

**DESCRIPTIVE ANALYSIS:**

**CALENDAR YEAR 2008**

**WV RIGHT FROM THE START (RFTS)**

**PROGRAM**

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## INTRODUCTION

The Right From the Start (RFTS) Program began offering comprehensive in-home care coordination services to West Virginia government sponsored pregnant women in 1989. In 2000, RFTS began offering services to the highest at-risk infants as well. This report provides an overview of the characteristics of prenatal and infant clients who received one or more RFTS services during calendar year (CY) 2008. Additionally, the report compares 2007 & 2008 RFTS data as well as looking at the differences found between women who were enrolled into RFTS (received at least one prenatal service) and women who were eligible (Medicaid) but not successfully enrolled.

## METHODS

The Birth Score Program has entered into an agreement with the WV Health Statistics Center which administers all Birth Certificate and Death Certificate information for the state. Each month an updated listing of all issued Birth Certificates is sent electronically to the Birth Score Program to facilitate a database match and create a Master linked data set file. The Birth Score Program also receives a data file from RFTS electronically of those women who were enrolled in RFTS and received services in a given year. Additionally, the Birth Score Program refers the highest at-risk infants for RFTS services during the first year of their life. The RFTS files are then merged into the Master linked data set file. This Master file contains all data pertaining to the mothers' pregnancy, Birth Score status of the infant, and Birth Certificate information.

Four groups that are analyzed in this report are: Group I-Medicaid eligible prenatal women who were enrolled and received at least one RFTS service in CY 2008; Group II-Medicaid eligible infants who were enrolled and considered the highest at-risk and born in CY 2008; Group III - Medicaid eligible women who were eligible for RFTS but not enrolled; and Group IV-Medicaid eligible prenatal women who were enrolled and received at least one RFTS service in CY 2007.

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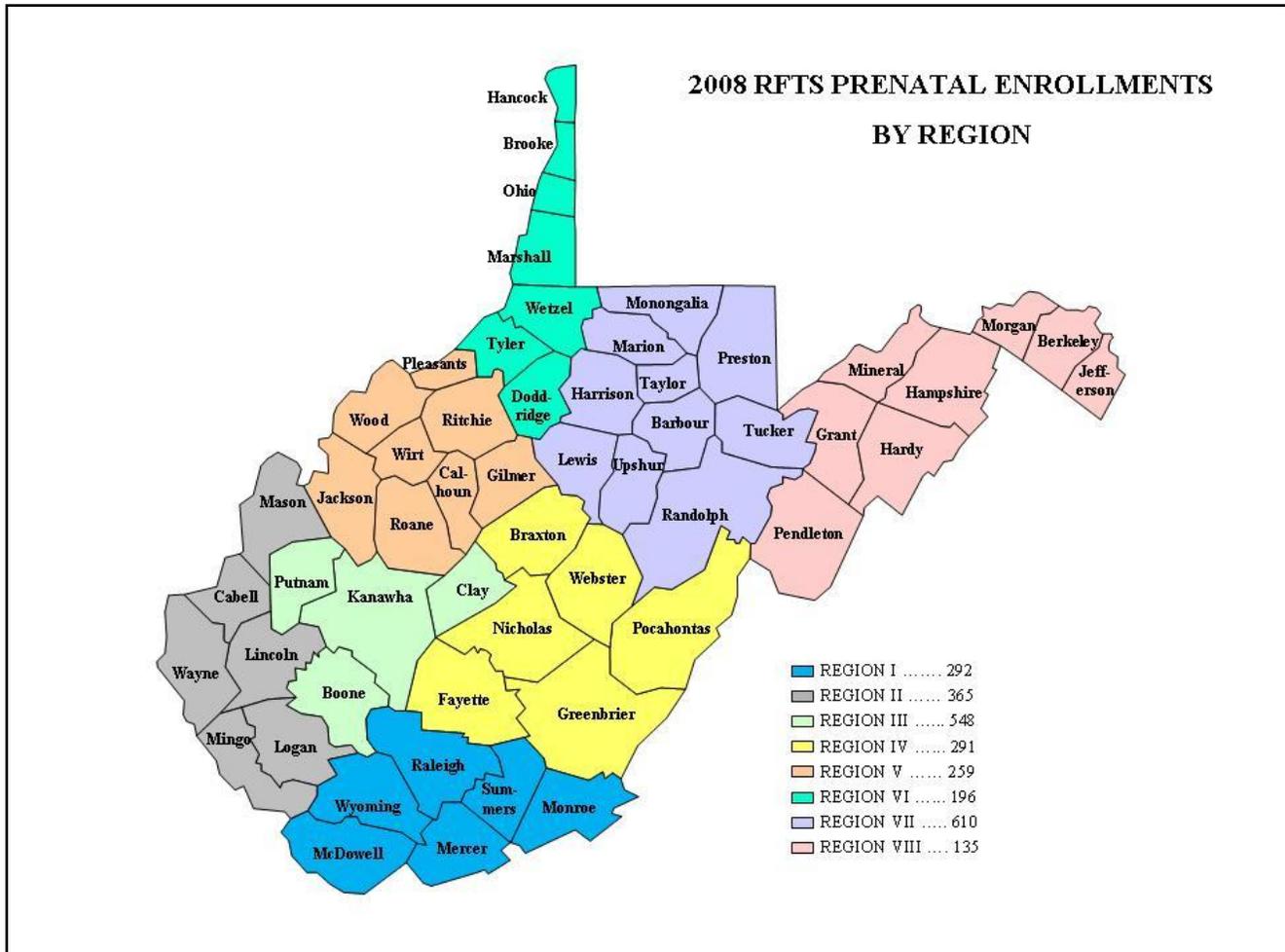
Group I consisted of 3,032 prenatal women meeting the necessary criteria. The Master linked file identified 2,696 (89%) with complete data to analyze.

Group II consisted of 1,789 infants meeting the necessary criteria. The Master linked file identified 1,698 (95%) with complete data to analyze.

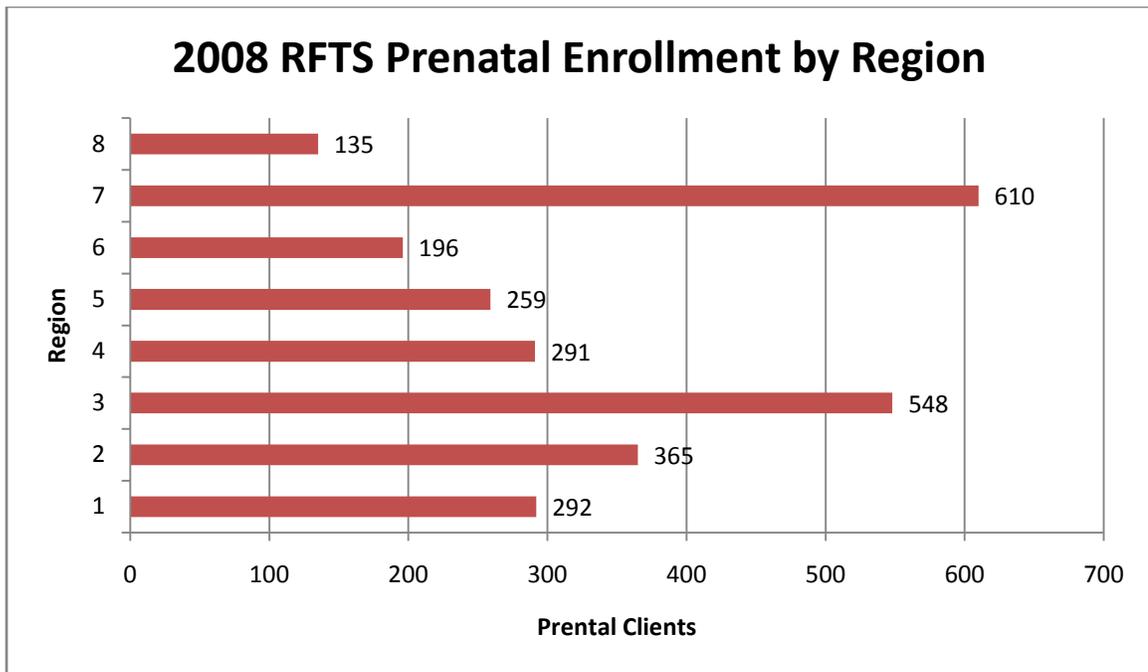
Group III consisted of 10,950 prenatal women who were Medicaid but did not chose to enroll in RFTS. The Master linked file identified 8,170 (75%) with complete data to analyze.

Group IV consisted of 3,589 prenatal women who received at least one RFTS service during CY2007 meeting the necessary criteria. The Master linked file identified 3,085 (86%) with complete data to analyze.

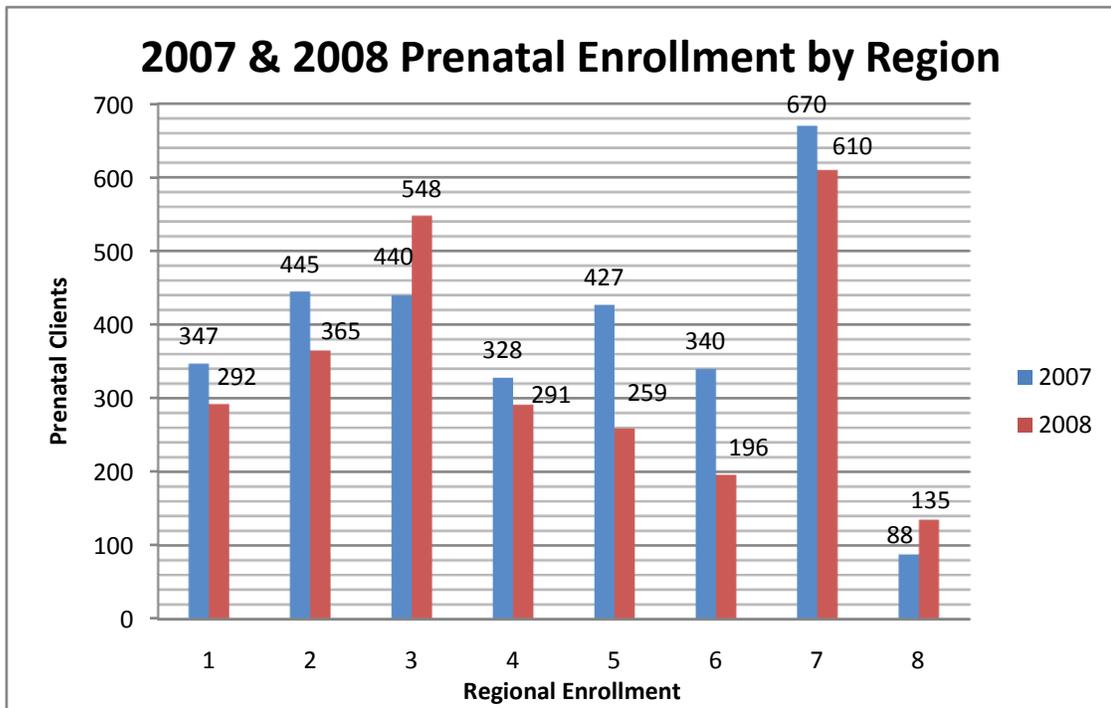
**PART I: 2008 RFTS PRENATAL CLIENTS MATCHED WITH BIRTH SCORE & BIRTH CERTIFICATE DATA BY REGION**



*\*Refer to Methods section on Pages 1-2 for further detail.*

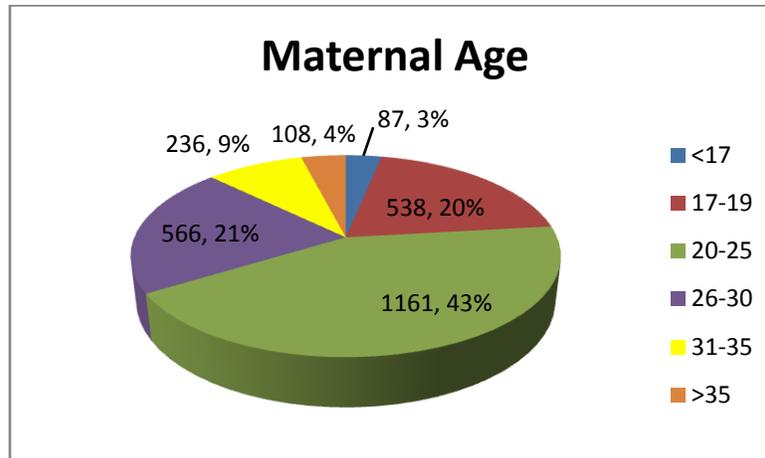


- 43% of RFTS clients were enrolled in Regions 3 & 7

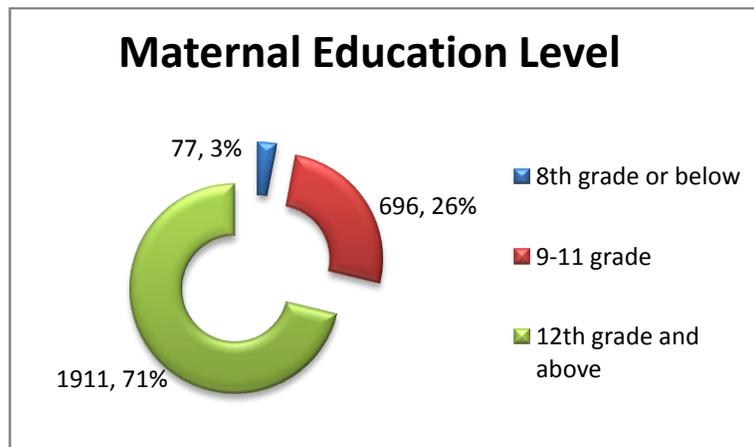


- Regions 3 & 8 increased prenatal client enrollment from 2007 to 2008

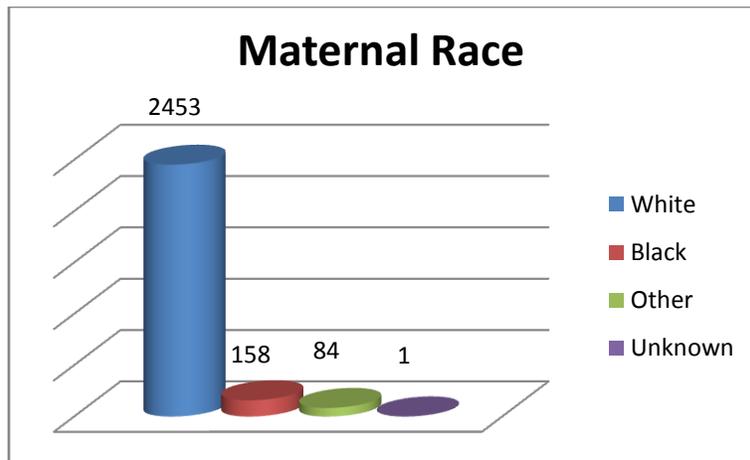
## CHARACTERISTICS OF 2008 RFTS TOTAL PRENATAL CLIENTS



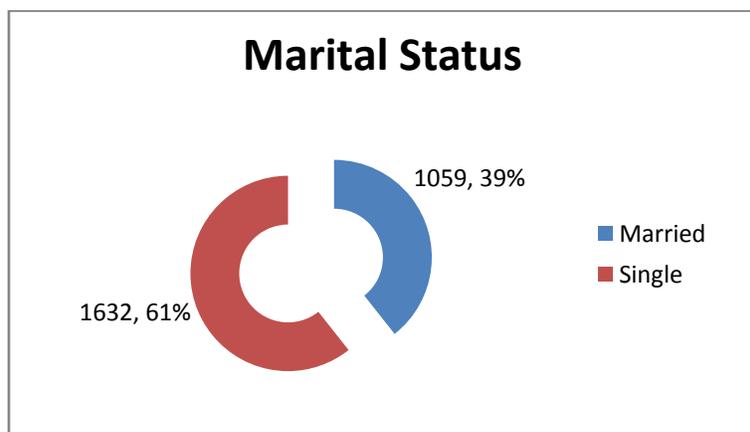
- The RFTS prenatal clients average age is 24 years
- Only 3% of the RFTS clients were under 17 years of age



- 71% of the RFTS clients have a 12th grade education or higher
- Only 3% of the RFTS clients have an 8th grade education or lower



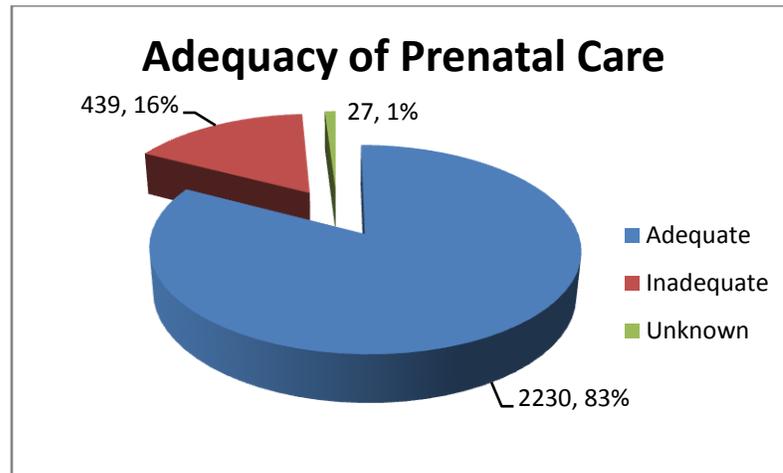
- 91% of the RFTS clients enrolled reported white as their race



- Over half of the RFTS clients enrolled in 2008 reported single marital status

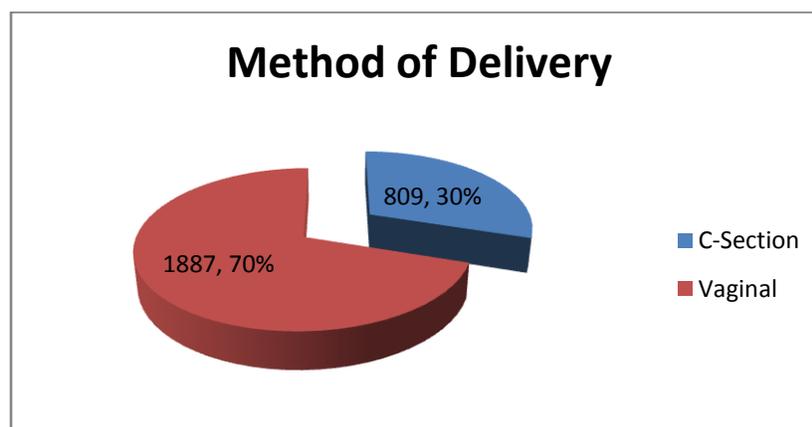
Previous Pregnancies (n= 2696)	
Pregnancies	Frequency (%)
None	1347 (50%)
1-3	1069 (39.6%)
4-6	199 (7.4%)
7-8	41 (1.5%)
9 or more	40 (1.5%)

- Half of the RFTS clients were enrolled during their first pregnancy
- 90% of the RFTS clients reported having 3 or less previous pregnancies at the time of enrollment



- Adequacy of prenatal care is calculated using a computer formula entitled the Kotelchuck Index. Adequacy of prenatal care utilization defined in terms of entry into care and quantity of prenatal visits, adjusted for sex of infant, gestational age, and birth weight
- According to the Kotelchuck weighted formula, 83% of the RFTS clients had adequate prenatal care during their pregnancy

## BIRTH OUTCOMES OF 2008 RFTS PRENATAL CLIENTS



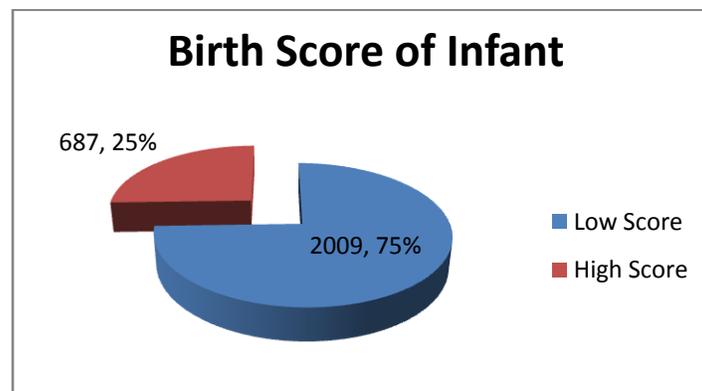
- Similar to the national rate in 2007 (31.7%), almost 1 in 3 RFTS prenatal clients (30%) delivered by caesarian section

Prenatal Clients Enrolled: Gestational Age of Infant (n=2696)	
Weeks	Frequency (%)
≤34	108 (4.0%)
35	56 (2.1%)
36	149 (5.5%)
37-38	1002 (37.2%)
39-40	1268 (47.0%)
>40	113 (4.2%)

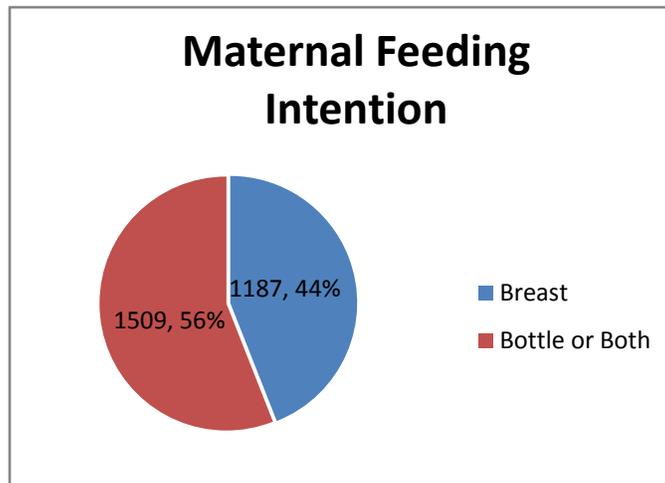
- Only 6.1% of the RFTS prenatal clients gave birth before 36 weeks gestation age
- Almost half of the clients (47%) gave birth between 39-40 weeks

Prenatal Clients Enrolled: Birth Weight of Infant (n=2696)	
Grams	Frequency (%)
<1500	54 (2.0%)
1501-2000	60 (2.2%)
2001-2500	196 (7.3%)
2501-3000	665 (24.6%)
3001-3500	979 (36.3%)
>3500	742 (27.5%)

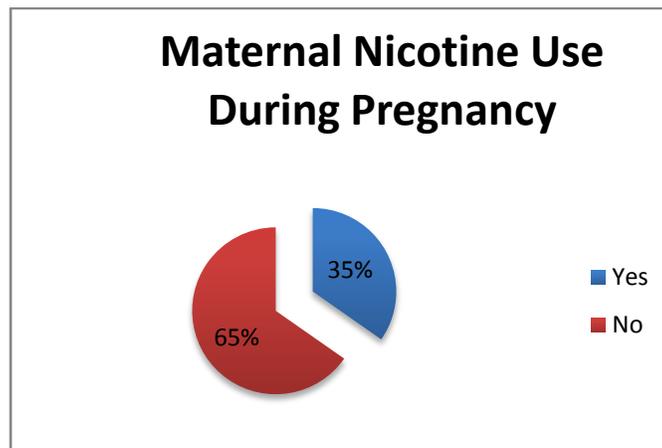
- Only 2% of the RFTS prenatal clients gave birth to infants with very low birth weight (<1500 gm.)
- 88% of the prenatal clients gave birth to infants that weighed at least 2501 grams (5 lbs. 9 oz.)



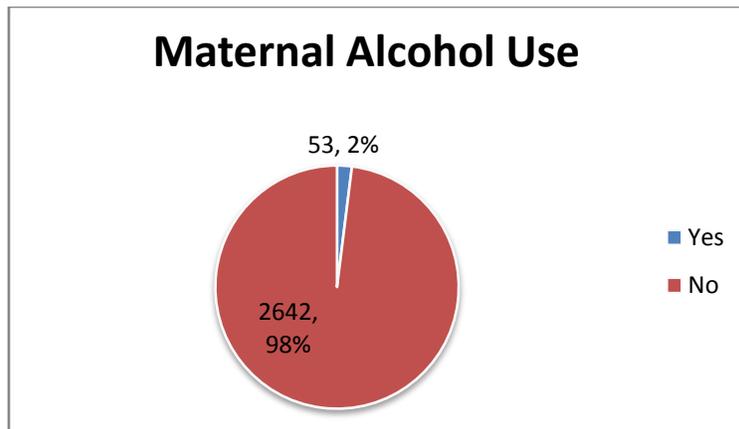
- Only 25% of the RFTS prenatal clients gave birth to High Score (At-risk) infants



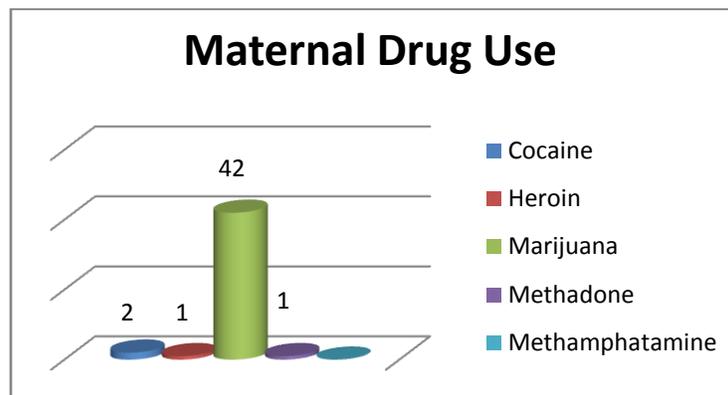
- 44% of the RFTS prenatal clients had intentions to exclusively breastfeed their infants



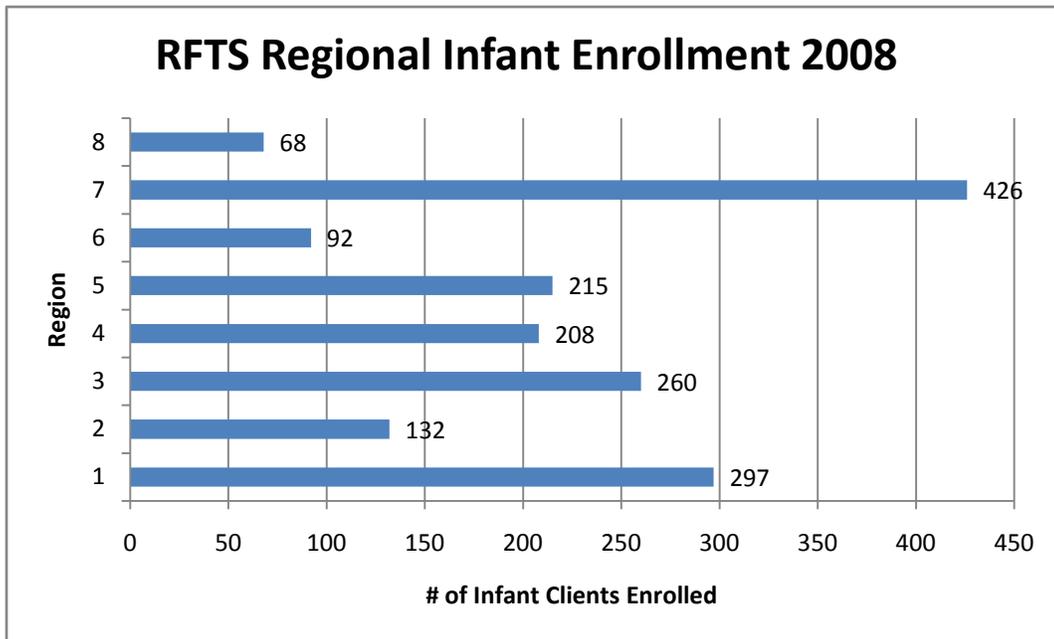
- 35% of the RFTS clients reported using tobacco during their pregnancy



- Only 2% of the RFTS clients reported drinking alcohol during their pregnancy

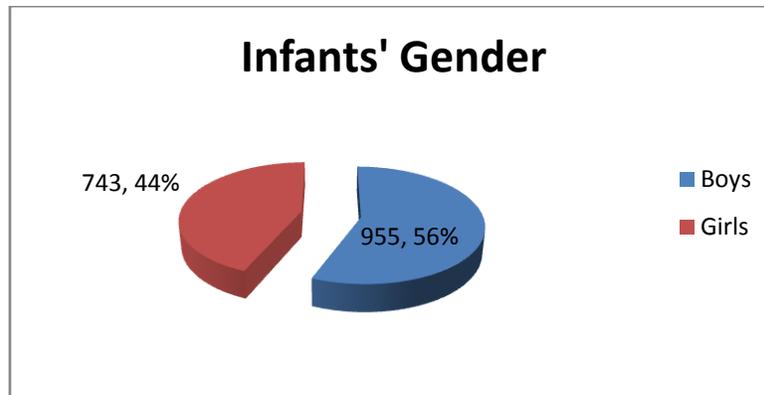


- Only 46 (2%) women reported drug use during their pregnancy
- Marijuana was the most frequently reported drug used

**PART II: 2008 RFTS INFANT ENROLLMENT**

- Almost half (43%) of the RFTS infant clients were enrolled in Regions 1 & 7

## CHARACTERISTICS OF RFTS INFANTS ENROLLED



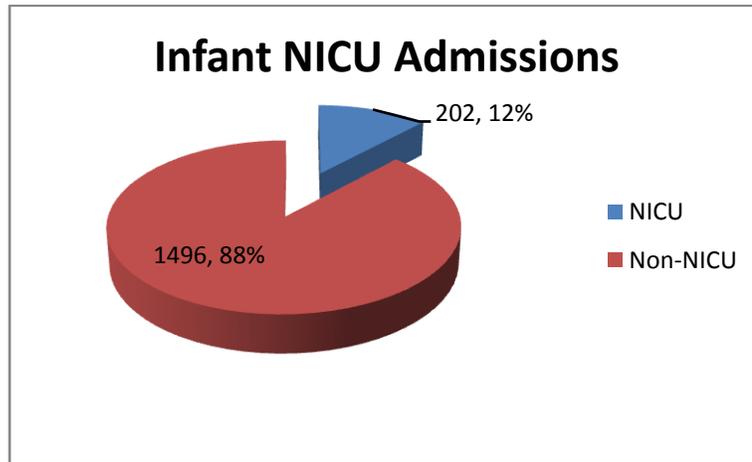
- Slightly more than half (56%) of the infant clients enrolled in 2008 were boys

Enrolled Infants' Gestational Age (n=1678)	
Weeks	Frequency (%)
≤34	138 (8.2%)
35-36	157 (9.3%)
37-38	617 (36.7%)
39-40	699 (41.6%)
>40	67 (4.0%)

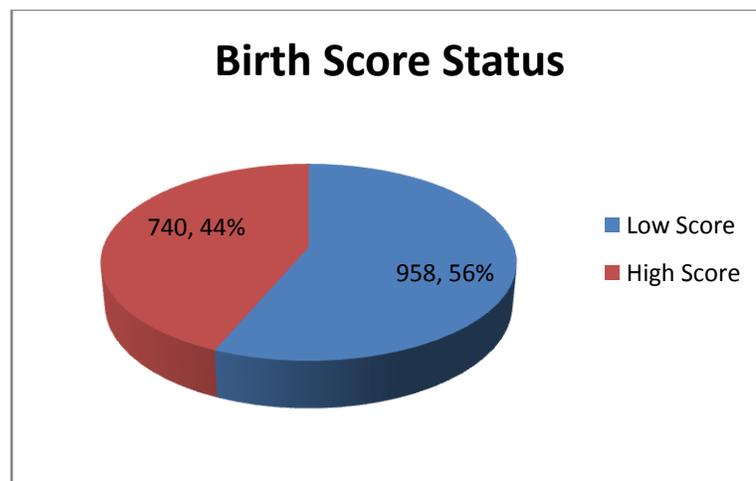
- 82% of the infant clients were born at 37 weeks or more
- Only 8% of the infant clients were born at or before 34 weeks

Enrolled Infants' Birth Weight (n=1698)	
Grams	Frequency (%)
<1500	386 (22.7%)
1501-2000	83 (4.8%)
2001-2500	66 (3.9%)
2501-3000	157 (9.2%)
3001-3500	441 (26%)
>3500	565 (33.2%)

- 23% of the infants enrolled had very low birth weight (less than 1500 grams)



- Only 12% of the enrolled infants were admitted to the NICU for care following delivery

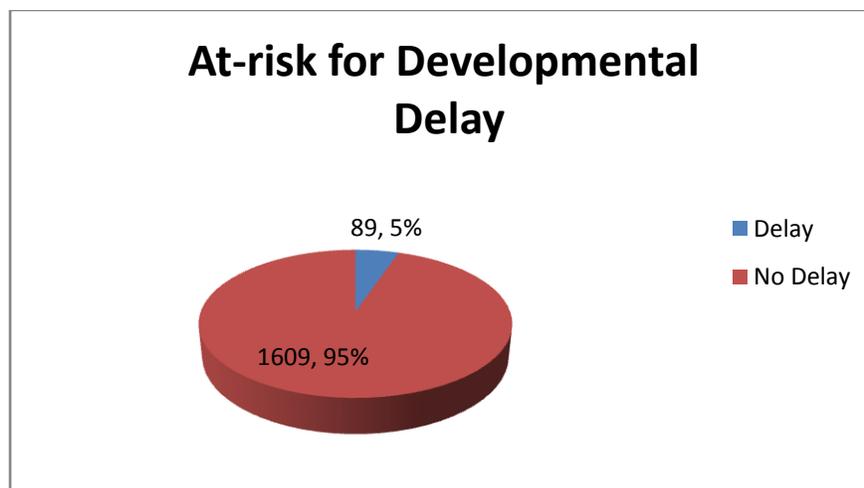


- 44% of the infant clients enrolled were High Score

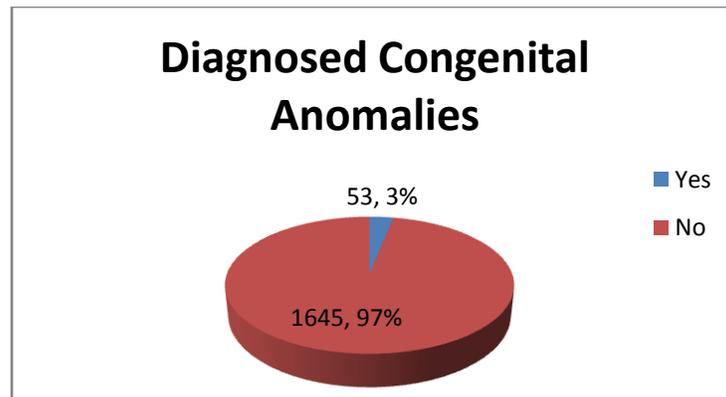
### 2008 High Birth Score Referrals & RFTS Enrollment by Region

Region	2008 Total High Birth Score Infant Referrals	% of High Birth Score Infant- Linked to a Medical home	2008 High Birth Score Infant- Enrolled into RFTS (%)
1	508	409 (80.5%)	125 (24.6%)
2	561	492 (87.7%)	83 (14.8%)
3	560	451 (80.5%)	126 (22.5%)
4	285	258 (90.5%)	79 (27.7%)
5	321	256 (79.7%)	85 (26.5%)
6	224	164 (73.2%)	44 (19.6%)
7	543	463 (85.2%)	164 (30.2%)
8	262	223 (85.1%)	34 (13.0%)
<b>Total</b>	<b>3264</b>	<b>2716 (83.4%)</b>	<b>740 (22.7%)</b>

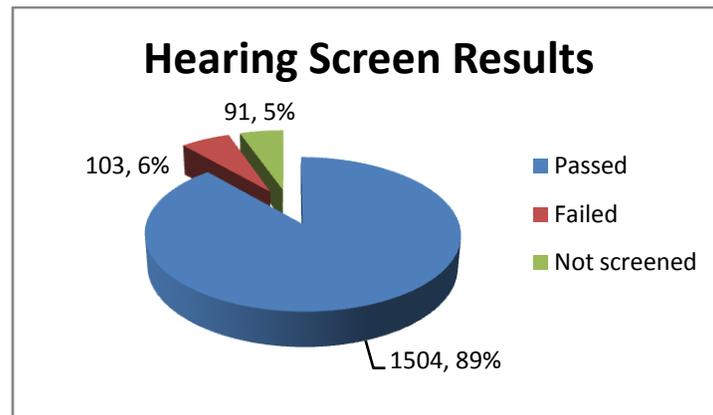
- In 2008, 22.7% of the total High Birth Score referrals were enrolled into RFTS
- 83% of the High Birth Score infants were linked to a medical home



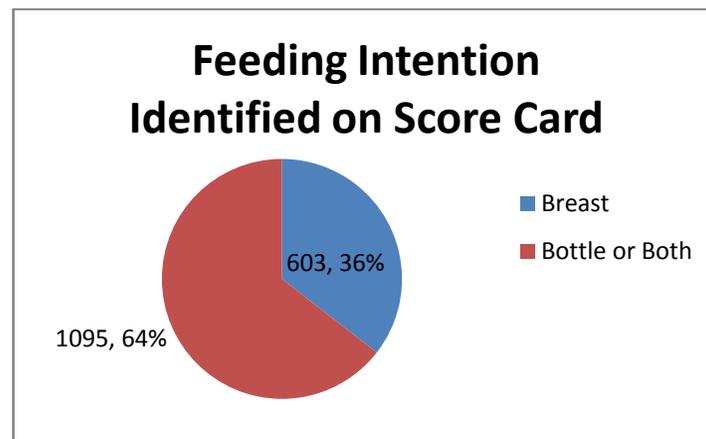
- 5% of the infants enrolled were at-risk for developmental delay



- 3% of the infants enrolled were diagnosed with congenital anomalies at birth



- 89% of the infants enrolled passed their hearing screen



- 36% of the infant's mothers intended to exclusively breast feed

## PART III: COMPARING 2007 & 2008 RFTS PRENATAL CLIENT OUTCOMES

### SELECTED WV BIRTH CERTIFICATE FACTORS FOR RFTS CLIENTS 2007 & 2008

*\*Annual improvements from 2007 to 2008 are highlighted in blue*

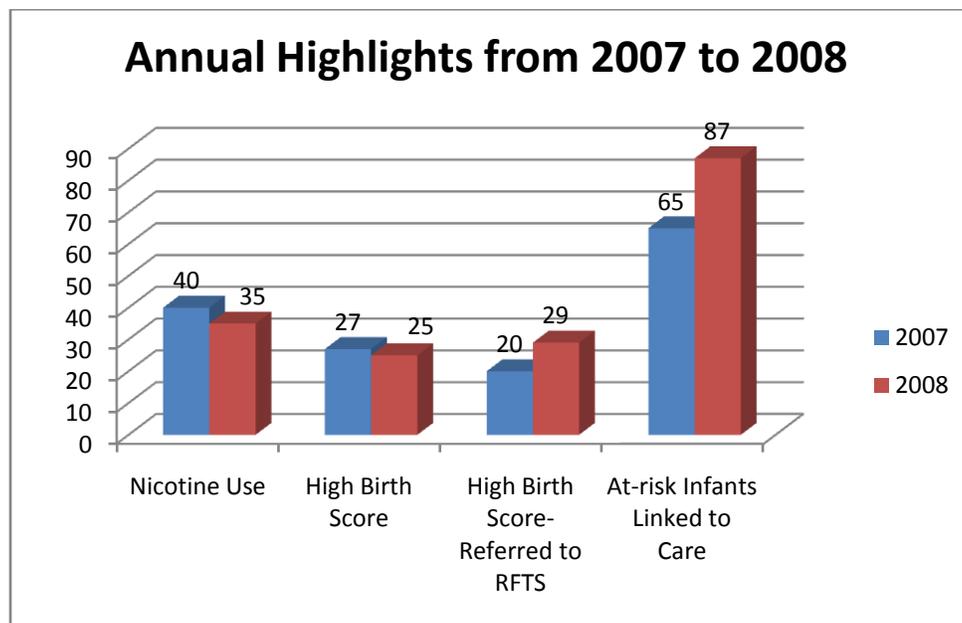
INDICATORS	≥ 1 RFTS SERVICE <u>2007</u> (N=3085)	≥ 1 RFTS SERVICE <u>2008</u> (N=2696)
<b>MATERNAL FACTORS</b>		
Adequate Prenatal Care Utilization **	<b>85%</b>	<b>83%</b>
C-Section	<b>26%</b>	<b>30%</b>
Nicotine Use During Pregnancy	<b>40%</b>	<b>35%</b>
Alcohol Use During Pregnancy	<b>2%</b>	<b>2%</b>
Single Marital Status	<b>50%</b>	<b>61%</b>
Maternal Education ≤ 10 <sup>th</sup> Grade	<b>16%</b>	<b>18%</b>
Maternal Age < 20 Years	<b>19%</b>	<b>23%</b>
<b>INFANT FACTORS</b>		
Birth Weight < 2500 Grams	<b>8%</b>	<b>12%</b>
Birth Weight < 1500 Grams	<b>1%</b>	<b>2%</b>
Gestational Age < 37 Weeks	<b>9%</b>	<b>12%</b>
≥ 1 Congenital Anomaly	<b>1%</b>	<b>3%</b>
≥ 1 Abnormal Infant Condition	<b>5%</b>	<b>5%</b>

\*\*Kotelchuck Index: Adequacy of prenatal care utilization defined in terms of entry into care and quantity of prenatal visits, adjusted for sex of infant, gestational age, and birth weight

## SELECTED BIRTH SCORE FACTORS FOR RFTS PRENATAL CLIENTS 2007 & 2008

*\*Annual improvements from 2007 to 2008 are highlighted in blue*

INDICATORS	≥ 1 RFTS SERVICE	≥ 1 RFTS SERVICE
	<b>2007</b> (N= 3085)	<b>2008</b> (N=2696)
<b>INFANT FACTORS</b>		
Infants born with High Birth Score	27%	25%
NICU Admission	5%	6%
High Birth Score Referrals to RFTS	20%	29%
Newborn Hearing Screen—Failed	3%	3%
Newborn Hearing Screen—Not Screened	4%	4%
Linked to Well Child Care (High Score Only)	65%	87%
At-Risk for Developmental Delay	2.4%	2.4%
Breast Fed Only	46%	45%



## 2008 HIGHLIGHTS

- Nicotine use has declined among RFTS prenatal clients from 40% in 2007 to 35% in 2008.
- Infants with a High Birth Score have somewhat decreased from 27% in 2007 to 25% in 2008.
- There were more High Birth Score referrals to RFTS in 2008.
- There was a dramatic improvement (65% to 87%) with High Score infants being linked to a medical home.

## PART IV: COMPARING 2008 RFTS PRENATAL CLIENTS TO MEDICAID ELIGIBLE WOMEN NOT ENROLLED

### SELECTED WV BIRTH CERTIFICATE FACTORS FOR 2008 RFTS CLIENTS AND WOMEN WHO WERE ELIGIBLE (MEDICAID) BUT NOT ENROLLED

*\*Indicators that are highlighted in blue indicate that RFTS services were effective.*

INDICATORS	≥ 1 RFTS SERVICE (N=2696)	NO RFTS SERVICE (N=8170)
<b>MATERNAL FACTORS</b>		
Adequate Prenatal Care Utilization	83%	61%
C-Section	30%	23%
Nicotine Use During Pregnancy	35%	46%
Alcohol Use During Pregnancy	2%	2%
Single Marital Status	61%	64%
Maternal Education ≤ 10 <sup>th</sup> Grade	18%	20%
Maternal Age < 20 Years	23%	19%
<b>INFANT FACTORS</b>		
Birth Weight < 2500 Grams	12%	18%
Birth Weight < 1500 Grams	2%	4%
Gestational Age < 37 Weeks	12%	14%
≥ 1 Congenital Anomaly	4%	4%
≥ 1 Abnormal Infant Condition	5%	5%

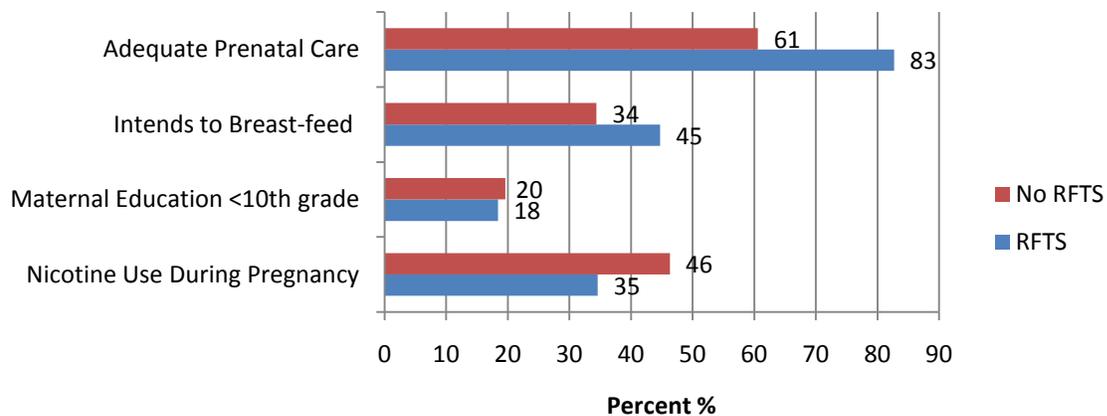
\*\* Kotelchuck Index: Adequacy of prenatal care utilization defined in terms of entry into care and quantity of prenatal visits, adjusted for sex of infant, gestational age, and birth weight

## SELECTED BIRTH SCORE FACTORS FOR 2008 RFTS CLIENTS AND WOMEN WHO WERE ELIGIBLE (MEDICAID) BUT NOT ENROLLED

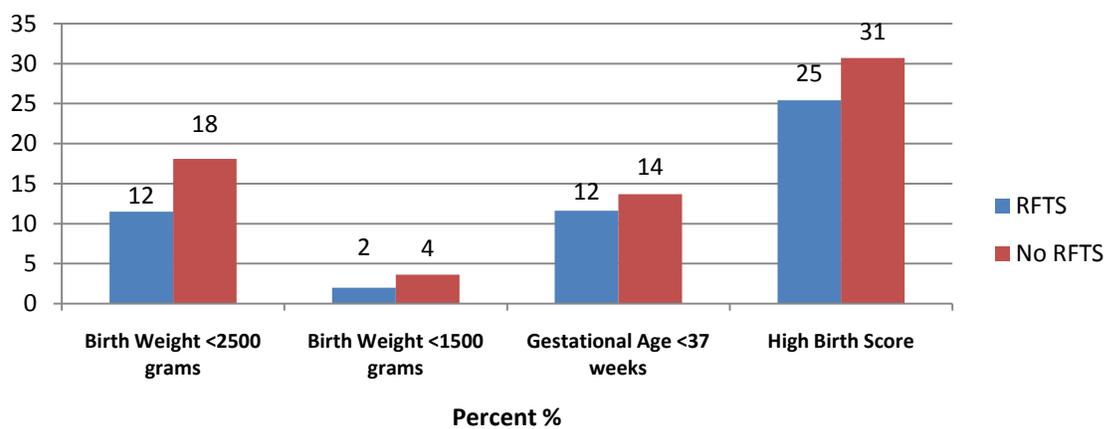
*\*Indicators that are highlighted in blue indicate that RFTS services were effective.*

INDICATORS	≥ 1 RFTS SERVICE (N=2696 )	NO RFTS SERVICE (N=8170)
<b>INFANT FACTORS</b>		
High Birth Score	<b>25%</b>	<b>31%</b>
NICU Admission	<b>6%</b>	<b>7%</b>
Newborn Hearing Screen— Failed	<b>3%</b>	<b>4%</b>
Newborn Hearing Screen—Not Screened	<b>4%</b>	<b>4%</b>
Linked to Well Child Care (High Score Only)	<b>87%</b>	<b>78%</b>
At-Risk for Developmental Delay	<b>2%</b>	<b>3%</b>
Breast Fed Only	<b>45%</b>	<b>34%</b>

### 2008 RFTS Prenatal Clients vs. Eligible Women (Medicaid) but Not Enrolled Maternal Outcomes



### 2008 RFTS Prenatal Clients vs. Eligible Women (Medicaid) but Not Enrolled Infant Outcomes



## SUMMARY/CONCLUSION

### **Prenatal Clients (Part I: See charts on pages 4-10)**

RFTS prenatal enrollment slightly decreased from 2007 to 2008. Among all eight RFTS regions, only two were able to increase enrollment numbers in 2008. During 2007 and 2008 Region 7 enrolled the most RFTS prenatal clients. Region 8 enrolled the least clients but did increase enrollment from 2007 to 2008.

The majority of the RFTS prenatal clients are white women between the ages of 17-30. Almost two thirds of the women completed twelfth grade or higher. More than half of the women are single and were enrolled into RFTS during their first pregnancy. The Kotelchuck weighted formula provides prenatal care outcomes in two categories: adequate and inadequate.

According to the Kotelchuck formula 83% of the RFTS prenatal clients received adequate care during their pregnancy.

- RFTS clients receive significantly more adequate prenatal care than women who did not receive RFTS services.

The majority of RFTS clients had a vaginal birth at or following 37 weeks gestational age. More than half of the RFTS clients delivered infants that weighed more than 2501 grams, or approximately five pounds and nine ounces. Only 25% of the RFTS clients gave birth to High Score infants. Slightly less than half of the women (44%) intended to exclusively breast feed their infant.

When compared to women who did not receive RFTS services:

- RFTS clients give birth to infants with healthier birth weight.
- RFTS clients deliver less High Score infants.

- RFTS clients have fewer infants' admitted to the NICU.
- Significantly more RFTS clients intend to exclusively breast feed their infants.

Tobacco use among the RFTS prenatal clients was 35%, slightly higher than the state tobacco use and pregnancy average rate of 31.3%. Only 2% (53) of the RFTS clients reported drinking alcohol, while less than 2% (46) reported using drugs during their pregnancy. Marijuana was the most commonly reported drug used during pregnancy. Among the 2008 RFTS prenatal clients there were 13 infant deaths, 7 neonatal (birth-27 days) and 6 post-neonatal (28 days-first year). Among the 13 infants who died, 7 were admitted to the NICU and 5 had High Birth Scores.

When compared to women who did not receive RFTS services:

- RFTS clients have a significantly lower rate of nicotine use during pregnancy compared to other Medicaid women who were not enrolled into RFTS.
- RFTS clients have a lower rate of alcohol use during pregnancy.

#### **Infant Clients (Part II: See charts on pages 11-15)**

1698 infants were enrolled into RFTS during 2008. RFTS infant enrollment was significantly higher in Regions 1 & 7 (43% of total clients enrolled) compared to all other regions. Slightly more than half of the infant clients were male (56%). 82% of the infants were delivered at 37 weeks gestational age or more. Only 8% of the RFTS infant clients were delivered at or before 34 weeks gestational age. However, 23% of the infants enrolled had a "very low" birth weight, under 1500 grams. 12% of the infants were admitted to the Neonatal Intensive Care Unit at or following birth. Almost half (44%) of the infants received a High Birth Score. 36% of the infants mothers intended to exclusively breastfeed.

Just 5% of the RFTS infant clients were at risk for developmental delay, and 3% were diagnosed with a congenital abnormality at birth. The majority of infants (89%) passed their hearing screening. Among the 2008 RFTS infant clients there were 14 deaths, 6 neonatal (birth-27 days) and 8 post-neonatal (28 days-first year). Among the 14 infants who died, 9 were admitted to the NICU and 8 had a High Birth Score.

### **Comparisons between 2007 & 2008 (Part III: See charts on pages 16-17)**

[Note: For the purposes of this analysis, only 2007 RFTS prenatal client data was available for comparison analysis with 2008 RFTS prenatal client data. 2007 RFTS infant client data was not available]

From 2007 to 2008 there were several improvements among RFTS prenatal client maternal and infant outcomes:

- Among the prenatal clients nicotine use during pregnancy decreased from 40% in 2007 to 35% in 2008.
- RFTS prenatal clients delivered less High Score infants in 2008 (25%) than in 2007 (27%).
- Most impressive, 87% of the High Score infants that were born to RFTS prenatal clients in 2008 were linked to a medical home. This is a significant improvement from 65% in 2007.

**2008 RFTS Prenatal Clients vs. Eligible Women (Medicaid) Who Were Not Enrolled- Maternal Outcomes (Part IV: See charts on pages 19-22)**

After comparing the 2008 RFTS prenatal client and their infant outcomes to other Medicaid-eligible women who were not enrolled into RFTS, it is evident that RFTS services improve a number of outcomes:

- RFTS clients are more likely to receive adequate prenatal care.
- RFTS clients are less likely to use tobacco and alcohol during their pregnancy.
- RFTS clients are more likely to carry their infants past 37 weeks gestational age.
- RFTS clients are more likely to deliver infants with healthier birth weights.
- RFTS clients deliver fewer High Score infants.
- RFTS clients have fewer infants admitted to the NICU.
- RFTS clients are more likely to exclusively breast feed their infants than mothers who did not receive RFTS services.

In conclusion, the RFTS Program offers services for Medicaid-eligible women and infants that do improve both maternal and infant outcomes in pregnancy and post-delivery. The relationships that the Designated Care Coordinators (DCC) establish with their clients are extremely valuable. DCC's provide in-home care and follow-up that are a critical piece to ensuring positive outcomes for both mother and infant.