

Appendix 1 – 6th Assessment Study
Part of 9th Equal Protection Compliance Report
July 1, 2017

ASSESSMENT BRIEF

The summary and impressions discussed reflect activities by Shelby/Memphis Juvenile Court (Juvenile Court) up to April 26, 2017. Many of the areas of concern that were the impetus for the Memorandum of Agreement (MoU) have continued to exist over the last 47 months or so. The Juvenile Court has taken ownership and has made strides but DMC and the disparate treatment of Black youth still exists. More specifically:

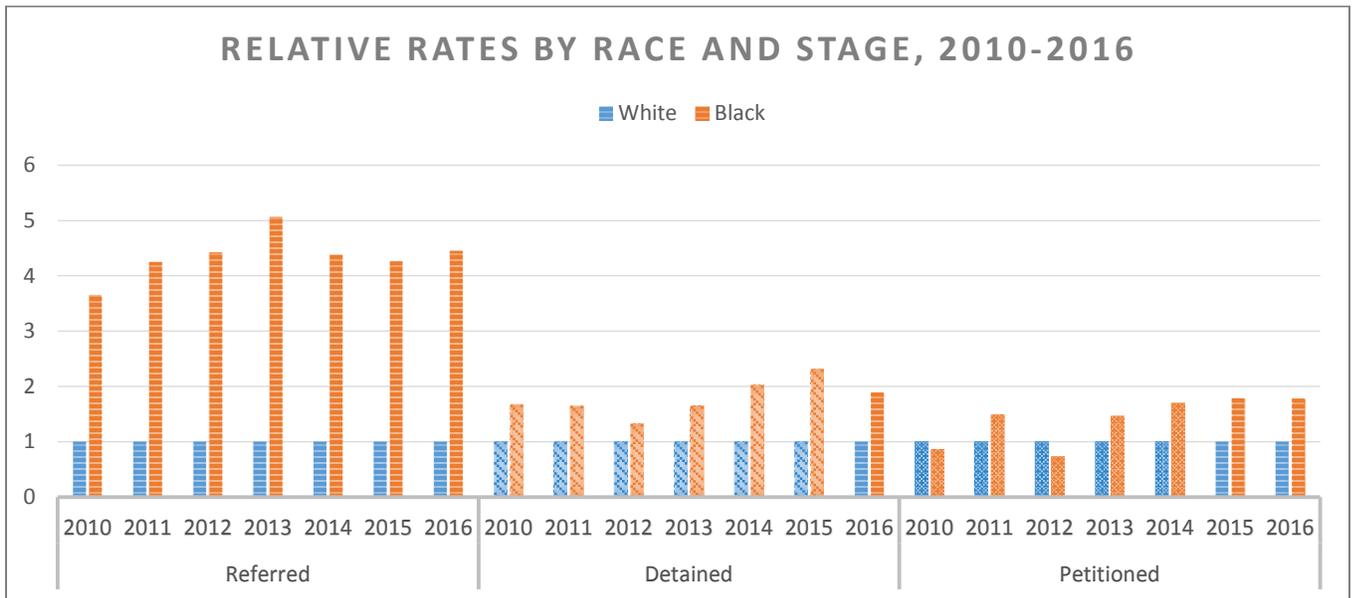
- **DMC** as measured by the relative rate and in terms of equity for similar offenders, irrespective of race, **HAS NOT CHANGED** and continues to be a problem for the Court.
 - First, it is important to point out that both the relative rates and the numerous studies that have been reported on over the last 4 years, including the results from the 6th assessment study to be discussed within this brief, continue to show, for the most part, that DMC remains a problem for the Court.
 - Continued evidence also suggests that race still impacts decision-making even after factors such as the severity of the crime are taken into consideration.
 - DMC is a continued issue at referral, secure detention and the non-judicial stages.

Key findings from the 6th Assessment study are summarized below:

- While the number of referrals has declined over time, the racial breakdown remains disproportionate.
- Likewise, although the overall number of youth held in secure detention has decreased, a racial gap remains and in fact has not decreased. Race still matters once all other factors are considered at detention.
- Black youth continue to be underrepresented in diversion.
- Blacks continue to have increased odds of being disadvantaged relative to their similarly situated White counterparts at the non-judicial stage – they are more likely to move further into the judicial proceedings.
- Although overall numbers appear to have declined, significant overrepresentation of Black youth exist for receiving Notice to Transfer to adult criminal proceedings and actual waiver to adult court (only three youth waived were White).

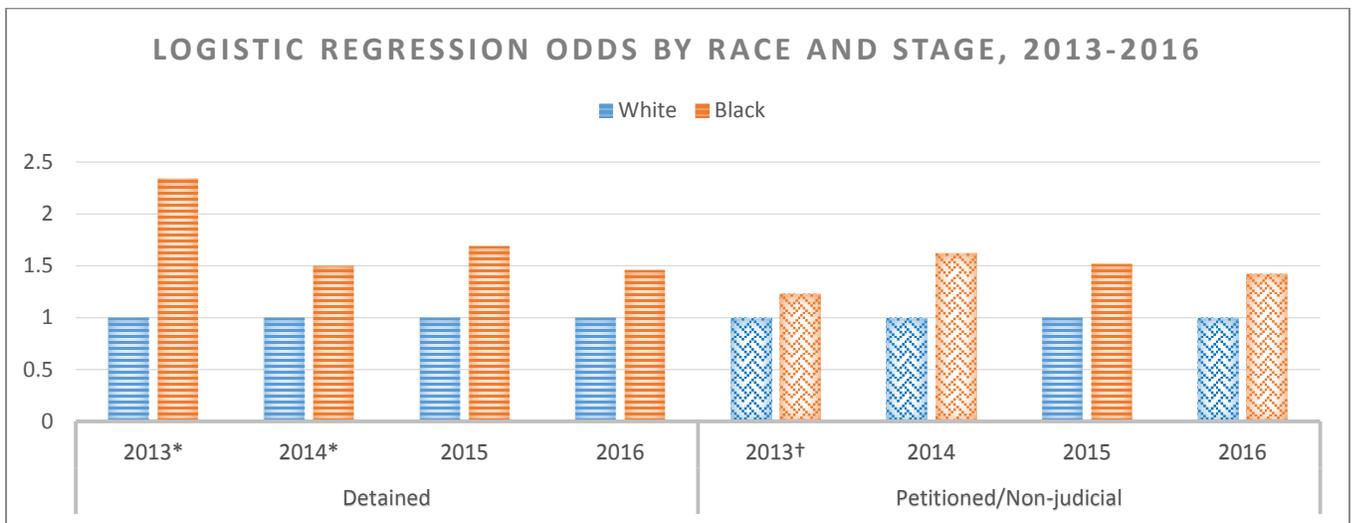
To illustrate the continuation of DMC and the lack of change, Figure 1 presents the relative rates for the years 2010-2016 by referral, detention and non-judicial or what will be referred to as petition. Figure 2 provides the odds for Whites and Blacks once factors such as crime severity, prior record, etc. are taken into account for the years 2013-2016. See next page (pg. 2).

Figure 1. Relative Rates by Race and Stage, 2010-2016



Note: How to read relative rate index (RRI), for example in 2010, referred to juvenile court 3.65 Blacks to 1 White.

Figure 2. Logistic Regression Odds by Race and Stage, 2013-2016



* Logistic regression represents interaction between race and person offense; Main race effect not significant

† Logistic regression coefficient not significant

Note: How to read regression odds, for example in 2013, detained 2.34 Blacks to 1 White.

As can be seen in Figure 1, 1 White to 4.45 Black youth are referred to court in 2016 compared to 1 White to 3.65 Black youth in 2010. Similar trends, for the most part, exist for detention and petition. While the racial gap decreases after controlling or taking into consideration legal factors, Blacks are still more likely than similar Whites to be detained and petitioned (Figure 2).

Overall, the above findings have been consistently reported by all 6 assessment studies to date. The role of race and DMC in court referrals and court outcomes continue despite the use of SHAPE, Porter Leath, the Expedited Review, the SUMMONS program, JDAI reform at detention, and the implementation of structured decision-making tools at detention and at the non-judicial stage.

Recommendations

- The Juvenile Court has taken ownership of the DMC issue and this is evident by among other things the use and expansion of SHAPE and Porter Leath, the use of beds at Youth Villages, discussions/training of the Memphis Police Department, including those in higher administration, the use of expedite evaluation and review, and greater use of summons as a means to avoid juvenile court contact. These initiatives represent a good effort, but each needs to be evaluated to assess if such efforts are producing the intended results as well as whether they should be used in greater frequency to reduce the number of youth, especially Black youth, referred to juvenile court.
- The Juvenile Court has attempted to revise the DAT (in particular with a focus on the history of prior offenses, certainty of appearance, and threat to danger to self/others). The revised DAT was implemented February 1, 2017. To reduce DMC and achieve equitable treatment for all youth at detention, the DAT needs to be closely examined, evaluated, and revised in a timely manner. Likewise, the implementation and possible greater use of the Expedite review, especially for misdemeanor offenses and electronic monitoring may aid in reducing the number of Black youth referred and placed in secure detention.
- The Court has been reviewing the Graduated Response Grid and how it contributes to DMC and disparate treatment of Black youth at the non-judicial stage. The Response Grid has been revised and implemented in November of 2016. In April of 2017, the Juvenile Court posted an RFP to secure help in evaluating the Revised Graduated Response Grid. While this is good, too much time had passed since the meeting in July of 2016, where the Graduated Response Grid was discussed as a contributing factor to DMC, to the posting of the RFP in April of 2017. Like the DAT, the Graduated Response Grid needs to be continuously monitored and evaluated to possibly change the continuing race issue at this stage. This process should occur sooner than later.

- It is recommended that the Juvenile Court implement, expand and evaluate diversionary efforts to reduce DMC, especially for minor offenses and domestic assaults. The Juvenile Court has begun to look into the greater use of the By-Pass program and the SRT initiative as methods to do this.

In short, the Juvenile Court has now taken ownership of the DMC issue it is facing. Still, the efforts that have been implemented and are underway must be aggressively used and pursued to alter the continuing presence of DMC and attain equal protection for all youth.

It should also be noted that the sixth assessment study is based on data for 2016. This is important to point out as a number of the initiatives used by the Juvenile Court were implemented in the latter part of 2016, and in the case of the DAT 3, in February of 2017. Thus, these efforts most likely would have had little impact on changing DMC at referral, secure detention and decision-making at the non-judicial stage (petition) in 2016 given the short time since implementation.

The Sixth Assessment Study is presented on the next page (pg. 5).

6TH ASSESSMENT STUDY

Background

A Memorandum of Agreement (MoU) regarding the Juvenile Court of Memphis and Shelby County was signed December 17, 2012 by the United States Department of Justice, Civil Rights Division, and the County Mayor and County Attorney, and the Juvenile Court of Memphis and Shelby County (JCMSC) to address the administration of juvenile justice for youth facing delinquency before the juvenile court and the conditions of confinement of youth at the detention center operated by the juvenile court. The Parties selected Dr. Michael J. Leiber as the Equal Protection Monitor of the Agreement. The Agreement requires the Monitor to assess the level of compliance by the juvenile court every six months and to produce reports. A ninth Equal Protection Monitor Report that included an Assessment Study has been completed as part of the MoU.

Before the studies are discussed, it is important to provide additional background. More specific, the existence and level of Disproportionate Minority Contact (“DMC”) occurring at each phase of the juvenile court process can be captured by the relative rate index (RRI). DMC is the term used to describe the overrepresentation of minority youth in the juvenile justice system. The RRI provides a snapshot or a description of the youth in the juvenile justice system during a specified time-frame and at stages in the system. The RRI was and will be used to measure the level of DMC at stages for Black youth as compared to White youth. While valuable, the RRI can only provide insight on the level of DMC at stages and cannot tell us *why* DMC is occurring. Instead, an assessment study using multivariate statistics in the form of logistic regression permits such an inquiry. Logistic regression is a statistical technique that takes into consideration a variety of factors to predict the likelihood of a case outcome. In essence, there is an attempt to model what legal (e.g., crime severity, prior record) and extra-legal (e.g., race) considerations used by decision-makers to arrive at an outcome. Legal factors and to some extent extra-legal factors can be relied upon to make a juvenile justice outcome due to its *parens patriae* foundation, such as crime severity and assessments about the family environment. Race, however, should not be predictive of a stage outcome once all legal and other extralegal factors are considered. If race does not indicate a statistically significant presence, then DMC is explained by differences, for example, in legal characteristics (i.e. crime severity). If race is a statistically significant indicator, then something else in addition to legal and other extra-legal factors accounts for DMC. One possibility is bias that may be present in the form of overt and/or indirect or subtle bias.

An example of direct bias is arriving at a decision solely on the basis of a youth’s race. An example of subtle bias is making a decision that is not necessarily based on race but on a reliance on a legitimate criterion. For example, prior record can be used by court personnel when assessing what the court should do with a youth. Prior record, however, may be a racially tainted criterion since in many jurisdictions, including Shelby County, Black youth are overrepresented in court referrals by law enforcement in the form of arrests. While arrest can be an indicator of law breaking behavior, arrest can also be a function of police procedures and deployment. Consequently, if Black youth are more likely to have a large number of arrests (whether it is because of unlawful behavior and/or as a by-product of where police patrol), Black youth are likely to receive harsher outcomes than Whites.

DOJ Findings Prior to Agreement

As reported in the Investigation of the Shelby County Juvenile Court (2012), the Department of Justice (DOJ) examined the relative rate indexes and conducted an assessment study using multivariate analyses. These findings, in part, showed DMC at almost every stage and revealed race to be a determinant of decision-making once relevant factors were considered. For the RRI's, data was used from 2007 through 2009. For the assessment study, court data was used from 2005 through 2009, though further analysis was conducted with 2010 data and did not alter the findings reported using data submitted by the Juvenile Court of Memphis and Shelby County (JCMSC, referred from now on as Juvenile Court) to Tennessee from 2005 through 2009. In summary, Blacks were found to be most overrepresented at referral, secure detention, placement in secure confinement, and transfer to adult court. Black youth were found to have a lesser chance of receiving both the non-judicial outcome of a dismissal or warning, and of a fine, restitution or public service sanction than alike White youth. In addition, Blacks were more likely to be held in detention and reach adult transfer consideration than similarly situated Whites. The overall conclusion was that these findings do not comport with the Equal Protection Clause and Title VI. More specific, the findings showed evidence of discriminatory treatment of Black youth compared to White youth.

As stated in the Agreement between Shelby County and the Department of Justice, within nine months, the Juvenile court “shall augment the appropriate data collection method to assist in its evaluation of its DMC levels, causes, and reduction.... This includes information on points of contact, the relative rate indexes, and available diversion options for youth appearing before JCMSC...” (p. 22). As part of the Agreement, the Equal Protection Monitor, Michael Leiber, conducts assessment studies of the level and causes of DMC. Six assessment studies (including the present assessment research) have been conducted to date following the Agreement.

Next, in this sixth assessment by Leiber, trends in the form of relative rate indexes are first presented to examine the extent or level of DMC. Results from the sixth assessment study using logistic regression are also provided to tap into the possible causes of DMC. Discussion is provided comparing and contrasting trends in the results from both the relative rates and the six assessment studies.

Stages of Juvenile Justice Measured as Part of the Relative Rate Index

The RRI includes the rate of occurrence for different racial groups in each major stage of the juvenile justice process. The stages include the following:

- | | |
|---------------------------------|---|
| (1) Juvenile Arrests | This stage consists of all juvenile arrests. Arrest is not a focus of this study. |
| (2) Referrals to Juvenile Court | This category includes children who are brought before the juvenile court on delinquency matters either by a law enforcement officer, a complainant (including a parent), or by a school. |

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- (3) Cases Diverted
- This category includes children who are referred to juvenile court, but whose matters are resolved without the filing of formal charges. The charges against these children may be dismissed, resolved informally, or resolved formally through probation, an agreement, community service or various other options that do not include continuing through the formalized court process.
- (4) Cases Involving Secure Detention Prior to Adjudication
- This category includes children who are held in a secure detention facility before the final disposition of their cases. Some jurisdictions include children who are awaiting placement following the disposition of their cases in this category.
- (5) Cases Petitioned
- This category includes children who are formally charged with a delinquency matter and are required to appear on the court calendar. When a child is formally petitioned, the court is requested to adjudicate the matter or transfer the matter to the criminal court.
- (6) Cases Resulting in Delinquent Findings
- This stage encompasses a court finding that the child has been found delinquent, a formal finding of responsibility. The child would then proceed to a dispositional hearing where he or she may receive various sanctions including probation or commitment to a secure residential facility.
- (7) Cases Transferred to Adult Criminal Justice System
- This category consists of cases that have been transferred to the adult criminal court following a judicial finding that the matter should be handled outside of the juvenile system.
- (8) Cases Resulting in Probation
- This category includes cases where the child is placed on probation following a formal adjudication. This does not include the children whose cases were diverted earlier in the process.
- (9) Cases Resulting in Confinement in Secure Juvenile Correctional Facility
- This category includes cases where the child has been formally adjudicated and placed in a secure residential facility or a juvenile correctional facility.

Interpreting the Values in the Relative Rate Index (RRI) for JCMSC

The below is taken from the Investigation of the Shelby County Juvenile Court report (2012) to explain how to interpret the RRI (see pgs. 27-28). The RRI formula lists the numerical indicator of the level of disparity or difference in contact in each stage that a particular racial or ethnic group has in the reporting system. The formula compares the ratio of Black children to the ratio of White children for each stage of the process. A numerical value of 1.0 is neutral. A numerical value exceeding 1.0 means that Black children have a higher rate of representation at the particular stage being considered. A numerical value below 1.0 means that Black children have a lower, statistically significant, rate of contact in that stage as compared to White children in that stage.

The first step in determining RRI is to determine the total number of events, categorized by race, in each phase of the juvenile court system. Then, for each racial or ethnic category, the RRI formula divides the number of events for each phase by the number of events in the preceding phase to determine rates for each phase. This means that the RRI is calculated by comparing the rates for Black children to rates for White children by dividing the rate of Black children by the rate for the White children. For example, if a system incurred 20 juvenile arrests consisting of 10 White children and 10 Black children, and all 10 of the Black children were referred to juvenile court, but only 5 of the White children were referred, then the resulting rate of referral to juvenile court for Black children would be 1.0, and the rate for white children would be 0.5. The resulting RRI would equal 2.0, a value twice that of the neutral 1.0. RRI values that differ from the neutral 1.0 are marked as statistically significant, meaning that the difference in rates of contact is not likely to be the result of a chance or random process. Recall that the RRI does not control for the differences in the youth's underlying charges and/or school or family situation.

Relative Rates Index (RRI) 2010 through 2016

Presented in Table 1 (pg. 10) are the relative rate indexes for the years 2010 through 2016. Data for 2009 will not be reported in the Table. The breakdown for each stage in terms of the relative rate for 2009 is as follows:

	<u>RRI - 2009</u>
Refer to juvenile court:	3.4
Cases diverted:	0.9
Secure detention:	2.1
Petitioned:	1.2
Adjudicated delinquent:	1.3
Probation (judicial disposition):	1.0
Confinement (judicial disposition):	1.7
Transferred:	2.3

Data was provided by the Juvenile Court of Memphis and Shelby County (JCMSC). As can be seen in Table 1 (pg. 10), Black youth are disproportionately overrepresented in 3 stages in 2016: referral to the juvenile court, secure detention, and cases petitioned. Black youth are underrepresented in cases that are diverted, adjudicated delinquent and probation at judicial disposition. The following narrative summarizes these results.

1. The relative rate index involving **referrals to court** remains high at 4.45. In other words, almost 4 and a half Black youth per 100 youth are referred relative to 1 White youth per 100 youth. Thus, the number of referrals for both Whites and Blacks are down which is good (not shown). **But, the relative overrepresentation of Black youth to White youth in court referrals continues to be an issue that has shown relatively no change over the last 8 years (which include 2009).**
2. **Black youth continue to be underrepresented for cases diverted.** In 2009, the RRI was .90, in 2016 the RRI is .95.
3. RRI values pertaining to secure detention initially showed a decline from 2.1 in 2009 to 1.32 in 2012. But starting in 2012 through 2015, an increase in disparities related to secure detention was evident at 2.31. Although the overall number of youth involving secure detention has reduced significantly over the years for both White and Black youth, **Blacks are still being detained more so relative to Whites.** It should be noted that the RRI did go down to 1.89. Still, this is an area that the Court will need to continue to address.
4. The RRI's for cases **petitioned** show overrepresentation and have been slowly **rising** from 0.73 in 2012 to 1.46 in 2013 to 1.69 in 2014 to 1.78 in 2016.
5. Although the relative rates resulting in delinquent findings and probation at judicial disposition shows no real pattern, it is important to note that the Court went from an overrepresentation of Black youth in 2015 (RRI of 1.70 for delinquent findings) to a slight underrepresentation in 2016 (RRI of .94). The same is true regarding probation at judicial disposition, where again there is a slight underrepresentation of Black youth (RRI of 1.29 in 2015; RRI of .90 in 2016).
6. Although rates for cases resulting in **confinement in secure juvenile facilities** began to show a decline from 1.7 in 2009 to 1.30 in 2012 and 1.05 in 2013 and the relative rate shows an increase to 1.50 in 2014 and 1.65 in 2015, there appears to be a reduction in the number of youth receiving a disposition involving an out-of-home placement (as there were not enough cases to calculate the RRI for 2016). This is a good sign. **Still, only 8 Whites received an out-of-home placement compared to 196 Blacks.**
7. In terms of the relative rate, **youth waived to adult** court has remained relatively the same from 2009 to 2012 (2.3 in 2009, 2.23 in 2012). RRI analyses for this decision stage were not conducted for the year 2013 through 2016 as the number of cases was insufficient. It is important to point out that based on data from the Court, while the disparity between Whites and Blacks appears to have stayed relatively the same over the years, the number of youth waived to adult court has declined from 225 in 2008, to 199 in 2009, 151 in 2010, 121 in 2011, 99 in 2012, 90 in 2013, 77 in 2014, and 31 in 2015. The number of youth recommended for a waiver or given notice of transfer is high at 256 in 2013, 190 in 2014, and 153 for 2015. For 2016, 128 youth were given a notice of transfer (10 White, 118 Black). Of the youth waived, 3 were White and 42 were Black.

Recall that a relative rate index of 1 is neutral or 1 White per 100 youth to 1 Black per 100 youth. Anything above 1 indicates overrepresentation; anything below, underrepresentation. Overall, Black youth are and continue to be overrepresented at several stages relative to White youth in the JCMSC's juvenile justice system especially at court referral and secure detention.

Table 1. Rates of Juvenile Court Actions and Relative Rate Index, 2010-2016

Decision Stage (and base rate for calculation)	RRI 2010	RRI 2011	RRI 2012	RRI 2013	RRI 2014	RRI 2015	RRI 2016
1. Refer to Juvenile Court (per 1000 population)	3.65	4.25	4.42	5.06	4.38	4.26	4.45
2. Cases Diverted (per 100 referrals)	0.95	0.83	0.93	0.88	0.92	0.91	0.95
3. Cases Involving Secure Detention (per 100 referrals)	1.67	1.65	1.32	1.64	2.02	2.31	1.89
4. Cases Petitioned (charge filed per 100 referrals)	0.85	1.49	0.73	1.46	1.69	1.79	1.78
5. Cases Resulting in Delinquent Findings (per 100 referrals)	2.00	1.44	2.11	1.16	1.18	1.70	0.94
6. Cases resulting in Probation Placement (per 100 found delinquent)	0.91	1.04	0.97	1.04	1.05	1.29	0.90
7. Cases Resulting in Confinement in Secure Juvenile Facilities (per 100 found delinquent)	1.19	1.76	1.30	1.05	1.50	1.65	-
8. Cases Transferred to Adult Court (per 100 referrals)	2.86	1.42	2.23	-	-	-	-

- Insufficient number of cases; unable to conduct RRI analyses for decision stage

Note: Data for 2010-2016 provided by Juvenile Court of Memphis and Shelby County (JCMSC). How to read relative rate index (RRI), for example in 2016, *Refer to Juvenile Court* as 4.45 Blacks to 1 White.

Logistic Regression Results

An examination of the relative rate indexes show that DMC continues to exist. The RRI's reveal overrepresentation at referral to the juvenile court, secure detention, cases petitioned, cases resulting in delinquent findings, and those placed in confinement in secure facilities referral. Although in decline, Blacks comprised most of the youth that received a notice for waiver to adult court. Recall that the RRI provides information concerning the extent of DMC and does not inform us of the causes of DMC. Next, multivariate analyses in the form of logistic regression, is used to give added insight into the predictors of case outcomes or the underlying causes of DMC. The DOJ study and the previous five assessment studies by Leiber reported evidence of selection bias once this statistical technique was utilized. The purpose of this sixth assessment study is to examine the extent to which race still matters once legal (i.e., crime severity) and extralegal (i.e., age) factors are considered.

Data for the Current Study

For the purpose of this study, data was obtained directly from the Shelby County Juvenile Court. This data was cleaned for the objective of conducting the research. More specific, raw data of all delinquent referrals in Shelby County for the year 2016 (N= 139,689) were provided. The dataset was converted from Excel to SPSS format and all analyses were conducted using the SPSS statistical software.

The data was first sorted according to three variables: juvenile id, complaint date, and disposition severity (disposeverity). Based on this command, only the referral/complaint with the most severe disposition outcome for a given complaint date would be retained for each juvenile. In addition, complaints filed within 7 days of one another under the same juvenile id were assumed to be linked to the same incident, and therefore only the complaint with most severe disposition outcome within 7 days was retained. The steps taken to clean the data for analysis purposes are consistent with those used in the previous five Assessment studies.

The final data consists of N=4,779 distinct referrals for the one year period of January 1, 2016 through December 31, 2016. The data distributions parallel the Shelby county Court data by distinct complaints, as evidenced in Table 2 on the next page (pg. 13).

Table 2. Data and Distributions by Stages from January through December 2016

Stages ^c	<u>Shelby Juv. Court^a</u> (N=4,951) N	<u>Leiber^b</u> (N=4,779) N
Detention		
No	4,052	3,985
Yes	899	794
Non-judicial		
Yes	4,486	3,275
No	1,664	1,504
Adjudication		
No	409	378
Yes	1,255	1,126
Judicial disposition		
Probation	810	922
Placement	348	204
Waiver ^d		
No	----	128
Yes	83	45

a: Shelby county data counted by distinct complaints as taken from JCMSC 2016 RRI Report

b: Dataset provided by Shelby county and cleaned to represent distinct referrals

c: Stages created using disposition outcomes of the data cleaned to represent distinct referrals

d: Waiver as presented in JCMSC 2016 RRI Report includes all transfers to adult court in 2016 regardless of the initial complaint date; Waiver as created from dataset provided by Shelby county represent all transfers to adult court with a complaint date in 2016 only.

---- Information not provided

Variables

Table 3 (pgs.16-17) provides the independent and dependent variables used for the logistic regression analyses. The selection of variables was based on available data, the DOJ study, and past research dealing with assessment studies. The first assessment study and the present assessment study include independent variables (e.g., prior referrals, custody) and stages (e.g., adjudication, judicial disposition) not included in the DOJ study. The inclusion of these variables was done to provide a more detailed examination of the factors that may impact decision-making and possibly provide a better context for understanding the presence and/or absence of bias.

Independent. Eighty-seven percent of the sample is Black. Males comprise 74 percent of the sample and the average age of youth is 15 years old. Two measures of school status are used: attending school v. else and whether the youth was in special education. Ninety-one percent of the sample was reported to be in school full-time while just 10 percent were in special education. The current living situation of a youth is captured by two dummy variables: own home with one parent and home of relatives. Living in his/her own home with two parents is the reference group for both variables. Seventy-eight percent of the youth reside in their own home with one parent, 10 percent live at home with both parents and 12 percent live with relatives.

The extent of past involvement with the juvenile justice system is measured by the number of prior referrals. While the juvenile court collects information on each referral, data representing the number of prior referrals is not reported. Data was gleaned using data from 2010 through 2016 to create this variable. Thus the count making-up prior referral could be underestimated. Still, on average the sample evidenced on average 1.83 referrals and variation on the variable is present ranging from no past referrals to 10 or more past referrals.

Referral method is categorized as either summons/other or custody. The summons/other category mainly reflects summons referrals (62%). In all, 65 percent of the sample was referred by a summons/other, while 35 percent were taken into custody. The number of charges, crime severity, and four indicators of crime type are also included as legal variables. The average number of charges is a little over 1; most offenses are classified as a misdemeanor (72%) and the most common crime type is a person offense (45%), followed by a property offense (34%), domestic (10%), and drugs (10%). The reference category for the four crime type variables is other.

Dependent. Decision-making is examined at five stages and each stage constitutes the dependent variables. *Detention* is defined as a youth held in an actual center/facility and excludes waiting room/holds and those waiting to be picked up. Seventeen percent of the sample was held at some point in secure detention. Since being detained has been found elsewhere to have an indirect influence on case outcomes through race, detention will also be considered as an independent variable. For example, Blacks have been found in prior research to be more likely to be detained than similarly situated Whites; in turn, being detained predicts placement at judicial disposition. If this is found, because Blacks were more likely to be detained in the first place, Blacks then will receive placement at judicial disposition through the effects of detention on decision making at this stage.

Non-judicial is differentiated by yes (receive some type of non-judicial outcome – diversion, fine, release, etc.) and no (moving forward in the court proceeding thus recipient of a judicial outcome). Sixty-nine percent of the sample received a non-judicial outcome; thus a significant percent of youth were diverted away from the system. Following the DOJ report, the non-judicial option is further delineated to examine decision making involving warning (no, yes), 79 percent, and diversion (no, yes), 5 percent. The reference group for both variables is dismissed. Formal stages are represented by *adjudication* and *judicial disposition*. Seventy-five percent of the youth that reach adjudication are adjudicated delinquent. Eighty-two percent received probation at judicial disposition whereas only 18 percent received an outcome involving out-of-home placement.

Waiver. In the DOJ report race was found to be a predictor as Blacks were more likely than similarly situated Whites to be waived. There was not enough variation among race (i.e., not enough Whites) in our sample for 2016 to run statistically sound or stable models for the decision to waive youth to adult court.

The possibility of collapsing waiver hearing data from 2012 through 2016 also failed to produce enough variation. In 2016, almost all youth receiving a notice of transfer and those actually waived were Black (only three were White).

- Table 3 next page (pgs. 16-17) -

Table 3. Distribution of Variables (N=4,779)

Variable	Value	N	%
<i>Independent</i>			
Race	0 – White	599	13
	1 – Black	4180	87
Gender	0 – Male	3532	74
	1 – Female	1247	26
Age (young to old)	Years	M = 15.14 SD = 1.81 Range = 7-18	
School status	0 – In school full time	4332	91
	1 – Else	447	9
Special education	0 – No	4324	90
	1 – Yes	455	10
Current living situation ^a	0 – Own home, two parents	472	10
	1 – Own home, one parent	3724	78
	2 – Home of relatives	583	12
Prior referrals (low to high)	Number	M = 1.83 SD = 2.54 Range = 0-10	
Referral method	0 – Summons/Other	3118	65
	1 – Custody	1661	35
# Charges (low to high)	Number	M = 1.16 SD = 0.54 Range = 1-10	
Crime severity	0 – Misdemeanor	3424	72
	1 – Felony	1355	28
Property ^b	0 – No	3159	66
	1 – Yes	1620	34
Person ^b	0 – No	2643	55
	1 – Yes	2136	45

Table 3. continued

Variable	Value	N	%
Domestic ^b	0 – No	4308	90
	1 – Yes	471	10
Drugs ^b	0 – No	4309	90
	1 – Yes	470	10
<i>Dependent</i>			
Detention ^c	0 – No	3985	83
	1 – Yes	794	17
Non-judicial	0 – Yes	3275	69
	1 – No	1504	31
Warn	0 – No	877	27
	1 – Yes	2398	73
Diversion	0 – No	3111	95
	1 – Yes	164	5
Adjudication	0 – No	378	25
	1 – Yes	1126	75
Judicial disposition	0 – Probation	922	82
	1 – Out of home placement	204	18

a: Variable will be treated as dummy variable; Own home, two parents reference group.

b: Reference category is Other offense, e.g. weapon possession, disorderly conduct.

c: Treated as both independent and dependent variable.

Note: Insufficient cases or variation to study waiver; all but three youth waived were Black.

Analysis Procedures

As stated previously, this part of the assessment study used multivariate procedures in the form of logistic regression. This procedure allows for the estimation of the relative effects of each of the independent variables on a dependent variable. The Exp(B) will be also used to calculate the odds ratio to discuss the relative impact of an independent variable on a dependent variable. The first model will represent the full or additive equation, which allows for the examination of a direct or main effect of an independent variable on an outcome (e.g., race with detention). Next, separate models were estimated for Whites and Blacks to address the possibility of race interaction relationships with independent variables and in predicting a case outcome. For example, race and gender may act in combination to impact decision making. That is, it is possible that being a White female may result in different treatment than a Black female. The estimation of separate models along with tests involving Z-score comparisons allows for the examination of this possibility.

Past research has also shown that as youth move through the juvenile justice system the sample becomes more alike; thus, increasing the chance for error or selection bias. To correct for this possibility, a hazard rate was created and included in the model at judicial disposition. The results produced problems with multi-collinearity. Thus, the models were re-estimated without the hazard rate. Once the hazard rate was dropped from the analyses, statistical checks for multi-collinearity revealed acceptable levels of sharedness among the variables.

Findings

Detention. Table 4 (pg. 19) presents the logistic regression result for estimating the decision to detain. In the present study, race is a statistically significant determinant of the detention outcome. **Black** youth have almost a **one and a half times** greater likelihood to be **held in detention** than a White once other factors are taken into consideration (Column 1).

In the last two assessments, there was the presence of an interaction effect involving race and being charged with a drug offense. Being White and charged with drug offending substantially decreased the chances of being detained. In this 6th assessment study, no such relationship was found. In fact, being involved with drug offending decreased the likelihood of detention and this effect did not differ by the race of the youth. Most of the legal and extralegal variables predict detention as one would expect. For example, crime severity is predictive of detention and has the strongest impact on the detention process.

Overall, in 6 of 7 assessment studies, race has been found either individually or in combination with other factors, such as drug offense, to influence the decision to detain net considerations of other variables. Recall that the DOJ study reported a strong relationship between race and detention in that Black youth were almost 2¾ times more likely to be detained than similarly situated White youth. In the first assessment study by Leiber, race was not found to be a statistically significant predictor of the detention decision once all legal and extralegal factors were taken into account. In Leiber's second and third assessment studies, Black youth involved in a person offense increased the likelihood of being detained by over two times relative to all other youth net controlling for other factors, including domestic assault cases. In the fourth assessment study, Whites charged with a drug offense were less likely to be detained than comparable Blacks. In the fifth assessment study, being White and charged with drug

Table 4. Logistic Regression Results - Detention (N=4,779)

Variable	Full Model (1)	White (2)	Black (3)
Race	.38^{a*} (1.46)	-	-
Gender	-.81** (.45)	-.67 (.51)	-.82** (.44)
Age	.15** (1.16)	.11 (1.11)	.15** (1.17)
School status	.60** (1.82)	.57 (1.77)	.62** (1.85)
Special education	-.28 (.76)	.07 (1.08)	-.29 (.75)
Own home, one parent	.15 (1.16)	.50 (1.64)	.08 (1.09)
Home of relatives	.43* (1.54)	.81 (2.25)	.38 (1.46)
Prior referrals	.22** (1.24)	.28** (1.32)	.22** (1.24)
Custody	- _b	- _b	- _b
# Charges	.38** (1.46)	.22 (1.24)	.40** (1.49)
Crime severity	2.73** (15.26)	2.35** (10.49)	2.76** (15.86)
Property	-1.66** (.19)	-2.20** (.11)	-1.60** (.20)
Person	-.03 (.97)	-.40 (.67)	.03 (1.03)
Domestic	-.12 (.89)	-1.15 (.32)	-.02 (.98)
Drugs	-1.67** (.19)	-2.99** (.05)	-1.44** (.24)
-2 Log Likelihood	2849.47	256.12	2584.49

a: Regression coefficient; Exp(B) is presented in the parenthesis ().

b: Insufficient cases, variable dropped from analysis

Note: Coefficient comparisons failed to yield statistical significant differences across White and Black models for adjudication

**p<.01, *p<.05

offending decreased the chances of being detained by 67 percent. In this sixth assessment study, being Black increases the likelihood of being held in secure detention by almost one and a half times to a comparable White. In short, the evidence from the 6 assessment studies overwhelmingly indicate that **detention is a problematic stage in terms of DMC.**

Non-judicial. Table 5 (pgs. 21-22) presents the logistic regression results for predicting the decision to first use a non-judicial outcome versus further court processing, followed by models differentiating among non-judicial outcomes (warning, diversion versus release). Race is a positive statistically significant predictor of non-judicial decision-making (Column 1). Being **Black increased the odds of receiving a recommendation for further court proceedings (by 42%)** once controls were taken into account (Column 1).

If a non-judicial outcome is given, **race differences are evident in the decision to provide youth with a warning** (Column 4). Black youth are more likely to receive a warning than alike White youth. In addition, Whites involved in domestic dispute increases the odds of receiving a warning relative to other youth (Column 5). No race effect exists for the decision to divert (Column 7). Tests for race interaction relationships with other independent variables produced one significant effect at the $p < .01$ level involving diversion. **Older Whites have an increased odds of not receiving a diversionary outcome** relative other youth (Column 8).

In the DOJ assessment study, Blacks were found to be less likely than similarly situated Whites to receive a warning and a fine, restitution or public service sanction. Or, in other words, Blacks were more likely than Whites to be referred for further juvenile court proceedings once controls were considered. The results from Leiber's first assessment study showed that this effect remained. Blacks were 1 ½ times more likely than Whites to be referred to a court hearing net controls. In the second and third assessment study by Leiber, race was not a statistical significant determinant of the decision to be referred further on at this stage. In the fourth assessment study and the fifth assessment study, the results paralleled those from the DOJ study and the first assessment study. In the current study, Blacks once again were found to be referred on at intake than similarly situated Whites. **Thus, in 5 of 7 assessment studies, race has had a direct relationship with the non-judicial decision.**

In the first assessment study by Leiber, differentiating among the non-judicial case options with warning as one variable and diversion as another variable with release as the reference group failed to produce evidence of race main or interaction effects with the dependent variables. Similarly no main or interaction relationships were evident in the second study. But similar to the findings reported by DOJ, results from the third and this fifth assessment study by Leiber showed that Black youth were less likely to participate in diversion than similar White youth. In this sixth assessment no such effect was discovered. In fact, Black youth were more likely to be warned than White youth.

Table 5. Logistic Regression Results - Non-Judicial

Variable	Non-Judicial			Warn			Diversion		
	Full (1)	White (2)	Black (3)	Full (4)	White (5)	Black (6)	Full (7)	White (8)	Black (9)
Race	.35^{a*} (1.42)	-	-	.35^{**} (1.42)	-	-	-.16 (.85)	-	-
Gender	-.79^{**} (.45)	-1.55^{**} (.21)	-.74^{**} (.48)	-.05 (.95)	-.30 (.74)	.01 (1.00)	.44^{**} (1.55)	.73 (2.06)	.41[*] (1.50)
Age	.02 (1.02)	-.12 (.89)	.03 (1.03)	.03 (1.03)	.16[*] (1.18)	.01 (1.01)	.02 (1.02)	-.25[*] (.78)	.07^{††} (1.07)
School status	.12 (1.13)	.38 (1.46)	.05 (1.06)	-.01 (1.00)	-.03 (.97)	.02 (1.02)	-.66 (.52)	-.53 (.59)	-.74 (.48)
Special education	.19 (1.21)	1.50[*] (4.47)	.16 [†] (1.17)	.44^{**} (1.56)	.83 (2.30)	.41[*] (1.51)	-.84 (.43)	- ^b -	-.68 (.51)
Own home, one parent	-.01 (.99)	-.07 (.93)	-.04 (.96)	-.48^{**} (.62)	-.56 (.57)	-.52^{**} (.60)	1.18^{**} (3.26)	1.33 (3.78)	1.10[*] (3.01)
Home of relatives	.06 (1.06)	.90 (2.46)	-.02 (.98)	-.52^{**} (.60)	-.33 (.72)	-.59^{**} (.56)	1.11[*] (3.02)	1.35 (3.84)	1.00 (2.72)
Prior referrals	.40^{**} (1.49)	.70^{**} (2.01)	.38^{**} (1.47)	-.13^{**} (.88)	-.16 (.86)	-.13^{**} (.88)	-.49^{**} (.61)	-.24 (.79)	-.53^{**} (.59)
Custody	.74^{**} (2.10)	1.16^{**} (3.19)	.69^{**} (2.00)	-1.52^{**} (.22)	-2.33^{**} (.10)	-1.44^{**} (.24)	-.84^{**} (.43)	-1.02 (.36)	-.88^{**} (.42)
# Charges	.28^{**} (1.32)	.49 (1.63)	.23[*] (1.26)	.11 (1.12)	-.01 (1.00)	.11 (1.12)	.24 (1.27)	-.02 (.98)	.30 (1.35)
Crime severity	1.96^{**} (7.09)	1.92^{**} (6.79)	1.97^{**} (7.14)	-.19 (.83)	-.01 (.99)	-.23 (.79)	.16 (1.18)	-.04 (.97)	.23 (1.26)

Table 5. continued

Variable	Non-Judicial			Warn			Diversion		
	Full (1)	White (2)	Black (3)	Full (4)	White (5)	Black (6)	Full (7)	White (8)	Black (9)
Property	.30 (1.36)	.65 (1.92)	.27 (1.31)	.29* (1.34)	.30 (1.35)	.31* (1.36)	1.13** (3.09)	.93 (2.54)	1.14** (3.14)
Person	.67** (1.95)	1.47* (4.37)	.57** (1.78)	.16 (1.17)	.21 (1.23)	.14 (1.15)	1.02* (2.79)	1.24 (3.46)	.99* (2.70)
Domestic	-.54* (.58)	-3.32 (.04)	-.49* (.61)	.04 (1.04)	1.25* (3.50)	-.10 [†] (.91)	₋ ^b -	₋ ^b -	₋ ^b -
Drugs	.17 (1.18)	.28 (1.32)	.19 (1.21)	.39* (1.48)	.52 (1.69)	.31 (1.36)	1.48** (4.41)	1.78 (5.92)	1.35 (3.87)
Detention	2.27** (9.64)	1.67** (5.31)	2.34** (10.37)	-.41 (.66)	-1.42 (.24)	-.23 (.79)	₋ ^b -	₋ ^b -	₋ ^b -
-2 Log Likelihood	3146.94	263.29	2855.06	3423.49	497.06	2909.30	1199.24	225.92	964.54

a: Regression coefficient; Exp(B) is presented in the parenthesis ()

b: Insufficient cases, variables dropped from analysis

** p<.01, *p<.05

†† p<.01, † p<.05, Coefficient comparisons yield statistical significance.

Adjudication. Table 6 (pg. 24) provides the logistic regression results for understanding adjudication decision-making. In the present assessment study, **race once again does not have a statistical direct effect on adjudication outcomes** (Column 1). Further, tests involving coefficient comparisons **also failed to produce evidence of race differences in the relative effects of the independent variables with adjudication.**

It is important to note that detention has a strong impact on the adjudication decision once all factors are taken into account. Being detained decreases the likelihood of an adjudication of delinquency (Column 1). For Whites, the effect of detention is inverse but not statistically significant (Column 2). For Blacks, subjected to detention decreases (inverse) the odds of being adjudicated by .44 (Column 3). Recall that earlier it was reported that being Black was a determinant of detention. **Thus, an indirect relationship exists between being Black, being detained, and a decreased likelihood of being adjudicated a delinquent.**

Recall that the DOJ study did not report adjudication decision-making as a problem area. In the first assessment study by Leiber, race by itself was not a significant predictor once controls were considered. Comparisons of coefficients revealed the existence of a race interaction relationship with the number of charges and the odds of being adjudicated. For Whites, the number of charges had an inverse or negative relationship with the dependent variable and was not statistically significant. For Blacks, the relationship was positive and statistically significant. Black youth with a greater number of charges increased the likelihood of adjudication by 2.15 relative to other youth net considerations of legal severity and other variables. In the second assessment study, race once again did not have a direct effect on the dependent variable. But, two race interaction relationships were found. Black females and White youth charged with a person offense were found to have an increased likelihood of adjudication. In the fourth and fifth assessment study, no direct race effects of statistical significance were discovered. But, a positive indirect effect with race and detention was found with the adjudication decision (increased the chances of being adjudicated). In the current study, **an indirect race/detention relationship with the adjudication process** was once again reported but this time the effect decreased the odds of being adjudicated for Blacks detained.

Judicial Disposition. In Column 4 of Table 6, the logistic regression results for predicting judicial disposition outcomes are presented. In the present assessment study, and consistent with the previous four assessment studies, **race is not a statistically significant determinant of judicial decision-making.** Tests for the presence of race combination relationships with independent variables also failed to show the existence of such effects with the dependent variable. Detention, however, has an effect on disposition outcomes. This relationship is positive suggesting that **Blacks who were detained are receiving an out-of-home placement.**

Because of the instability of the models for Whites, separate regression runs were not conducted for each racial group. **Only 8 Whites received a disposition of out-of-home placement compared to 198 Blacks.**

In the first assessment study by Leiber, race had no main relationship with the dependent variable. However, two race interaction relationships were reported. Older Whites had a reduced probability of a receiving an out-of-home placement than older Blacks who had an increased

Table 6. Logistic Regression Results - Adjudication, Judicial Disposition

Variable	Adjudication			Judicial Disposition
	Full (1)	White (2)	Black (3)	Full (4)
Race	.09 ^a (1.09)	-	-	.35 (1.41)
Gender	.43 (1.54)	- ^b	.30 (1.35)	-1.30** (.27)
Age	-.56** (.57)	-.43* (.65)	-.57** (.56)	.07 (1.08)
School status	.10 (1.11)	-.42 (.66)	.18 (1.20)	.29 (1.33)
Special education	.67** (1.96)	1.45 (4.27)	.66** (1.94)	-.67* (.51)
Own home, one parent	.32 (1.38)	.06 (1.06)	.37 (1.45)	-.71* (.49)
Home of relatives	.57* (1.76)	-.57 (.57)	.74** (2.10)	-.13 (.88)
Prior referrals	-.06** (.95)	.07 (1.07)	-.06** (.94)	.26** (1.30)
Custody	.75** (2.12)	.72 (2.05)	.77** (2.16)	-.23 (.79)
# Charges	-.18* (.84)	.21 (1.24)	-.20* (.82)	.09 (1.09)
Crime severity	-.67** (.51)	.20 (1.22)	-.78** (.46)	.19 (1.21)
Property	-.02 (.98)	.68 (1.98)	-.06 (.95)	-.56 (.57)
Person	-.78** (.46)	-.65 (.52)	-.78** (.46)	-.54 (.58)
Domestic	-.43 (.65)	- ^b	-.34 (.71)	-1.25 (.29)
Drugs	.19 (1.20)	.69 (2.00)	.08 (1.08)	-2.02** (.13)
Detention	-.64** (.53)	-1.17 (.31)	-.58** (.56)	1.35** (3.86)
-2 Log Likelihood	1444.50	102.61	1328.27	850.71

a: Regression coefficient; Exp(B) is presented in the parenthesis ().

b: Insufficient cases, variable dropped from analysis

Note: Coefficient comparisons failed to yield statistical significant differences across White and Black models for adjudication; not enough variation to estimate separate race models for judicial disposition

**p<.01, *p<.05

odds of such an outcome. Being detained had also significant positive relationship with the dependent variable (increased odds of being taken out of the home). This effect was conditioned by race. Blacks held in detention had an increased likelihood of receiving the more severe judicial outcomes than similarly situated White youth once controls were taken into account. In the second assessment study, once again race was not a statistically significant determinant of judicial disposition decision making. Differentiating the results by race, tests comparing coefficients produced two statistically significant interaction relationships. As in the first assessment study, older Whites had decreased odds of receiving an out-of-home placement than other youth, including Blacks. White youth from a single-parent home were found to be less likely to receive the more severe judicial disposition outcome than similarly situated Black youth. These relationships were not found in neither of the last three assessment studies. In the current research, an indirect inverse relationship appears to exist between being Black, being detained and receiving the harsher outcome of out-of-home placement at judicial disposition.

Note: As pointed out earlier, logistic regression was not used to predict decision making at the transfer hearing to decide whether to waive a youth to adult court. Recall that there was a lack of variability in that there were too few Whites to conduct the analysis over the last five years. That is, **almost all youth receiving notice of transfer and actually waived are Black.**

Summary and Conclusions

Using data from the state of Tennessee for the years 2005 through 2009, and to some extent 2010, the DOJ study found and reported the presence of DMC at almost every stage. In subsequent analysis using data from Shelby County, the DOJ findings letter reported that the presence of DMC was not accounted for solely by legal and extralegal considerations, especially at detention, the use of non-judicial outcomes in the form of warning and diversion and at the transfer to adult court hearing.

Since the DOJ study, Leiber has conducted six assessment studies, including the current research. For the most part, Leiber has reported similar findings as those detailed in the DOJ study. In his first assessment study, Leiber used data given by the Memphis/Shelby County Juvenile Court and cleaned by Leiber for the time-frame ranging from July 1, 2012 through June 30, 2013, and reported somewhat similar results to DOJ. In the second assessment study covering court decision making for the entire year 2013 by Leiber, several themes continued to exist. In a 3rd assessment study using data from July 1, 2013 through June 30, 2014 similar patterns from the previous two assessments and the DOJ study were evident. The fourth and fifth assessment studies by Leiber examined data for delinquent referrals for the year 2014 and the year 2015, respectively.

The current study covered cases for the year 2016. And once again, a continuation of Black overrepresentation and Black effects with decision-making outcomes exist. **The most problematic areas continue to be referral, secure detention, and intake/petition or the non-judicial stage in terms of overrepresentation and equity.**

Recall that a summary of these studies and conclusions are presented on pages 1-4 and discussed throughout this report. Additional information concerning recommendations and specifically

what the Shelby Court has/has not undertaken can be found in the 9th Equal Protection Compliance Report.

Below are the main findings/themes from all six assessment studies and recommendations:

- **Referrals** by the police/schools to the juvenile court have declined but Black youth continue to be overrepresented.

Strategies such as SHAPE, the expanded use of Porter Leath, the use of beds at Youth Villages, discussions/training of the Memphis Police Department, including those in higher administration, and the use of expedite evaluation and review, and greater use of summons as a means to avoid juvenile court contact, have been utilized by the Court. These initiatives seem to be good. But, each needs to be evaluated to assess if they are producing the intended results and whether these should be used in greater frequency to reduce the number of youth, especially Black youth, referred to juvenile court.

- Efforts of reform at **detention** appear to be taking place, to some degree, as evident in the decline in the relative numbers but the RRI's and the findings from the multivariate analyses continue to show no change in the overrepresentation of Blacks relative to Whites, AND being Black continues to predict the use of secure detention. The relationship of race with detention is sometimes evident in the form of a direct effect and at other times in the form of interaction relationship with a number of independent variables, such as being charged with a person or drug offense. Race also appears to have an indirect relationship with adjudication and judicial disposition decision-making where the effects sometime yield more severe and/or lenient outcomes at adjudication and at judicial disposition.

The continued finding that race matters at detention once again begs the question as to what effect the Summons program (LEAP) and DAT are having on the referral of Black youth to detention. Enough time has passed for implementation of these efforts to have an impact but the overall results show that change in DMC and the more equitable treatment of Black youth is not occurring. The Juvenile Court has attempted to revise the DAT (in particular with a focus on the history of prior offenses, certainty of appearance, and threat to danger to self/others). The revised DAT 3 was implemented February 1, 2017. For DMC and achieving equitable treatment for all youth at detention, the DAT 3 needs to be closely examined, evaluated, and revised in a timely manner. Likewise, the implementation and possible greater use of the Expedite review, the Summons Review Team (SRT) initiative, and electronic monitoring may aid in reducing the number of Black youth referred and placed in secure detention. The STR full implementation did not occur until the fall of 2016 and so the full possible impact on race and case outcomes still needs to be determined.

- Race relationships continue to exist at **non-judicial decision-making**. Over time, this relationship has almost been as evident as at referral and detention. Similar to referral and secure detention, there needs to be an inquiry as to why these race effects are continuing.

As stated on numerous occasions, the Court needs to address the following questions: (1) are the structured decision-making tools being administered properly (e.g., overrides)? And (2) are the tools and the criteria comprising the tools used to structure decision-making reducing DMC and ensuring decision-making that results in equal protection? The findings from the six assessment studies, for the most part, reveal that the tools are not bringing about the needed change in decision-making.

The Court has been reviewing the Graduated Response Grid. There has been a particular focus on: (1) if the decision making process by each PO reaches the same or similar conclusion and (2) whether or not the supervisor and/or DA moves cases from non-judicial to petition (court). A revised Response Grid was implemented in November of 2016. An RFP has been issued and posted by Shelby County Purchasing in April of 2017, to help in further evaluating the Revised Graduated Response Grid. While this is good, too much time elapsed from the meeting in July, 2016 where the Graduated Response Grid was discussed as a contributing factor to DMC to the posting of the RFP in April of 2017. The Court is also implementing a parent orientation to discuss the importance of not rejecting an offer to participate in diversion as well as possible greater use of the By-Pass program.

- Although the overall number of youth reaching the waiver stage via notice have declined, most youth that receive a notice and waived are Black. While much of this relationship rests with the prosecutor, continued dialogue must occur between the interested parties to address this issue.

Overall, the Court has shown awareness and now ownership of the DMC issue it is facing. **But more aggressive** discussions and action in the form of strategies, policies, and implementation need to take place before the reported results may be altered. In short, despite efforts on the part of the Court to make change, little has changed in reducing DMC and ensuring greater equality for Black youth in Shelby County/Memphis Juvenile Court. This is especially true with regards to referrals, detention, and non-judicial decision-making. Central to change will be securing a greater commitment from the police, and **aggressively evaluating** the revised DAT 3 and the revised Graduated Response Grid.