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High Mortality and Low Rates of Long Term Engagement in Care Following Delivery Among HIV-Infected Women in Mississippi

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Disclosure

- Contracted Research to Institution: Gilead

Background

- A growing number of HIV-infected women are giving birth every year.
- Pregnancy provides a unique opportunity to impact the HIV Treatment Adherence Cascade

Whitmore SK, et al. Estimated Number of Infants Born to HIV-Infected Women in the United States and Five Dependent Areas, 2006. *JAIDS* 2011.

Lando HA et al. Promoting smoking abstinence in pregnant and postpartum patients: a comparison of 2 approaches. *Am J Manag Care*. Jul 2001;7(7):685-693.

Matthey S, et al. Prevention of postnatal distress or depression: an evaluation of an intervention at preparation for parenthood classes. *J Affect Disord*. Apr 2004;79):113- 126.

Wodak A et al. Evaluation of a cognitive-behavioural intervention for pregnant injecting drug users at risk of HIV infection. *Addiction*. Aug 1996;91(8):1115-1125.

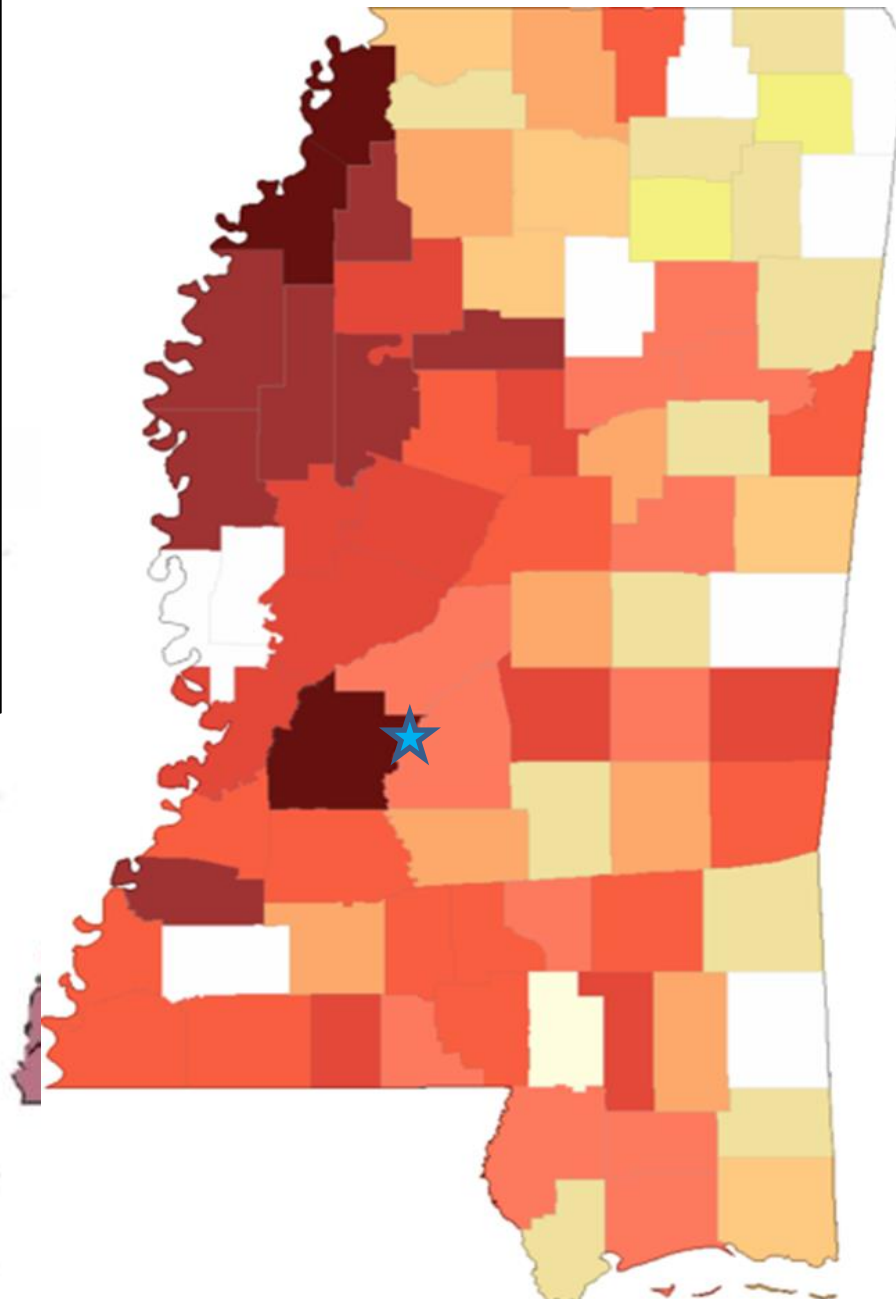
Background

- Postpartum HIV-infected women face challenges with treatment adherence.
- Women in the deep South may experience greater difficulties with care engagement due to poor access to care, stigma, lack of social support, and mistrust in the health care system.

1. Bardeguet et al. Adherence to antiretrovirals among US women during and after pregnancy. JAIDS 2008; 48:408.
2. Watts DH et al. Progression of HIV disease among women following delivery. JAIDS 2003; 33:585–93
3. Postpartum viral load rebound in HIV-1 infected women treated with HAART. HIV Clin Trials 2011; 12:9–23
4. Sex, race, and geographic region influence clinical outcomes following primary HIV-1 infection. JID Feb 15 2011;203(4):442-451
5. Reif S. et al, HIV Diagnoses, Prevalence and Outcomes in Nine Southern States, 39(6) J. Comm. Health (2015) 40:642–651

Rates of Females Living with an HIV diagnosis, by County, 2012

AIDSVu (www.aidsvu.org). Emory University, Rollins School of Public Health



**Mississippi
Public Health
Districts I-IX**

Objectives

- Retrospective analysis of all HIV-infected women ≥ 16 years who delivered in Mississippi from January 1, 2002 to Dec 31, 2014.
- Focus on health care utilization and outcomes:
 - Death/Progression to AIDS
 - Engaged in care in 2015 (one medical visit or CD4/PVL in 2015)
 - HIV-1 Plasma Viral Load < 200 copies/mL in 2015

Methods

- Clinical data from all 9 federally funded Ryan White clinics in Mississippi (Careware)
 - Statewide implementation in 2005-2006
- Mississippi Department of Health (MSDH) Enhanced HIV/AIDS Reporting System (eHARS)
 - Mandatory CD4/HIV Viral Load reporting to MSDH started Jan 2013

Demographics

Total Women

548

Total number of deliveries

685

Median Age at First Delivery (IQR)

26 (23,31)

Race

Black 474 (86.5%)

White 57 (10.4%)

Multiple 4 (0.7%)

AI/AN 3(0.5%)

Not reported 10 (1.8%)

Hispanic

15 (2.7%)

Median Annual Income (IQR) (n=208)

\$9780 (\$4116, \$15570)

Insurance

Medicaid* 123 (22.4%)

Uninsured 65 (11.8%)

Private 20 (3.6%)

Medicare 9 (1.6%)

Unknown 217 (39.6%)

Housing Status

Stable/Permanent 192 (35%)

Temporary/Unstable 23 (4.2%)

Unknown 215 (39.2%)

Geography

Health District (N=300)

I	10 (3.3%)
II	6 (2%)
III	36 (12%)
IV*	12 (4%)
V	134 (44.7%)
VI*	27 (9%)
VII	23 (7.7%)
VIII	31 (10.3%)
IX	21 (7%)

Current State of Residence eHARS (N=415)

Mississippi **383 (92.3%)**

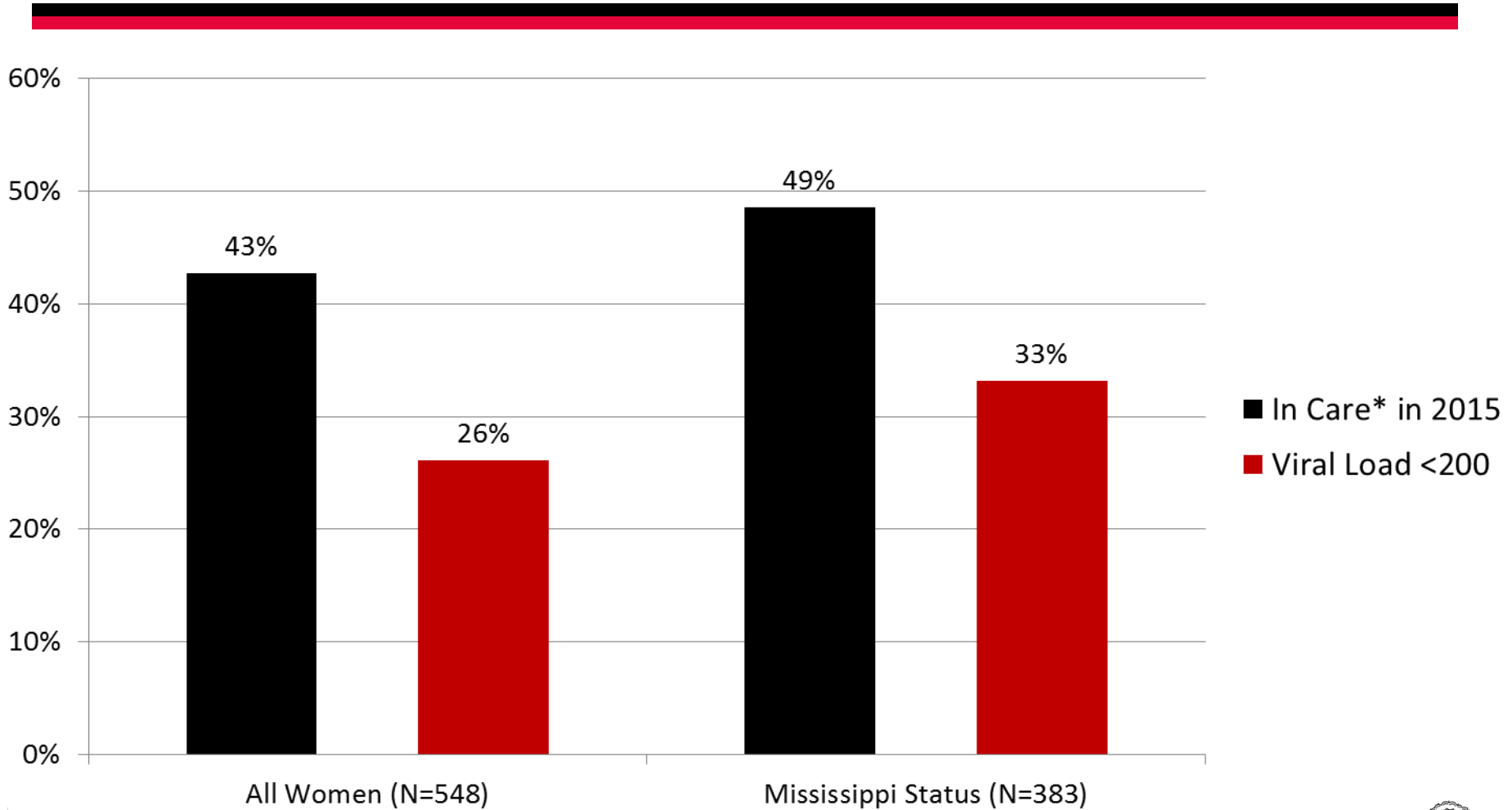
* No Ryan White HIV Provider in District

HIV

<u>Median Age at HIV Dx</u> (IQR) (n=548)	22 (19, 27)
<u>HIV Risk</u>	
Heterosexual	395 (72.1%)
Perinatal	15 (2.7%)
IDU	13 (2.4%)
Unknown	125 (22.8%)
<u>HIV dx around pregnancy</u>	206 (37%)
<u>AIDS Diagnosis</u>	268 (48.9%)
<u>Median Age at AIDS</u> (IQR) (n=268)	28 (23, 32)
<u>AIDS within 1 year of HIV dx</u>	68 (13%)
<u>Median Time HIV to AIDS, years</u> (n=268)	4.67 (.91, 8.3)
<u>Median Last available CD4 cells/μL</u> (IQR)	494 (305, 695)
<u>Most recent HIV-1 PVL</u>	
<200 copies/mL	146 (26.7%)
>200 copies/mL	228 (41.6%)
Missing	174 (31.8%)
<u>Perinatal Transmission</u>	9 (1.3%)

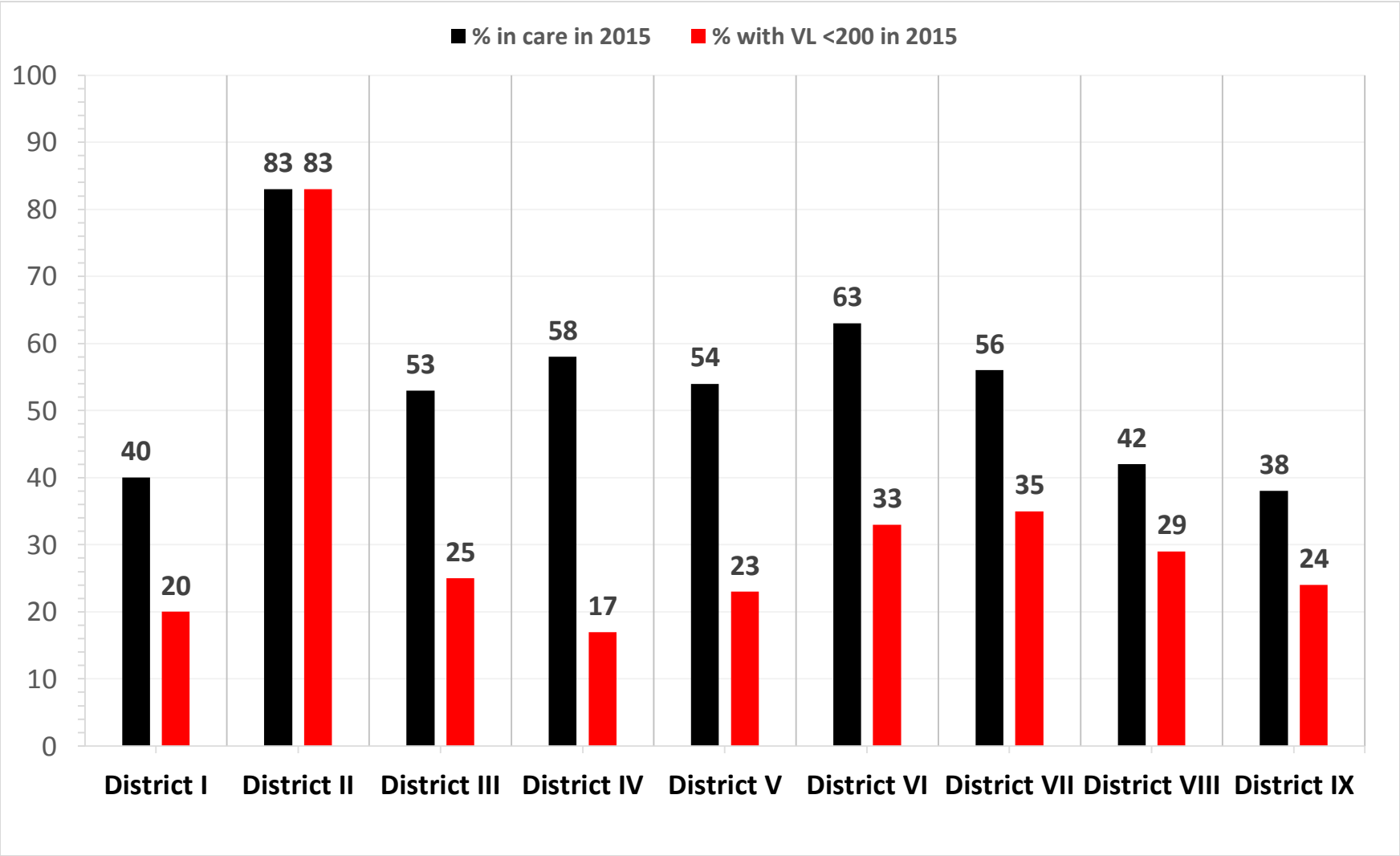


Engagement in 2015



*Any CD4/HIV PVL (eHARS) or medical visit in CAREWARE in 2015

Outcomes by Health District in 2015



Mortality

Number of Deaths	67 (12.2%)
Median Age at death (IQR)	32.4 (28.1, 36.7)
Median Time from HIV dx to death, years (IQR)	9.3 (6, 14.7)
Median Time from AIDs dx to death, years	4.5 (2.1-7.9)
Median time from last delivery to death, years (IQR)	5.35 (3.0, 7.0)
Median last available CD4 cells/μL (IQR) n=60	38 (9, 133)
Median last available HIV PVL copies/mL (IQR) n=58	59220 (7713, 195137)

Conclusions

- Young, HIV infected women in Mississippi experience low rates of retention and viral suppression, and significant morbidity and mortality following delivery.
- Systems based and innovative interventions initiated during pregnancy and continued through postpartum phase to support engagement with care may improve longitudinal treatment adherence and health outcomes.
- Interventions should be developed in collaboration with target health districts with lowest rates of care engagement.

Next Steps

- Analysis of predictors of retention, viral suppression and AIDS/mortality
- Cause of death
- GIS mapping (census tract data, health districts)
- Prospective study of HIV-infected pregnant and postpartum women
 - Followed longitudinally over 2 year period
 - Assessments of structural and behavioral barriers to care

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 - Kendra Johnson, MPH. Epidemiologist, STD/HIV Office
- **Ryan White Clinics in Mississippi**
 - UMC Adult Specialty Clinic, Jackson
 - UMC Adolescent Clinic, Jackson
 - Southeast Mississippi Rural Health Initiative, Hattiesburg
 - Crossroads South, McComb
 - Magnolia Medical, Greenwood
 - Coastal Family Health, Gulfport
 - GA Carmichael, Canton
 - Aaron Henry Clinic, Clarksdale
 - Garfield Clinic, Tupelo
 - Crossroads North, Greenville