Postpartum Care Engagement in HIV Care: An Important Predictor of Long-Term Retention in Care and Viral Suppression

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Overview

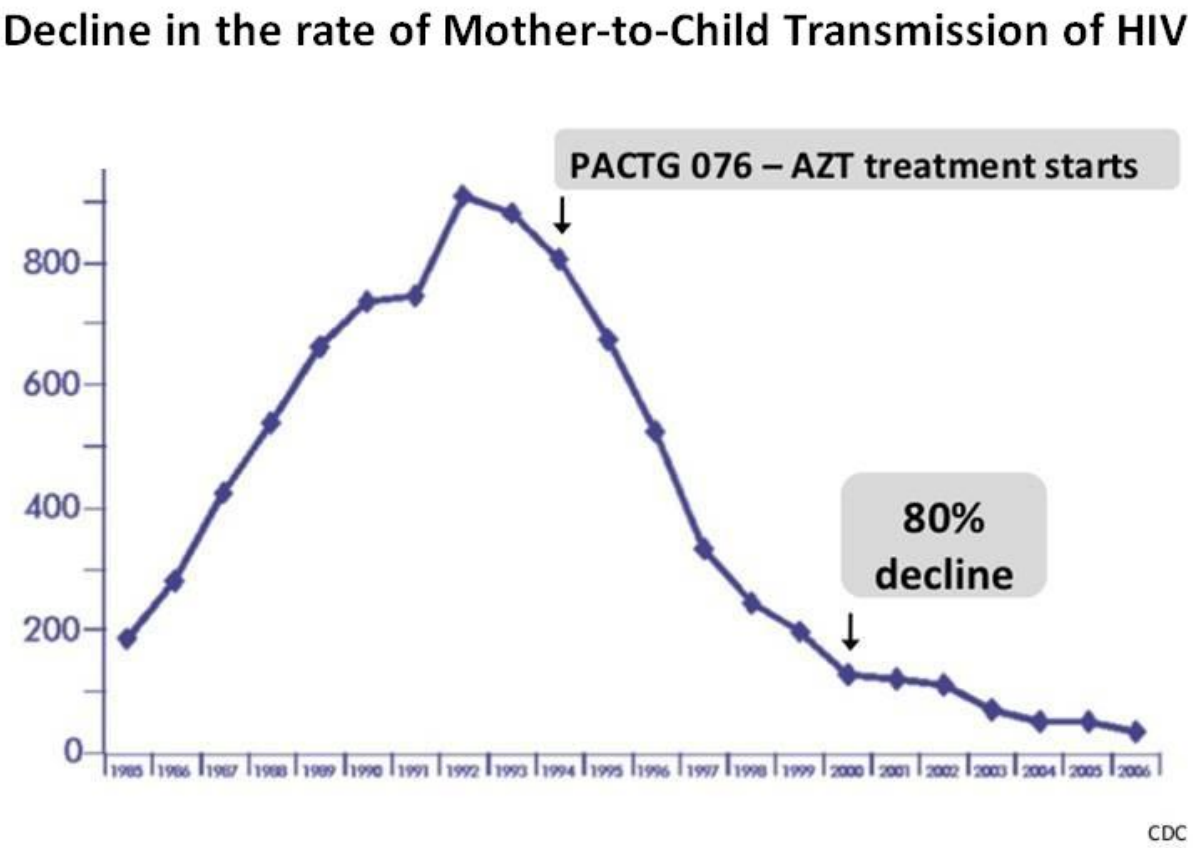
- WLWH experience unique challenges during pregnancy and postpartum
- Poor outcomes along the HIV Care Continuum
  - Analyses using HIV surveillance evaluating these outcomes during pregnancy and postpartum
- The immediate postpartum period:
  - is a critical time for WLWH
  - opportunity to keep women engaged in life long HIV therapy
- Summary and implications for future interventions

Introduction

- The prevention of MTCT of HIV has been a success in the U.S.

- ≥ 80% decline

- Health policies toward PMTCT are well build, however, little attention is given around the care and outcomes of HIV+ mothers after delivery



Challenges in the Postpartum Period

- Motivated to be in care to prevent perinatal HIV infection[1]
- Increased life demands related to child care responsibilities
- Flare of co-morbid conditions, particularly CVD and drug overdose as shown on recent PHL maternal mortality report
- Sub-analysis revealed presence of severe psychosocial stressors: lack of partner support (40%) and family support (30%), intimate partner violence (24%), housing insecurity (55%), incarceration/parole violation (18%)
- Care coordination between pediatric, HIV, OB, +/- primary and other subspecialty care

1. Mellins, Chu et al. AIDS Care, 2008

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MAJOR ARTICLE HIV/AIDS

Postpartum Engagement in HIV Care: An Important Predictor of Long-term Retention in Care and Viral Suppression

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Specific Aims

1) Describe aspects of the HIV care continuum, specifically retention and viral suppression postpartum, of WLWH up to two years after delivery

2) Evaluate factors associated with these outcomes

Methods

- Data abstracted from two population based HIV surveillance systems
  - Philadelphia Enhanced Perinatal Surveillance
  - Philadelphia Enhanced HIV/AIDS Reporting System

- Study Population
  - WLWH who had a live delivery in Philadelphia between 2005 and 2011

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Methods

Exposure Variable

- **Reengagement in HIV care within 90 days postpartum** (≥1 CD4 or HIV-RNA test within 90 days postpartum)

Outcome Measures

- **Retention in care at one and two years postpartum** (≥1 CD4 or HIV-RNA test in the 12 or 24 months postpartum, 60 days between labs)

- **Viral suppression at one and two years postpartum** (HIV-RNA <200 copies/mL using the lab closest to the end of 12 or the 24 month postpartum period)

Analysis

Multivariable logistic regression models to measure the association between HIV care engagement within 90 days of delivery with our outcomes, retention and suppression at one and two years postpartum.

Results

Characteristics, total n=695*	n	%
Maternal age at delivery, y		
16-24	182	26.2
25–34	363	52.2
≥35	150	21.6
Race/ethnicity		
Black	543	78.1
White	60	8.6
Other race	92	13.2
Alcohol, tobacco, or marijuana use during pregnancy	155	22.3
Illegal drug use during pregnancy (excluding marijuana)	113	16.3
HIV diagnosis <2 y before delivery	241	34.7

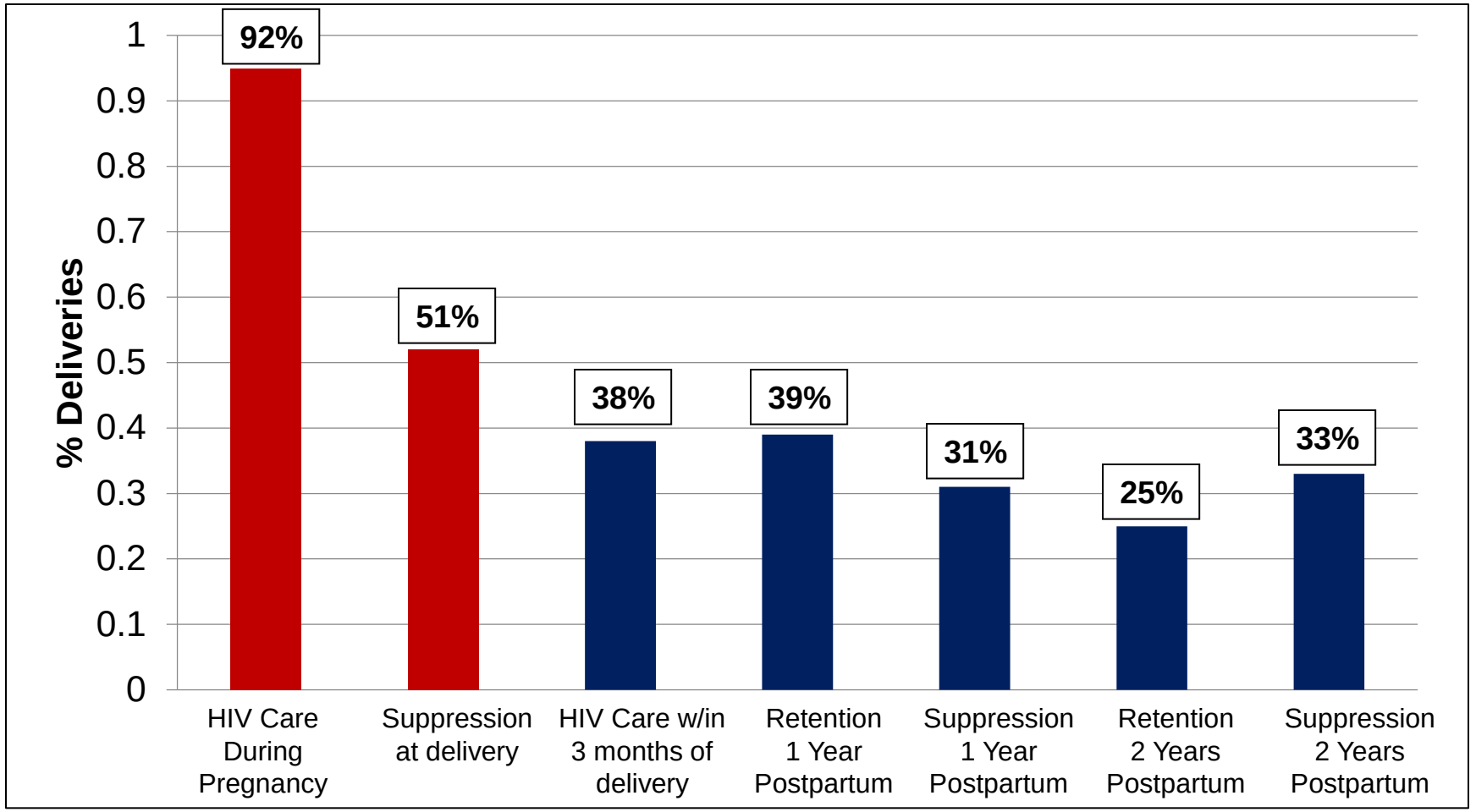
*695 deliveries among 561 WLWH, 2005-2011

Results

Characteristics, total n=695	n	%
Adequacy of prenatal care*		
Adequate	295	42.5
Intermediate	215	30.9
Inadequate/no prenatal care	185	26.6
No ART prescribed during pregnancy	78	11.2
Previous pregnancy with an HIV diagnosis	253	36.4
Year of delivery**		
2005–2007	315	45.3
2008–2009	201	28.9
2010–2011	179	25.8

*measured with the Kessner Index (timing of entry in PC, # of PC visits and the gestational age at delivery)
** Categorized to reflect 3 periods of major revision in the DHHS guidelines regarding HIV treatment initiation

HIV Care Continuum Postpartum



Factors Associated with Retention

Table 2. Factors Associated With Postpartum Human Immunodeficiency Virus (HIV) Care Retention of 561 HIV-Infected Women (N = 695 Deliveries) in Multivariable Logistic Regression Models

	Retention in Care at 1 y		Retention in Care at 2 y	
Characteristic	AOR[a]	95% CI	AOR[a]	95% CI
Maternal age at delivery, y				
16–24	1.50	.94–2.38	1.37	.86–2.20
25–34	1	NA	1	NA
≥35	0.89	.55–1.47	0.80	.48–1.34
Race/ethnicity				
Black	1.14	.59–2.19	0.57	.31–1.04
White	1	NA	1	NA
Other (multirace, Hispanic, unknown)	0.91	.39–2.10	0.84	.38–1.87
Alcohol, tobacco, or marijuana use during pregnancy	1.23	.73–2.05	0.94	.56–1.59
Illegal drug use during pregnancy (excluding marijuana)	0.62	.32–1.20	0.71	.36–1.40
HIV diagnosis <2 y before delivery	0.80	.51–1.25	**0.55**	**.34–.88**
No ART prescribed during pregnancy	0.86	.44–1.70	0.88	.43–1.83
Previous pregnancy with HIV	0.90	.59–1.37	0.94	.62–1.44
Adequacy of prenatal care (Kessner)				
Adequate	1	NA	1	NA
Intermediate	0.64	.41–1.00	0.70	.45–1.09
Inadequate/no prenatal care	0.63	.37–1.06	**0.40**	**.22–.72**
Year of delivery				
2005–2007	1	NA	1	NA
2008–2009	**1.65**	**1.06–2.57**	**2.07**	**1.30–3.30**
2010–2011	**2.11**	**1.34–3.33**	**2.35**	**1.47–3.77**
HIV care engagement within 90 d postpartum (Y/N)	**11.38**	**7.74–16.7**	**6.19**	**4.04–9.50**

Findings remained significant when redefined retention at 1 Y PP at 15 months PP and 2-Y retention at 2Y and 3 months PP

Factors Associated with Suppression

Table 3. Factors Associated With Postpartum Viral Suppression of 561 Human Immunodeficiency Virus-Infected Women (N = 695 Deliveries) in Multivariable Logistic Regression Models

	Viral Suppression at 1 y		Viral Suppression at 2 y	
Characteristic	AOR[a]	95% CI	AOR[a]	95% CI
Maternal age at delivery, y				
16–24	0.98	.63–1.51	**0.58**	**.38–.89**
25–34	1	NA	1	NA
≥35	1.51	.98–2.33	0.96	.64–1.44
Race/ethnicity				
Black	0.60	.32–1.13	0.59	.33–1.08
White	1	NA	1	NA
Other (multirace, Hispanic, unknown)	0.66	.30–1.45	0.51	.24–1.10
Alcohol, tobacco, or marijuana use during pregnancy	1.41	.90–2.21	1.16	.75–1.81
Illegal drug use during pregnancy (excluding marijuana)	0.96	.52–1.77	0.89	.53–1.49
HIV diagnosis <2 y before delivery	0.98	.64–1.51	0.83	.55–1.25
No ART prescribed during pregnancy	**0.42**	**.21–0.88**	0.89	.46–1.73
Previous pregnancy with HIV	0.74	.49–1.11	0.73	.48–1.10
Adequacy of prenatal care (Kessner)				
Adequate	1	NA	1	NA
Intermediate	0.68	.45–1.02	0.83	.58–1.19
Inadequate/no prenatal care	**0.61**	**.39–.95**	**0.55**	**.34–.89**
Year of delivery				
2005–2007	1	NA	1	NA
2008–2009	**2.55**	**1.67–3.92**	**1.78**	**1.19–2.66**
2010–2011	**3.75**	**2.40–5.84**	**2.59**	**1.73–3.89**
HIV care engagement within 90 d postpartum	**2.60**	**1.82–3.73**	**1.40**	**1.01–1.95**

Summary and Significance

- WLWH are falling sharply out of HIV care within 3 months of delivery
- Those who disengage in HIV care postpartum are less likely to be retained and suppressed up to 2 years after delivery
- Grave consequences for maternal outcomes
- The postpartum period should be used to:
  - To keep women in life long ART and prevent perinatal HIV transmission for future pregnancies
  - Manage mental health and other co-morbid condition
  - Interconception care and family planning

Implications for Future Interventions

- Need to rethink our current model of care
- Create models of HIV care delivery that support women:
  - combined pediatric-HIV care
  - home visits
  - peer to peer
  - centering and others
- While treating HIV, address psychosocial barriers to care
- Investing in women in the peripartum period has the potential to affect their care long term

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