

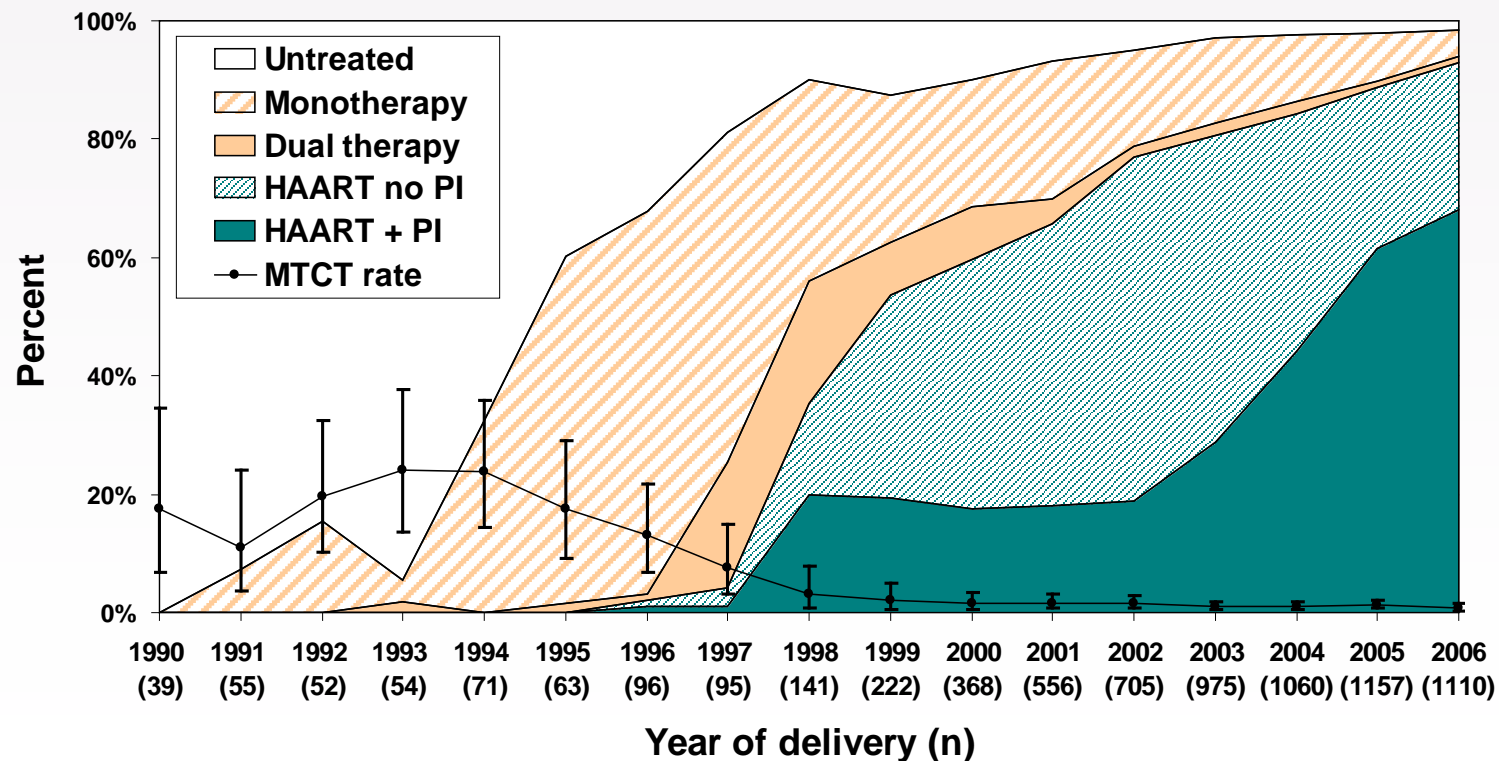
Mother-to-child transmission of HIV continues to decline in the UK & Ireland 2007-2011

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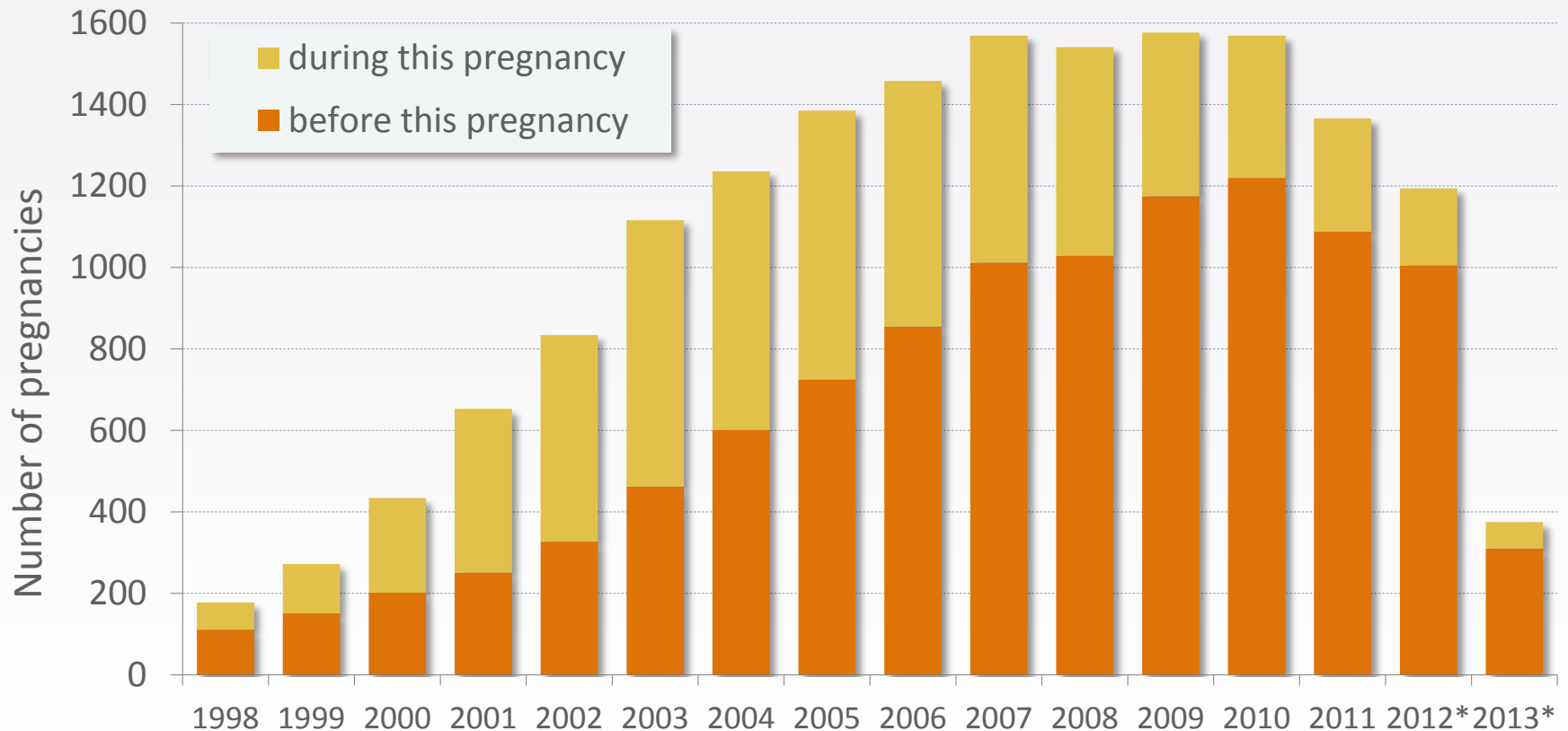
Background

- Rate of mother-to-child HIV transmission (MTCT) in diagnosed women in UK & Ireland: **1.2%** in 2000-06.



Background

Timing of maternal HIV diagnosis UK & Ireland 1998-2013



UK & Ireland pregnancies (all outcomes) reported to NSHPC by March 2013**

* Incomplete (reporting delay)

** includes data from all NSHPC reporting sources

Aims

- To present overall MTCT rates among diagnosed women in the UK and Ireland in 2007-2011, compared with 2000-2006 rates.
- To explore MTCT rates according to different treatment and mode of delivery scenarios.

Methods

- Pregnancies in HIV-infected women in the UK and Ireland are reported to the National Study of HIV in Pregnancy and Childhood (NSHPC), a population-based surveillance study.
- Children born to HIV-positive mothers are followed up to establish infection status.
- Analyses included live singleton infants born 2000-2011 and reported by March 2013.
- The association between duration of cART and probability of MTCT was analysed using generalized additive models in R.
- cART = combination antiretroviral therapy (3+ drugs)

Results: baseline characteristics

- There were 12,487 singleton live births to HIV-positive women between 2000 and 2011.

Pregnancy characteristics by time period		2000-2006	2007-2011	P-value
HIV diagnosis prior to reported pregnancy		46%	72%	<0.001
Antiretroviral therapy	No antenatal ART	3.3%	0.9%	<0.001
	Combination ART	82%	96%	
cART initiated prior to conception		25%	41%	<0.001
Undetectable viral load closest to delivery (median 23 days, IQR 9-42)		57%	76%	<0.001
Gestation at initiation of cART		25.7 weeks	22.7 weeks	<0.001
Planned vaginal delivery		14%	31%	<0.001

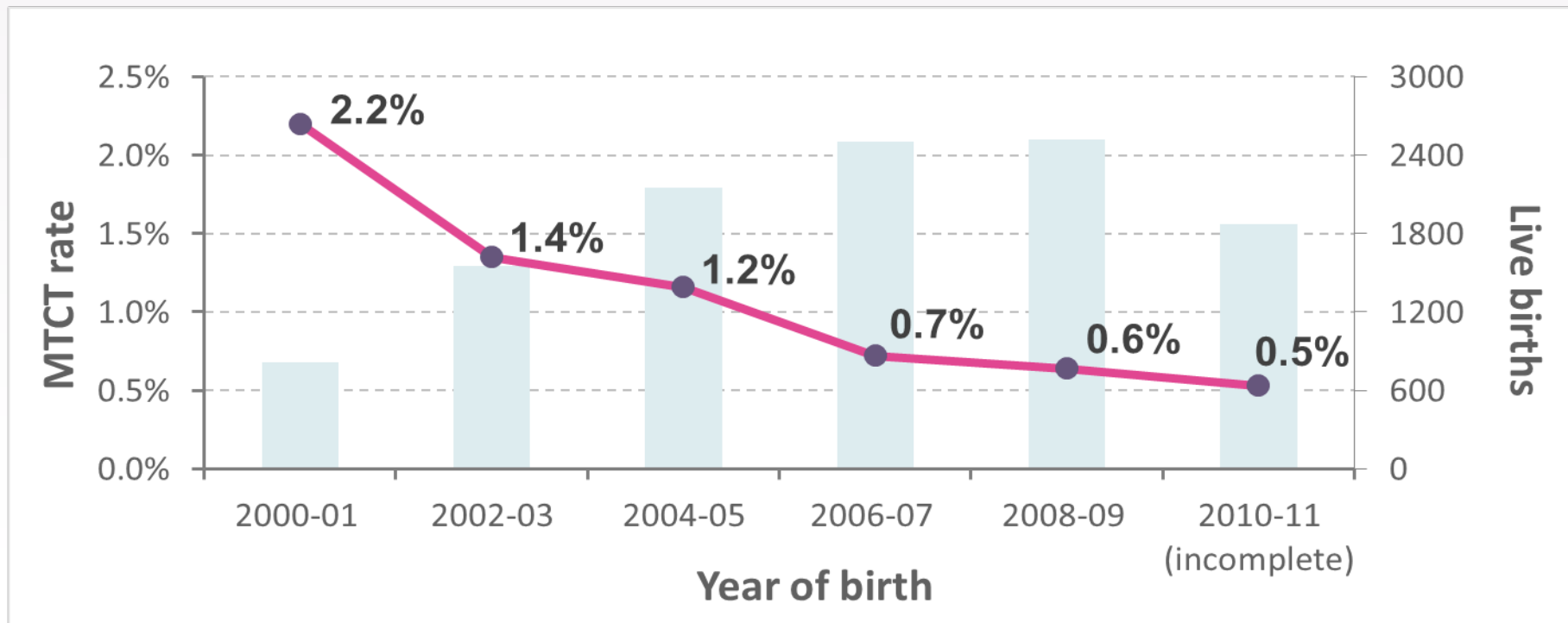
Results: MTCT rates over time

Overall MTCT rate in 2007-2011:

0.57% 95% CI: 0.42-0.84%

33 infected infants in 5788 singleton live births

MTCT rates in diagnosed women in UK & Ireland 2000-2011



Results: MTCT by receipt of ART

The number & proportion of transmissions attributable to short duration of cART or lack of treatment has declined:

Antenatal ART	MTCT in 2000-06		MTCT in 2007-11	
	N	%	N	%
None	14/149	9.4	4/54	7.4
<10 weeks of cART	26/935	2.8	8/342	2.3
>10 weeks of cART	10/2127	0.5	10/2599	0.4
cART from conception	2/1118	0.2	4/2105	0.2

77% (40/52) of transmissions in 2000-06 versus **46%** (12/26) in 2007-11 (p<0.001)

Breastfed infants and clear postnatal transmissions excluded

Results: mode of delivery and viral load

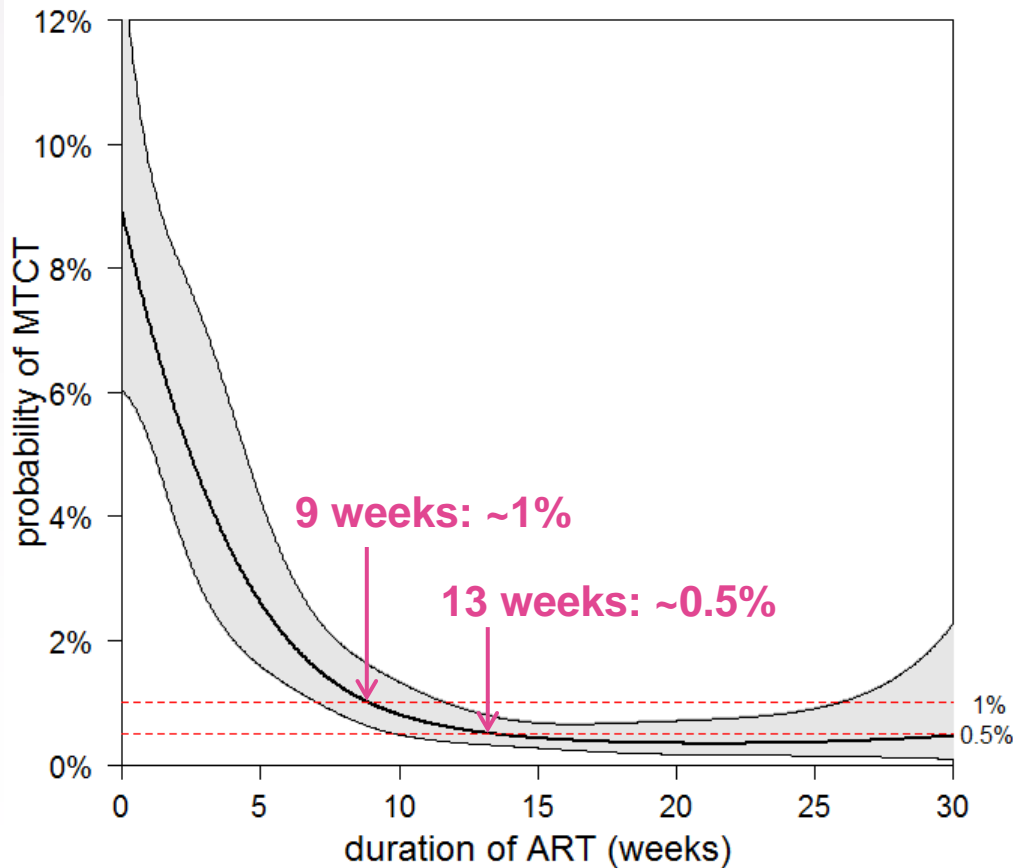
MTCT rates in women on cART

Mode of delivery	MTCT in 2007-11	
	N	%
Elective caesarean section	12/2050	0.6
Emergency caesarean section	7/1360	0.5
Planned vaginal delivery	3/1720	0.2
HIV RNA plasma viral load *		
Undetectable (<50 copies/ml)	2 ^{**} /3915	0.05
51-400 copies/ml	7/684	1.0
>400 copies/ml	13/447	2.9

* Median 23 days before delivery. ** Intrapartum/postpartum transmissions

Results: duration of cART

Probability of MTCT by duration of cART *



$n=6507$

Pregnancies delivered 2000-2011

* Model does not account for baseline viral load or any other factor

Summary

- In the context of an already successful prevention programme, MTCT rates in the UK and Ireland continued to improve in recent years, reaching 0.46% in 2010-2011
- This was primarily due to a reduction in transmissions associated with late initiation or non-receipt of cART in pregnancy, as well as an increase in the proportion of women on cART at conception.
- The predicted probability of MTCT declined rapidly with each additional week of cART up to about 10 weeks duration, levelling off at 0.4% after about 13 weeks.

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