



Advancing the Maternal & Child Health VISION
ASSOCIATION OF MATERNAL & CHILD HEALTH PROGRAMS 2013 ANNUAL CONFERENCE



Integrating Primary Care and Public Health to Reduce Mother-to-Child HIV Transmission




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The *Classic* Six-Step QUERI Process


1. Identify high risk/high burden conditions
2. Identify best practices
3. Define existing practice patterns and variations from best practices
4. Identify (or develop) and implement programs to promote best practices
5. Document outcome and system improvements
6. Document improvements in health-related quality of life



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Nevada 2004-2006

- Ranked 35th among states in number of people living with HIV/AIDS
- Only state west of the Mississippi River with elevated number of HIV-infected women of child-bearing age
- No documented perinatal infection 2004
- 4 documented perinatal infections 2005-06



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Case I

- 26-year-old female with no prenatal care and unknown HIV sero-status
- Rapid HIV test was negative, delivered within 24 hours. Discharged with infant and continued to breastfed
- Infant referred by pediatrician for persistent oral thrush. Diagnosed with HIV at 8 months
- Upon review, Husband known with AIDS to the health department and hospital but unknown to labor and delivery

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Case II

- 29-year-old woman admitted in labor at 33 wks, no PNC and unknown HIV status
- HIV ELISA drawn and sent to outside lab.
- She delivered 4 days later. No intervention for mother and baby
- Infant diagnosed with HIV at 6 months of age
- Upon review, HIV ELISA was positive days prior to delivery

Exzandue EE, Shanear C. Challenges to the Elimination of mother-to-Child HIV Transmission. AIDS Read 2007; 33-38

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Case III

- 36-year-old female with limited PNC. Unknown HIV sero-status
- Rapid HIV test during labor was reactive. Received AZT during labor and delivery
- Infant discharged on zidovudine and referred to pediatrician for follow up. Non-compliant
- Child seen by pediatrician for multiple infections and admitted for failure to thrive. Diagnosed with HIV at 18 months

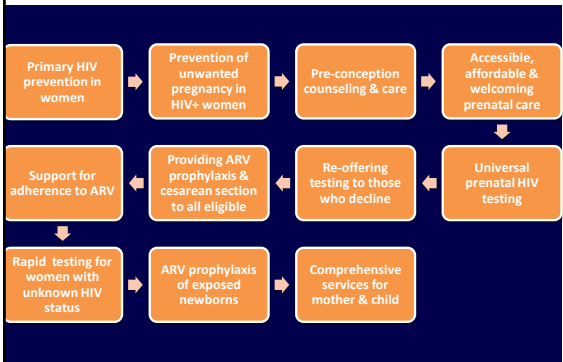
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**Chain of Events Leading to an HIV-Infected Child
The Proportion of Women...**



Steps to reducing MTC Transmission



The Issues

- Poor prenatal care among pregnant women
- Low rate of HIV testing among pregnant women
- Poor communication between health department and health care providers
- Poor coordination of care among health care providers

Eszarolus EE. Why are children still being infected with HIV in the US? Pediatric Academic Societies meeting, Toronto Canada May 5-8, 2007. PAS 2007:61:804S.2



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Identifying Community Partners

1. Build a team
2. Build a program
3. Build collaboration



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Interdisciplinary Team Building

- Obstetrician
- Pediatrician
- Nurse Practitioner
- Social Workers
- Case Workers
- Program Coordinator



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Integrated Program in Las Vegas



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Integrating Services

Case Management

Early Intervention → Primary Care

Obstetric Care

Pediatric Care



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Improving Communication

•Laboratory

•Health Department

•Obstetrician

•Pediatrician



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Working with Communities

•Hospital Maternal-Child Units

•Aid for AIDS of Nevada

•Community Counseling Center

•Other Ryan White Funded Programs



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Outcomes 2007-2012

HIV Exposed Births

Year of birth	Number of Births	Males	Females	HIV +
2007	20	10	10	0
2008	20	8	12	0
2009	28	14	14	0
2010	24	8	16	0
2011	9	6	3	0
2012	10	5	5	0
Total	111	51	60	0



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Outcomes 2007-2012

Race/Ethnicity

Year	African American	Hispanic	Caucasian	Native American	Asian/Pacific Islander	Other
2007	11	4	4	0	0	1
2008	10	4	4	1	1	0
2009	11	13	2	0	0	2
2010	13	5	5	0	0	1
2011	6	1	1	0	0	1
2012	6	2	1	0	0	1
Total	57	29	17	1	1	6

Type of Insurance

Medicaid	CASH	PRIVATE/OTHER
66%	5%	29%



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MOTHER INFORMATION

PRENATAL CARE	RECEIVED ARV THERAPY	
RECEIVED PNC	DURING PREGNANCY	DURING LABOR
80%	76%	84%

HIV DIAGNOSED

PRIOR TO PREGNANCY	DURING PREGNANCY	DURING LABOR	AFTER DELIVERY
59%	28%	7%	2%

DELIVERY METHOD

C-SECTION	VAGINAL	OTHER
71%	25%	4%




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INFANT INFORMATION

COMPLETED AZT TREATMENT			
12 HOURS		6 WEEKS	
81%		(100%) 76%	

COMPLETED TESTING			
HIV DNA/PCR (100%)		ELISA	
BIRTH	1 MONTH	4 MONTH	12-24 MONTHS
79%	76%	64%	59%



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HIV/AIDS Epidemiology

Overview of HIV among women of child-bearing age and infants 2010


People Living with HIV /AIDS	Global ¹	US ²	NV ³
Total	34 Million	871,846	8,352
Women	16.7 Million	300,00	1,395
Children (<15 Years)	3.3 Million	4500	11

People newly infected with HIV	Global	US	NV
Total	2.5 Million	48,298	368
Adults	2.2 Million	48,079	368
Women of Child-bearing age (13-55 Years)	~1.1 Million	9,868	49
Children (<15 Years)	330,000	219	0

1. GLOBAL HIV/AIDS RESPONSE: Epidemic update and health sector progress towards Universal Access. Progress report 2011. WHO | UNAIDS | UNICEF.

2. Centers for Disease Control and Prevention. HIV/AIDS data through December 2008 provided by the Ryan White HIV/AIDS Treatment Extension Act of 2009. for fiscal year 2010. HIV Surveillance Supplemental Report 2012; 17(No. 1).

3. Nevada State Health Division HIV/AIDS Reporting System (eHARS), February 2011



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Is preventing HIV really worth it?



* 16 year old with HIV recently identified

* 2 months hospitalization mostly in ICU

* 5 subsequent hospitalization ~7 days each hospitalization for complication including esophageal perforation



* Cohort study of all 88 children

* Mean total lifetime cost of care for children with HIV infection was \$418, 863 in 1996



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THANK YOU

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