrated Treatment Center
- Princess Margaret Hospital
- Queen Elizabeth Hospital
- Once HIV infection is confirmed in mother → Immediate Referral

Number of baby delivered from HIV positive mother in HA hospitals



Data: CDARS search via diagnosis coding
Courtesy: Dr. Polly Ho (QEH Pediatrics)

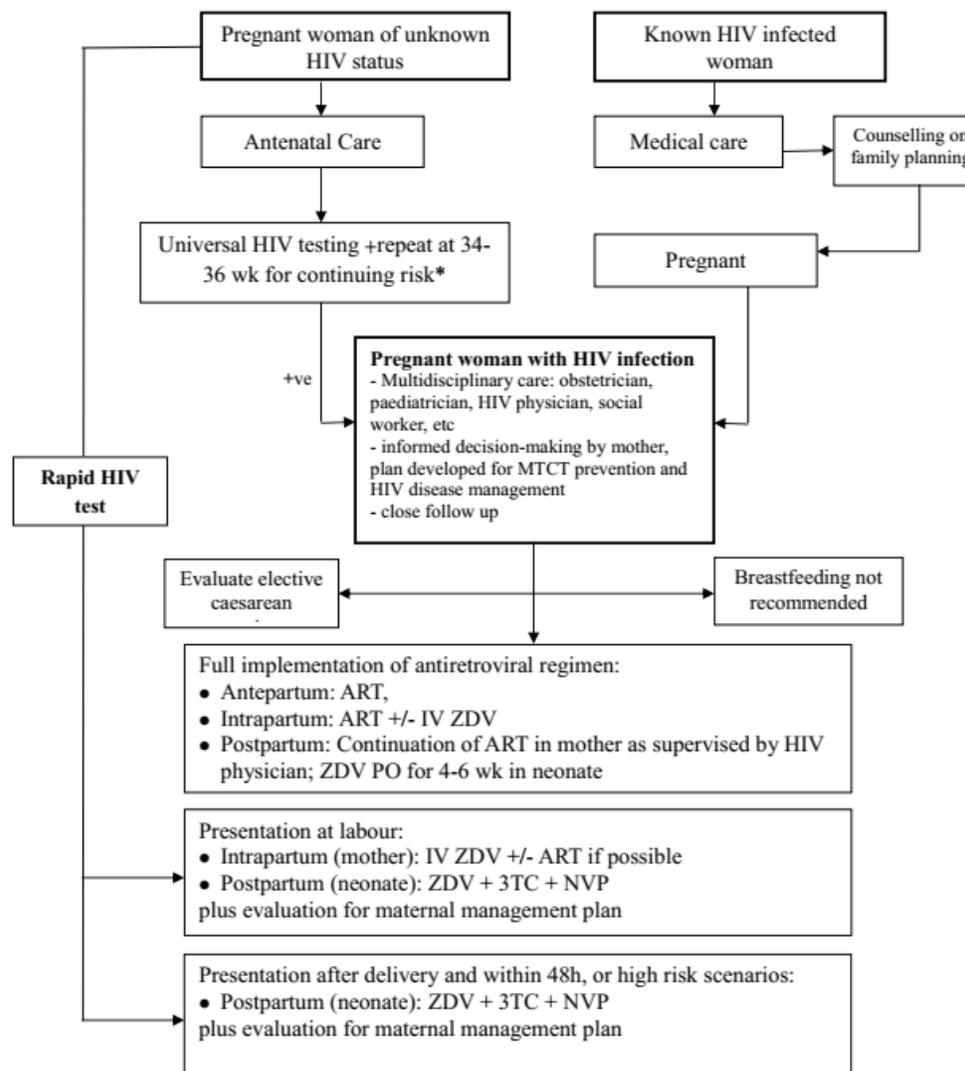
Number of Perinatal Infections Reported by Year



Referral Center for Pediatrics

- Queen Elizabeth Hospital, Department of Pediatrics
 - All newborns of HIV-positive mothers
 - Post-exposure prophylaxis
 - HIV testing
 - HIV-negative child → growth and development monitoring
 - HIV-positive child → antiretroviral treatment

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

 醫院管理局 HOSPITAL AUTHORITY	HA Central Committee on Infectious Diseases and Emergency Response (CCIDER)	Ref No.	CCIDER-HIVpreg-001(v1)
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	Management of pregnant women with HIV infection diagnosed in labour and pre-labour rupture of membranes	Approved by	CCIDER
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Management of pregnant women with HIV infection diagnosed in labour and pre-labour rupture of membranes

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Custodian	Central Committee on Infectious Diseases and Emergency Response (CCIDER)
Approved by	Central Committee on Infectious Diseases and Emergency Response (CCIDER)
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1. Summary

	Actions
HIV testing for woman presenting in labour/with pre-labour rupture of the membranes/requiring delivery without a documented HIV result	<input type="checkbox"/> Prompt point-of-care HIV test after informed consent and simultaneously send blood for urgent anti-HIV antibody testing <input type="checkbox"/> A positive point-of-care test must be acted upon immediately without waiting for the laboratory anti-HIV antibody test result <input type="checkbox"/> Screen viral hepatitis (e.g. HBV, HCV) and sexually transmitted infections (e.g. syphilis) if these have not been performed antenatally
Intra-partum care (point-of-care HIV test is POSITIVE)	<input type="checkbox"/> Disclose HIV diagnosis and discuss management with the pregnant woman <input type="checkbox"/> Urgent intrapartum IV zidovudine (ZDV) infusion, 1-hour loading dose at 2mg/kg followed by a continuous IV infusion of 1mg/kg/hour till delivery <input type="checkbox"/> In general, caesarean section is the preferred mode of delivery when HIV RNA level is unknown or >1,000 copies/mL, though obstetric indications should also be taken into consideration <input type="checkbox"/> May consider additional oral antiretroviral therapy <input type="checkbox"/> Inform paediatrician of the newly diagnosed maternal case
Post-partum and neonatal care	<input type="checkbox"/> Avoid breastfeeding <input type="checkbox"/> Consult paediatrician as soon as possible <input type="checkbox"/> Presumptive HIV therapy containing zidovudine (ZDV), lamivudine (3TC) and nevirapine (NVP) should be prescribed to the newborn within 6 hours after delivery, in view of high HIV acquisition risk <input type="checkbox"/> Check blood for HIV RNA PCR and HIV antibody on the first day of life and refer to Appendix I for other recommended neonatal care <input type="checkbox"/> Refer HIV-positive mother and HIV-positive child to HIV centers for management (Appendix II)

Bring Home Messages

- Early diagnosis of HIV infection in pregnant women or at-risk women of child-bearing age is the first step of PMTCT
- Antiretrovirals given antenatally, intrapartum and postnatally is the key to PMTCT
- Be prepared and get ready for the scenario of undiagnosed HIV-infected mother presenting in labour
- Multi-disciplinary care is crucial in the care of HIV-infected mother

Thank You