



**Multiple Response System (MRS)
Evaluation Report to the
North Carolina Division of Social Services
(NCDSS)**

*at the request of the
North Carolina General Assembly*

**Submitted by
Center for Child and Family Policy
Terry Sanford Institute of Public Policy
Duke University**

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Executive Summary

At the request of the North Carolina Division of Social Services (NCDSS), the Center for Child and Family Policy at The Terry Sanford Institute at Duke University evaluated the Multiple Response System (MRS) reform for families reported to child welfare in 10 MRS pilot counties. The evaluation included data collection and analyses to address issues relating to child safety, timeliness of response and case decision, frontloading of services, and implementation of key MRS family-centered strategies, specifically: the redesign of in-home services; Child and Family Teams; Child Welfare-Work First collaboration; and Shared Parenting. The study design combined multiple methods to assess the impact of these strategies on the two primary foci of child welfare practice: keeping children safe and providing services to families in order to prevent future problems.

For this evaluation, quantitative and qualitative analyses were performed using data from state administrative data systems and original data collected by evaluators. Data sources included Child Protective Services (CPS) reports, Services Information System (SIS) Data, case record reviews, social worker and caregiver interviews, and telephone surveys of family members. Statistical tests were used to measure changes in 10 MRS pilot counties over time and in comparison with non-MRS control counties. Each pilot county, with the exception of Mecklenburg, was matched to a control county based on pre-reform similarities in total population, child population, and rates of assessed and substantiated child maltreatment. Due to its large size, Mecklenburg County lacks an appropriate comparison county. Therefore results for Mecklenburg are included with the pilot group only when MRS trends over time are analyzed, but reported separately when comparisons are made with control counties. Responses from caregivers in 7 MRS pilot counties comprise the telephone survey sample. The evaluation team visited a sub-sample of 4 MRS pilot counties and 4 non-MRS counties to gather data for the qualitative component of the evaluation. Case reviews, combined with interviews with social workers and caregivers, provided qualitative information to assess implementation of MRS strategies compared to CPS practice in the non-MRS counties.

Major Findings

Dual Track Distribution of Assessments and Case Decisions

Within MRS counties, there was a significant shift toward greater use of Family Assessments (and decline in the use of Investigative Assessments) in the pilot counties from 2003-2005.

Within the Family Assessment Track, the case findings changed over time, as the proportion of Services Needed cases remained the same, but more cases were classified as Services Recommended and fewer cases were classified as Services Not Needed.

The percentage of Investigative Assessments that were Substantiated as Abuse did not change in the MRS pilot counties during this time.

Child Safety

MRS has not adversely affected the level of child safety based on official records of child maltreatment and substantiations. The initiation of MRS in 2002 was associated with a dampening in the rise of assessments in the pilot counties as compared with the control counties. Thus, MRS counties are assessing fewer cases than they would have been, if MRS had not been initiated.

Pilot counties showed a small but significant decline in rates of substantiated Abuse after MRS was introduced, but so did the control counties.

Rates of repeated assessment declined in all studied counties between 2000 and 2004, but this change cannot be attributed to MRS.

Timeliness of Response

Introduction of MRS did not significantly alter the likelihood that families would receive an initial response to an accepted report within 72 hours.

MRS was associated with a higher proportion of on-time case decisions in pilot counties than control counties.

Frontloading of Services

A goal of MRS is to bring services and supports more quickly to families in need, called frontloading. The average number of frontloaded service minutes increased in the pilot counties after the introduction of MRS.

Greater frontloading reduced the probability that a child would come back to the system within six months following an initial assessment, a finding of Neglect/Services Needed or a Substantiation of Abuse

Redesign of In-home Services

Although only MRS counties are allowed to choose between two tracks for case decision, Structured Decision Making tools (Family Risk Assessment, Family Assessment of Strengths and Needs, and the Case Decision Summary / Initial Case Plan) were implemented statewide effective April 1, 2002. This evaluation found that Family Assessments in the pilot counties identified more specific family risks and needs than

those in control counties. Insufficient documentation prevented evaluators from linking assessments with accurate data on service referrals, initiation, and completion; therefore, it was not possible to determine whether case plans were more individualized or more effective in the pilot counties. The extent of family involvement in case planning, an important dimension of the MRS redesign, requires further evaluation. The availability of community resources to address important contributing factors for child maltreatment such as poverty, substance abuse, domestic violence, homelessness, and mental health issues affects the support that DSS social workers can give families.

Child and Family Teams

MRS pilot counties varied in the extent of implementation of this strategy as documented in the case files. Some evidence for Child and Family Team Meetings was found in the pilot counties. Trained facilitators were available in some cases. More thorough and consistent documentation is needed to evaluate the scope, quality, and impact of this strategy and to assess the value of external facilitation.

Child Welfare-Work First Collaboration

Limited evidence was found in the case records for this strategy. Some examples of collaboration between Child Welfare and Work First caseworkers were found in MRS pilot counties but inadequate documentation prevented evaluators from determining the full range of activities or effectiveness of coordination efforts.

Shared Parenting

Shared Parenting meetings and activities are not systematically documented in the case records in MRS and non-MRS counties. There is no evidence for widespread practice of this strategy.

Feedback from Families

The majority of caregivers in a sample from 7 pilot counties felt that their social worker treated them with respect and helped them get the services they needed. In line with MRS goals, caregivers reported that the assistance they got from DSS improved their parenting skills and helped them know whom to contact in the community when they need help.

Recommendations

The following recommendations are based on the findings from the administrative and qualitative data included in this report.

Overall Recommendation

- Nothing in this evaluation indicates that the MRS reform is causing any harm to children, and a wide array of evidence indicates that families in MRS counties are receiving needed services more quickly. Thus, it is recommended that the MRS reform be continued in all 100 counties in North Carolina.

Benchmarking and Practice Recommendations

- Refine indicators and activities for each MRS strategy so that fidelity can be measured, progress of implementation can be assessed, and outcomes can be attributed to specific practices, particularly for Child and Family Teams, Shared Parenting, Child Welfare-Work First coordination, and Redesign of in-home services.
- Encourage a dialogue among state and county personnel to explore the value of facilitation for Child and Family Team meetings, when it is most appropriate and effective, and what resources are needed to consistently implement this strategy.
- Emphasize frontloading of services in practice to build on the demonstrated effectiveness of early support in preventing repeat assessment.

Documentation

- Develop standardized forms to document and track progress for MRS strategies, including forms for Child and Family Team meetings, Shared Parenting meetings, and in-home services.
- Encourage counties to adopt and supervise for consistent use of standardized documentation.

Training

- Increase training opportunities for both Child Welfare and Work First staff to enhance their knowledge about the policies and practices of their counterparts and to focus on ways to partner to meet the needs of families.
- Provide additional training for MRS strategies that emphasizes fidelity to the model and documentation of specific activities for Child and Family

Teams, Shared Parenting, Child Welfare-Work First collaboration, redesign of in-home services and other components of MRS reform.

- Expand training opportunities for foster care contractors and caregivers to increase their willingness and capacity to work with birth parents.

Supervision

- Refine methods and procedures for more rigorous supervision of staff members for MRS implementation.
- Increase training of supervisors for monitoring of MRS strategies.
- Provide on-going mentoring and assistance to supervisors.

Collaboration with Community Partners

- Work with counties to build capacity and collaboration with community partners to develop resources that meet the needs of children and families, especially to address substance abuse, domestic violence, and mental health.

Evaluation

Quality Assurance

- Work with counties to develop a process to solicit ongoing, valid feedback from caregivers.
- Work with counties to develop an ongoing quality assurance process to evaluate the progress in implementing MRS strategies and the effectiveness of service delivery, documentation, and supervision.
- Initiate a study of the Services Recommended case finding to determine how it is being used and the extent to which families follow through and benefit from voluntary services.

Future Evaluation

- Engage in ongoing meetings with officials from state agencies, counties, and the evaluators to define goals and to improve the quality of evaluation with regard to outcomes, including the quality of MRS practice and child safety, permanence and well-being.

Multiple Response System (MRS) Evaluation Report to the North Carolina Division of Social Services (NCDSS)

Introduction

Purpose

The purpose of this report is to present the findings of evaluation of the Multiple Response System (MRS) reform of family support and child welfare services as implemented in 10 County Departments of Social Services (DSS) in North Carolina: Alamance, Bladen, Buncombe, Caldwell, Craven, Guilford, Franklin, Mecklenburg, Nash, and Transylvania. As a part of the mandate to implement MRS, the North Carolina Legislature requires ongoing evaluation to ensure that child safety is maintained, that families continue to receive a timely response and needed services, and that local human service agencies are working together to accomplish these goals. In 2004, at the request of the North Carolina Division of Social Services (DSS), the Center for Child and Family Policy (CCFP) at the Terry Sanford Institute at Duke University undertook a comprehensive evaluation of MRS to address these issues in the 10 MRS pilot counties. Specifically, the evaluation focused on the following dimensions of MRS reform:

- Case distribution: choice of two approaches to reports of child maltreatment
- Safety: rates of assessment; repeat assessments
- Timeliness of response; timeliness of case decision
- Frontloading of services
- Redesign of in-home services
- Implementation of Child and Family Teams
- Collaboration between Child Welfare and Work First
- Shared Parenting activities
- Feedback from families

This report describes the quantitative and qualitative sources and methods used to assess these aspects of MRS reform, present the findings in each area, and makes recommendations based on the conclusions.

Evaluator

The Center for Child and Family Policy at The Terry Sanford Institute at Duke University conducted the evaluation of the Multiple Response System to families reported for child maltreatment. The Center for Child and Family Policy (CCFP) brings

together scholars, policy makers, and practitioners to solve problems facing children in contemporary society by undertaking rigorous social science research and then translating important findings into policy and practice. CCFP is currently addressing issues of early childhood adversity, education policy reform, and youth violence and problem behaviors. Researchers at CCFP design and evaluate interventions for youth and implement them in school and community settings; researchers and staff also work closely with families of at-risk children to implement and evaluate programs designed to foster healthy family dynamics.

Kenneth Dodge, Ph.D., who has served as the Principal Investigator for this evaluation, is the William McDougall Professor of Public Policy and Professor of Psychology and the Director of the Center of Child and Family Policy at Duke. For the past 25 years, Dr. Dodge has published over 250 scientific articles and has been the PI on research grants totaling over 35 million dollars, several involving multi-site collaborations. He is the recipient of a Senior Scientist Award from the National Institute on Drug Abuse to study the development and prevention of drug use in youth. Most recently, he has been concerned with translating knowledge from prevention science into effective public policies for children, youth and their families.

The evaluation team included staff members of CCFP with expertise in the areas of data management, statistics, project coordination, and program evaluation. Linda Frankel, Ph.D. and Christina Christopoulos, Ph.D., assisted by Natalie Towns, M.S.W., served as the Research Coordinators for this evaluation. Linda Frankel is a sociologist with expertise in qualitative research. For the past 15 years, Dr. Christopoulos has coordinated the research component of the Fast Track multi-site conduct disorder prevention/intervention project. Adele Spitz Roth served as the project coordinator for this evaluation. Spitz Roth has over 20 years of experience in organizational, systems and project management in health and human services delivery systems. Shayala Williams, M.P.H., served as the statistician for this evaluation. Katherine Rosanbalm, Ph.D. provided statistical supervision. Dr. Rosanbalm has worked as a program evaluator and statistician for numerous state and federally funded initiatives and research studies, including statewide pilot implementation of previous DHHS programs in North Carolina. Claire Osgood, assisted by Matt Edwards, was responsible for the data management and programming needs for this evaluation. Together, they have over 20 years of experience in data management, programming, and technical report writing.

Background

North Carolina's Multiple Response System (MRS) began with a mandate by the North Carolina General Assembly (Session Law 2001-424, Senate Bill 1005, "Appropriations Act of the General Assembly"). This mandate required that the North Carolina Division of Social Services pilot an alternative response system for child protection with selected reports of suspected child neglect. Ten pilot counties began preliminary field-testing of MRS in 2002, and implementation in those counties began in earnest in January 2003. MRS was expanded to 42 counties in 2003, following the

passage of legislation that increased the number of counties allowed to implement an alternative response system of child protection. As of January, 2006, all one hundred North Carolina counties are implementing the Multiple Response System.

MRS Strategies: A Family-Centered Approach

The Multiple Response System reform aims to increase family involvement in assessment and planning to address child welfare concerns and prevent future harm to children. The goal is to respond not only to the specific incident that brought a particular family to the attention of DSS, but to understand and address the broader spectrum of needs that might have undermined the caregivers' ability to parent effectively. Using a team approach, social workers work with the family to explore these needs and identify the available strengths and resources that will help them improve their lives and better care for their children. The MRS assessment process sets a more cooperative tone and is designed to be more open and transparent than the traditional forensic assessment. The purpose is to engage the family and gain a more complete picture of their circumstances so that appropriate assistance can be offered and concerns remedied. When services are deemed necessary, the case planning process includes strategies to facilitate family participation and cooperation. When placement of children outside the home is required, MRS reform extends to the relationship between foster and birth parents, promoting interaction that supports reunification as soon as possible.

North Carolina's Multiple Response System utilizes seven key strategies to carry out a family-centered approach to child protection, including:

1. *A strengths-based, structured intake process.* Emphasis is placed on family strengths along with needs. Includes structured intake tools with consistent screening criteria for identifying child abuse, neglect, and dependency reports.

2. *A choice of two approaches to reports of child abuse, neglect, or dependency.* Allows a differential response to child neglect and dependency reports that provides a more tailored approach for each family, facilitating a partnership among local agencies and communities to address all needs of the child and family. Definitions of the Family and Investigative Assessment Tracks and their respective findings follow:

A Family Assessment Track is followed for dependency cases and cases of suspected neglect that might be better served by service delivery than by an investigative response, though social workers and supervisors may always choose to place a neglect or dependency case into the Investigative Assessment track if they feel that this approach is needed to ensure the safety of the children. The Family Assessment Track follows a strengths-based approach that attempts to engage the family in determining needs and finding solutions. By accessing extended family and community resources and facilitating a team approach to address identified needs, the Family Assessment Track aims to stabilize the family and enable the parents to care for their children better. Initial interviews of parents and children are scheduled with the parents, parents are informed about

collateral interviews, and no perpetrator is identified. This track focuses on total child well-being, assessing all of the family's needs, rather than solely investigating a specific reported instance of neglect.

For the period evaluated there are three possible findings following a Family Assessment:

- (1) **Services Needed**, indicating that child protective services are required;
- (2) **Services Recommended**, indicating that services are voluntary but recommended; and
- (3) **Services Not Recommended**, indicating that no service need has been identified.

It should be noted that counties differed in how they recorded the situations when services were provided during the assessment period and no longer needed at the time of the case decision. This ambiguity has been addressed by the implementation of a new case finding (**Services Provided, Child Protective Services No Longer Needed**) that went into effect February 2006.

An **Investigative Assessment Track** continues to be followed for cases requiring an investigative response, including all reports that meet the definition of abuse as well as the following special types of reports:

- Abandonment
- A child fatality when there are surviving children in the family
- A child in custody of local DSS, family foster homes, residential facilities, child care situations, and reciprocal investigations
- A child taken into protective custody by physician or law enforcement, pursuant to N.C. General Statute 7B-308 & 500
- The medical neglect of disabled infants with life threatening condition, pursuant to Public Law 98-457 (Baby Doe)
- A child hospitalized (admitted to hospital) due to suspected abuse/neglect.

Following the Investigative Assessment, there are two possible findings:

- (1) **Substantiated**, indicating that the reported incident occurred and child protective services are required, or
- (2) **Unsubstantiated**, indicating that the reported incident cannot be proven, though services may be recommended if a need is identified.

Both assessment approaches (Family Assessment and Investigative Assessment) are family-centered and work with families to meet the safety needs of children.

3. *Coordination between law enforcement agencies and child protective services for the Investigative Assessment approach.* County Departments of Social Services continue to work closely with law enforcement agencies, particularly in investigating and, when appropriate, prosecuting cases on the Investigative Assessment track. The development of formal Memoranda of Agreement facilitates this process.

4. *A redesign of in-home services.* Redesign allows for a continuum of services of varying intensity depending on the needs of the family and the concerns for safety of the children. This continuum addresses the three core child outcomes of safety, permanence, and well-being. Family involvement, cultural relevancy and individualization of case plans are priorities of the redesign.

5. *Implementation of Child and Family Team (CFT) meetings during the provision of in-home services.* Child and Family Team meetings are used as a part of in-home services to bring all involved agencies, community and/or family resources and supports to the table. A CFT is a group of people that have been identified by the parent and social worker that work together as a team to assist them in achieving the desired outcomes for their children and families. The common threads of this group are that everyone knows the family (possibly in different contexts) and can honestly discuss the situation, identify needs, problem-solve, and reach consensus on a service plan. A Child and Family Team meeting is a process that occurs “with,” not “about,” the family.

6. *Implementation of Shared Parenting meetings and activities in child placement cases.* When a child is placed in foster care, a Shared Parenting meeting is held within seven days for the social worker, birth parents, and foster parents to discuss the care of the child. Ongoing interaction is encouraged between the birth and foster parents to enhance the child’s care, to facilitate mentoring of caregivers, and to improve chances for family reunification.

7. *Collaboration between Work First Family Assistance and Child Welfare.* Child Welfare works closely with Work First Family Assistance programs to share information, coordinate planning with families, and to provide financial, employment, and community services to caregivers to help them become self-sufficient and prevent future child maltreatment.

The elements that cut across these strategies include:

- Family involvement in all phases of intervention
- Focusing on family strengths
- Respect for families’ values and cultural traditions
- Individualized/targeted services to address needs
- Providing assistance earlier to reduce risk
- Collaboration with other agencies and community partners
- Mentoring of parents
- Promoting safety through greater cooperation

Although many of these elements had been known or partially incorporated into practice prior to the MRS reform, the initiation of MRS brought the pieces together, standardized them, and formalized them within the context of a cohesive family-centered approach to child welfare. This evaluation offers an opportunity to evaluate how far implementation has come and what impact the reform has had on children and families.

Method and Sources

The following sections describe the selection of county samples and the sources of data used for quantitative and qualitative analyses of MRS strategies. Quantitative data, drawn from administrative sources, were used to measure case distribution by track, child safety, frontloading of services, and timeliness of response and case decision. Qualitative data, from case reviews, interviews with social workers and caregivers, and a telephone survey of families, were used to assess the quality of implementation of four strategies: redesign of in-home services, Child and Family Teams, Child Welfare-Work First collaboration, and Shared Parenting. The telephone survey data was used to gauge family satisfaction with MRS.

Selection of Comparison Counties

Administrative Data

For quantitative analyses using administrative data, the pilot counties were also contrasted with control counties that have not yet implemented MRS.¹ Each pilot county was matched to a control county based on similarities in the following quantitative criteria:

- Total population
- Child population
- Reported rates of child maltreatment – all assessments and substantiated assessments

Mecklenburg County does not have a comparison county. Due to its size and population, there is no county in North Carolina that can be appropriately matched with Mecklenburg. Therefore, Mecklenburg is evaluated only through comparisons to itself over time, but is not included in analyses that involve control counties.

Note that this method of evaluation (contrasts between pilot and control counties over time) cannot provide the most rigorous analysis possible of the effects of MRS because alternate interpretations of findings will always be plausible. It will always remain plausible that changes across time are due to some other important event (such as

¹ All of the control counties will be implementing MRS in 2006. However, none of them had started MRS as of December 2005, and therefore statewide MRS implementation does not overlap with the time frame for this evaluation.

a change in the economy) rather than the introduction of a new system. Also, it will always remain plausible that the differences between the MRS counties and their control counties are due to some factor that led the MRS counties to be selected in the first place (such as their readiness for reform) rather than the MRS system. A true experiment with random assignment of counties would be needed to provide a more rigorous test of the effects of MRS.

Original Data

For qualitative data collection and review, 4 of the pilot counties were selected, along with 4 control counties that had not yet implemented MRS. Each pilot county was matched to a control county based on similarities in total population. Selection decisions were reviewed and approved by the Division of Social Services.

Data Sources

Data for this evaluation were assembled from state data systems and through original data collection as described below.

Child Protective Services (CPS) Reports

The North Carolina Department of Health and Human Services (DHHS) collects data regarding accepted CPS reports of child maltreatment from each county. The data from these reports are entered into the Central Registry and stored in the Client Services Data Warehouse. Data for 10 pilot counties and 9 control counties were extracted from the Data Warehouse, providing information on individual children that included report and assessment dates, the type of maltreatment reported, the finding, and the type of maltreatment for findings involving substantiation. See Appendix A for a detailed description of the CPS report data used in this evaluation.

Services Information System (SIS) Daysheet Data

Like the CPS reports, DHHS provides SIS Daysheet data via the Client Services Data Warehouse. These data include information about the type of social service provided a person, as well as the number of minutes that the service was provided. Data for 10 pilot counties and 9 control counties were extracted from the Data Warehouse, providing information on dates of service and the number of minutes of service for children with CPS assessments. See Appendix A for a detailed description of the SIS Daysheet data used in this evaluation.

Case Reviews

Qualitative data were collected from a random sample of case reports from 2004 in eight counties, 4 MRS pilot counties and 4 control counties. The sample comprised 127 cases, 15 or 16 in each county for a total of 64 reports in MRS counties and 63 in non-MRS counties. The selected reports represented the full range of Investigative and Family Assessment decisions and included cases identified for foster care or Work First involvement. Evaluation teams visited each county to examine the case files and to determine how DSS interaction with families is documented for assessments, Shared Parenting and Child and Family Team meetings, and coordination with Work First and other local human service agencies and community partners. A description of the case selection process can be found in Appendix A and the data collection form can be found in Appendix C included with this report on the DSS website: <http://www.dhhs.state.nc.us/dss/publications/index.htm>.

Caregiver Interviews

In coordination with the review of randomly selected case files, evaluators worked with local DSS staff in the counties to locate caregivers involved in the sampled reports. A small number of caregivers agreed to be contacted by the Center for Child and Family Policy and, when contacted, agreed to be interviewed. Interviews were arranged at a time and place convenient to the respondent. Thirty caregiver interviews were completed: 21 in MRS counties and 9 in non-MRS counties. The interviews lasted approximately 45 minutes and asked about the caregivers' experiences with DSS. Areas covered included how the social worker approached the family, what was discussed during assessment period, what services were offered and received, how plans were made with the family, and how helpful the caregivers found the interaction. Each respondent received a \$10 gift card to Wal-Mart or Food Lion for their participation. The interview questionnaire is included in Appendix C of the report located on the DSS website noted above.

Social Worker Interviews

The perspectives of social workers who worked with the families from the sampled reports were also sought. Evaluators conducted 103 in-person or telephone interviews with 44 assessment and case management social workers representing 92 of the selected case reports in the eight-county sample. Twenty-four of these social workers were in MRS counties, while the remaining 20 were in non-MRS counties. These social workers were connected with 45 and 47 cases respectively in the MRS and non-MRS counties. The interviews covered topics similar to those addressed with caregivers. The length of the interview was 20-40 minutes depending on the case type and the amount of

involvement the social worker had with the family. The interview questions can be found in Appendix C of the report on the DSS website.

Family Satisfaction Telephone Surveys

To gain additional feedback from caregivers, the Center for Child and Family Policy conducted a telephone survey with 122 respondents. CCFP requested that agency staff in the 10 MRS pilot counties and 4 control counties collect consent forms and contact information from caregivers willing to share their recent experience with DSS in a brief, anonymous telephone survey. Evaluators received a total of 189 consent forms from seven MRS counties and successfully contacted 65% of those caregivers who agreed to participate in the survey. In a 15 to 20 minute interview caregivers were asked about their involvement with DSS, including how the social worker treated them, what services they received, whether their ideas were incorporated into plans, if the help they received improved their parenting, and their overall satisfaction with the interaction. Insufficient numbers of consents were received from non-MRS counties to make comparison possible. The telephone survey protocol is included in Appendix C of the report on the DSS website.

Findings

Administrative Data

The following sections present the findings from the quantitative analyses of administrative data. For all administrative data, the calendar year was used as the timeframe for the analyses. Whenever counties were combined, the counties contributed equally to the numbers reported in the analyses. For a full explanation of this process and detailed information on the analytic methodology and statistical findings, refer to Appendix B.

Dual Track Distribution of Assessments and Case Decisions

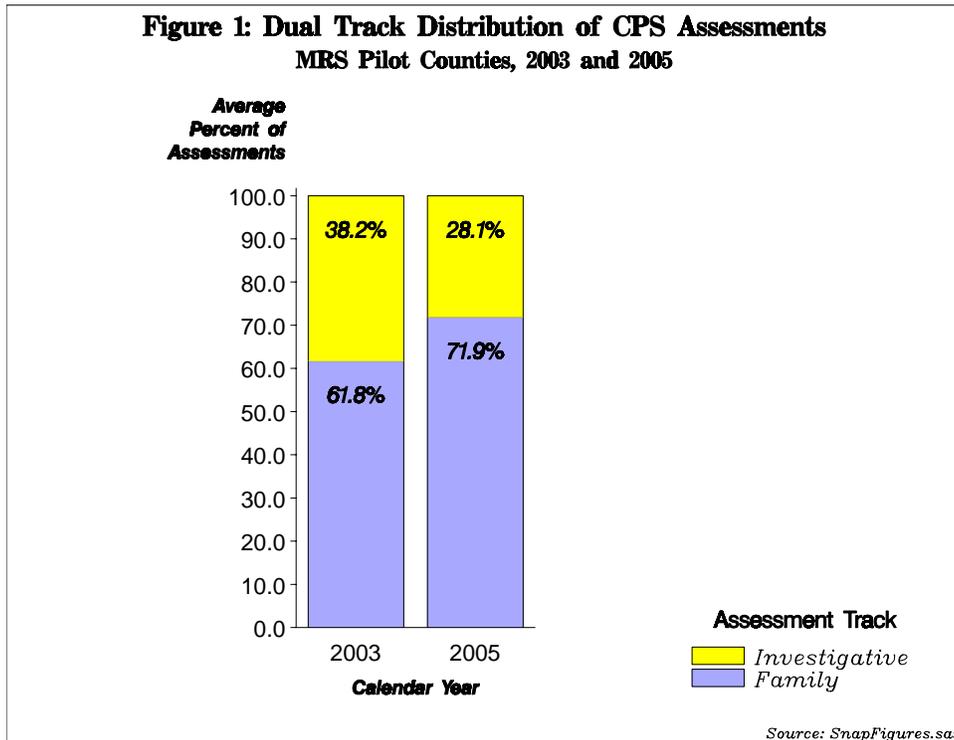
In 2003², the 10 MRS counties implemented two major changes in their practices: 1) a dual response mode to assessments (Family Assessment vs. Investigative Assessment) and 2) a new system of case decisions for the Family Assessment Track (Services Needed, Services Recommended and Services Not Recommended). The Investigative Assessment Track continued to use the pre-existing case decision system (Substantiated vs. Unsubstantiated).

² Although MRS was initiated in 2002, the evaluation uses 2003 as a marker because this date better represents the time by which the pilot counties had more fully implemented MRS.

It is important to examine how these changes affect case flow over time. To that end, this section presents an overview of the distribution of assessments by type (Family Assessment vs. Investigative Assessment) and case finding (Services Needed, Services Recommended or Services Not Recommended; Substantiated or Unsubstantiated) for the MRS counties in 2005 as compared to 2003.

Did the distribution of cases between the Investigative and Family Assessment Tracks change as MRS became more established?

Figure 1 shows the average³ proportion of DSS cases handled in the Investigative Assessment track versus the Family Assessment track during 2003 and 2005.

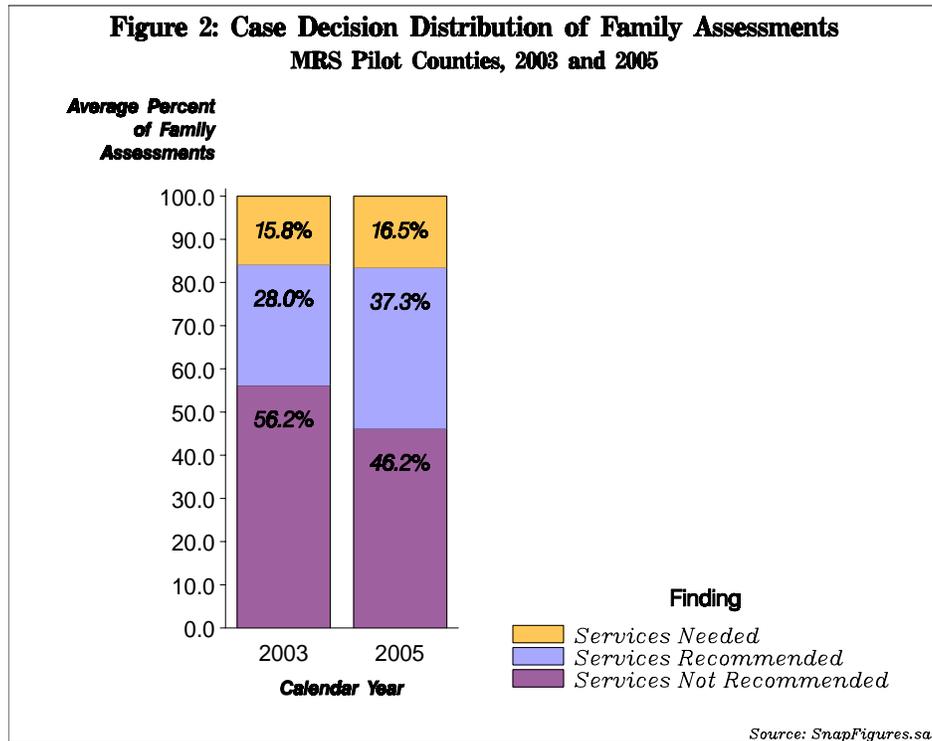


A significant change was seen in the distribution of cases between these years, with a sizeable shift from Investigative to Family Assessments. Overall, cases handled by the new MRS Family Assessment track increased by an absolute value of 10.1 percentage points (a 16% increase from 2003). Such findings are consistent with the conclusion that as DSS workers and supervisors feel more confident that they can serve families more effectively in the Family Assessment track without compromising the children’s safety, they will likely reserve the Investigative Track for cases of severe maltreatment.

³ In the body of the report ‘average’ is used as the equivalent of ‘mean’. A mean is calculated as the sum of all observations, divided by the number of observations.

Did the distribution of case decisions in the Family Assessment Track change as MRS practice became more established?

Figure 2 depicts changes in the distribution of cases in the Family Assessment Track from 2003 to 2005.



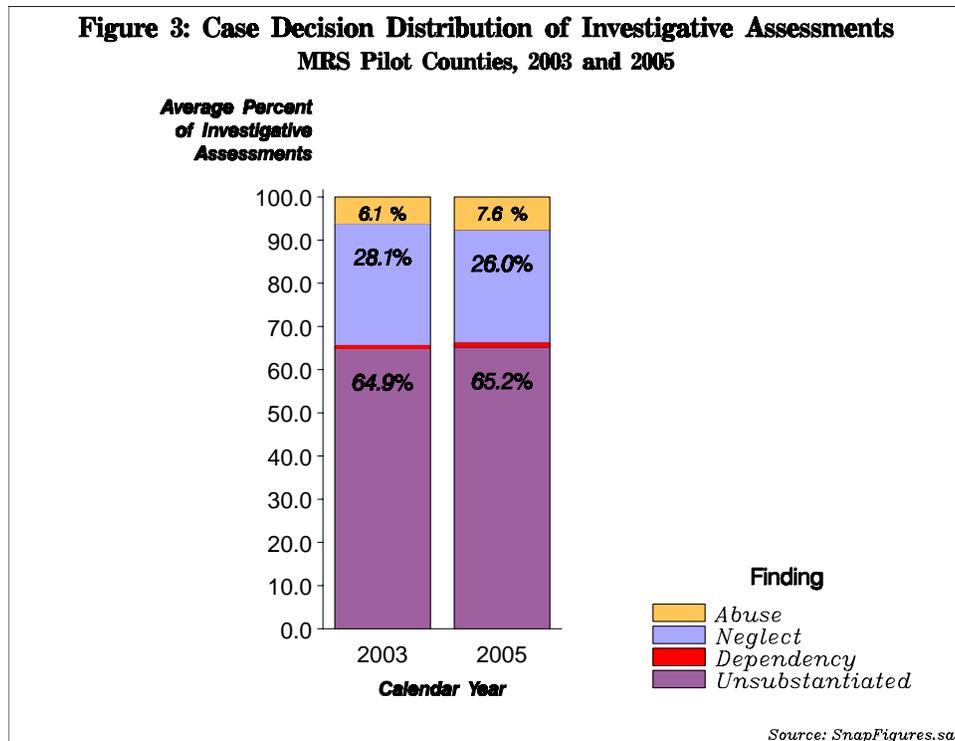
Again, a highly significant shift was seen between 2003 and 2005, with a lower proportion of cases receiving the decision of Services Not Recommended by an absolute value of 10 percentage points (a 16% decrease from 2003). Most of the decrease in this finding was matched by a corresponding increase in the Services Recommended category, while the number of cases given the more severe Services Needed finding remained relatively constant. The growth in the Services Recommended category reflects the expectation that as the MRS framework is more fully implemented, workers adopt a more global approach to family needs. It also potentially expands the number of families who receive services on a voluntary basis.

Further interpretation of these changes in the Family Assessment case findings may be difficult at this point. Counties have systematically applied different findings to cases in which frontloading of services (during the assessment phase) sufficiently met the family's needs. Some counties have used a Services Not Recommended decision with these cases because services are no longer needed at the time of case decision. Other counties have used Services Recommended or Services Needed decisions because families *did* need and received services following the report. A new case decision, Services Provided, Child Protective Services No Longer Needed, was implemented as of

February 2006 to address this issue, so data in future years may more accurately assess the true Family Assessment outcomes.

Did the distribution of case decisions in the Investigative Assessment Track change as MRS practice became more established?

Figure 3 shows changes in the distribution of case findings within the Investigative Assessment Track between 2003 and 2005.



Changes in case findings for the Investigative Assessment Track were quite small and not statistically significant across the two-year period. **These findings show that in the 10 MRS counties the percentage of investigated cases that were substantiated as serious maltreatment has stayed the same across the two-year period.**

Child Safety

The safety of children is a primary goal of the Division of Social Services and therefore the most important issue in the evaluation of MRS. The main concern has been whether the family-centered approach introduced by MRS will alter the likelihood that children remain safe in the future. Safety can be measured best by examining trends in rates of child maltreatment over many years. Given that MRS was first implemented fully as recently as 2003, only three years of outcome data are available for analyses, therefore the analyses below compare three years of pre-MRS to three MRS years.

In examining data to assess child safety the evaluators analyzed the rates of assessments, Substantiations of Abuse and repeat assessments, acknowledging that Substantiated Abuse is arguably the most severe finding for child maltreatment, and thus represents the children with the greatest safety concerns. These data elements were chosen for several reasons associated with how various allegations of Abuse or Neglect are treated in MRS and non-MRS counties.

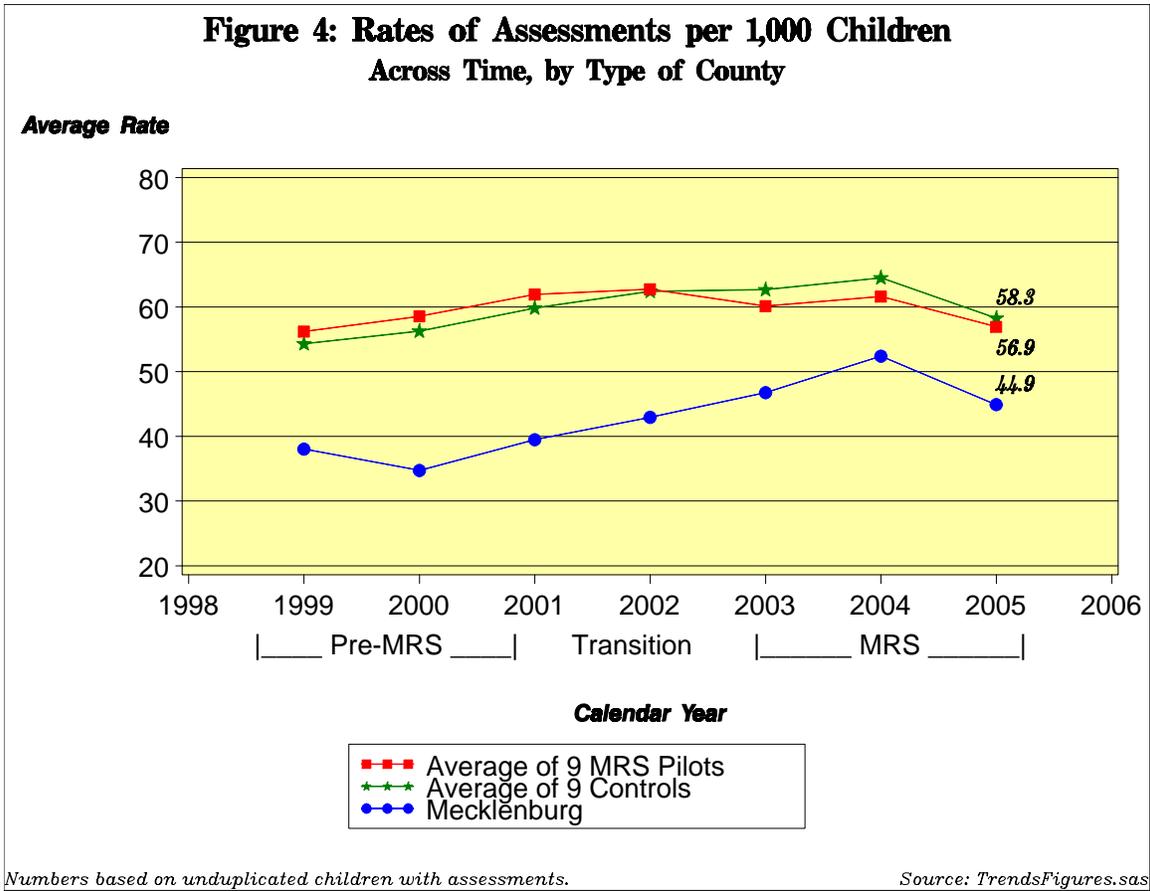
Did MRS alter child safety as evidenced in changes in the rate of assessments?

The first measure of child safety is the rate of assessments. If the initiation of MRS creates a less safe environment for children, one may expect that more children will be reported and assessed in MRS counties as compared to control counties.

The average rate of assessments by DSS was slightly but significantly higher in the three years after MRS than in the three years prior to MRS, for both the MRS counties and the control counties. The increase in the rates of assessments in the 10 MRS counties after the initiation of MRS was modest⁴ (pre-MRS = 56.8 per 1,000 children, MRS = 58.4 per 1,000 children). However, in order to examine the role of MRS in such an increase, one needs to compare the MRS counties to the control counties over time.

⁴ These rates include data from all 10 MRS counties including Mecklenburg, thus may differ from the rates in Figure 4.

Figure 4 depicts the average rate of children with assessments (per 1,000 child population) for the 9 MRS counties, the 9 control counties, and Mecklenburg County, for years 1999 through 2005.

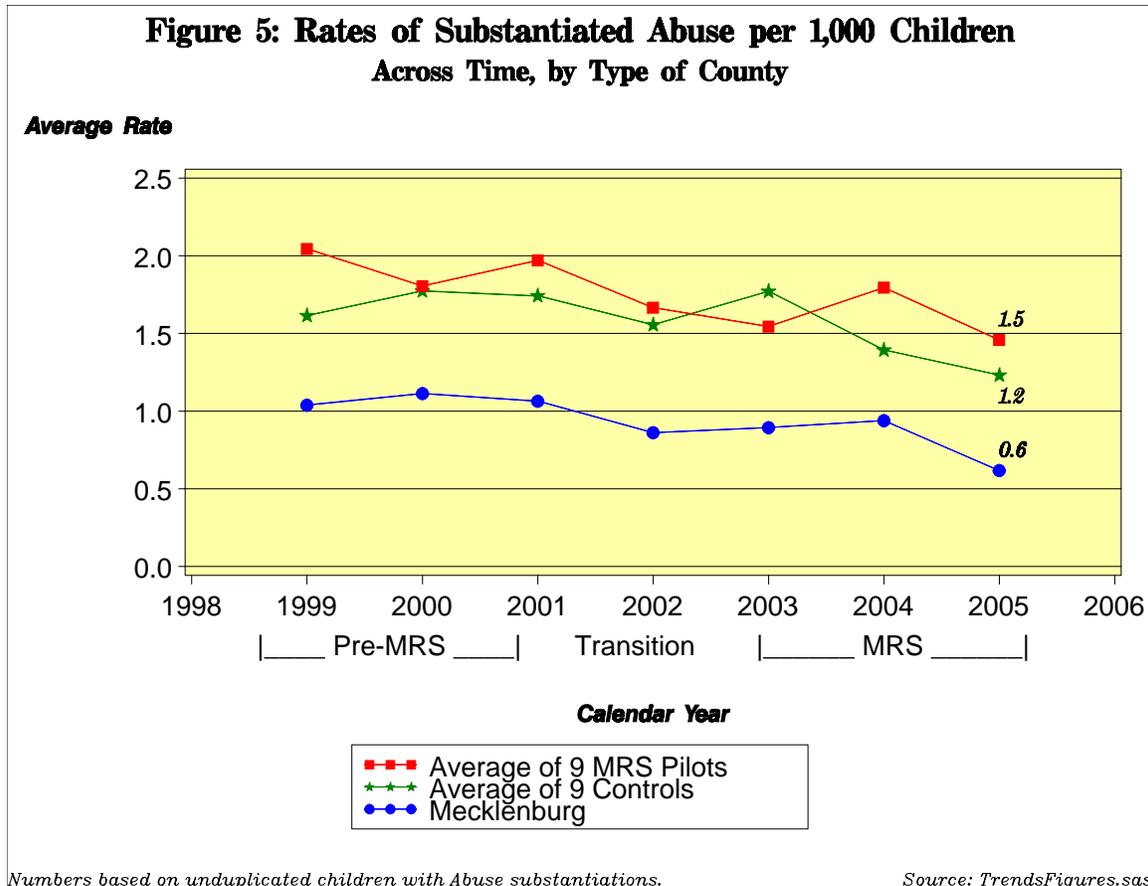


When the 9 MRS counties were compared to the 9 control counties, it was found that the rates of assessment increased to a greater extent in the 9 control counties than in the 9 pilot counties, and this difference was statistically significant. It is concluded that **the initiation of MRS is associated with less of an increase in the rates of assessment in MRS counties than would have occurred if MRS had not been initiated.** Three possible explanations can be put forth: 1) fewer allegations were made in MRS counties, 2) staff members in MRS counties became more adept at dismissing allegations that had little evidentiary basis, or 3) the effectiveness of frontloading services reduces the rate at which children return to DSS, which might in turn reduce the overall rates of assessment (see Figure 10 for the effect of frontloading services on re-assessment rates).

Did MRS alter safety as evidenced in changes in the rate of Substantiated Abuse?

A second measure of child safety is the rates of Substantiated Child Abuse. If MRS with its family-centered approach creates a less safe environment for children, one is likely to observe an increase in the rates of Substantiated Abuse.

Figure 5 depicts the average rate of children with Substantiations of Abuse (per 1,000 child population) for the 9 MRS counties, the 9 control counties, and Mecklenburg County, for years 1999 through 2005.



The rates of Substantiated Abuse in the 10 MRS counties have declined significantly since its initiation⁵ (pre-MRS: 1.9 per 1,000 children; MRS: 1.5 per 1,000 children). It is also true, however, that the rates of Substantiated Abuse have declined in the control counties, and the decrease did not differ significantly between the 9 MRS (excluding Mecklenburg) and the 9 control counties. **These findings show that according to official rates of Substantiated Abuse child safety was not altered due to the introduction of MRS.**

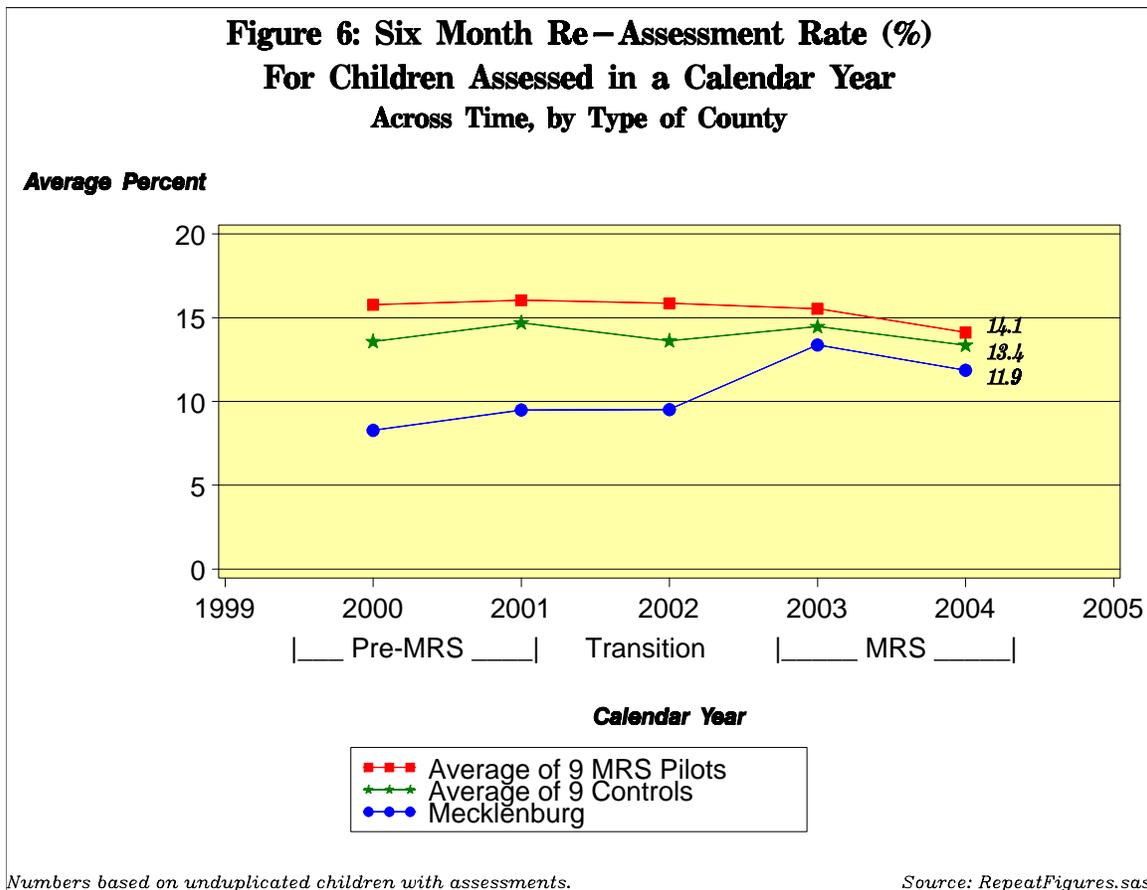
The decrease in rates of Substantiated Abuse across all counties might be attributed, in part, to the 2002 statewide policy change that initiated a structured decision-making procedure which took the focus of decision making away from substantiating a specific incident and refocused the process on four specific criteria: 1) frequency and severity of the event; 2) current safety issues; 3) risk for future harm; and 4) need for protection.

⁵ These rates include data from all 10 MRS counties including Mecklenburg, thus may differ from the rates in Figure 5.

Did MRS alter child safety as evidenced by changes in the rates of repeat assessments?

Another measure to evaluate child safety is the rate of re-assessments of children who had previously been assessed by DSS. If the MRS system is not effectively addressing the safety and security needs of children and families, these children and families may return to the attention of DSS. This recidivism may be evidenced in the rates at which previously assessed children come back into the DSS system. The proportions of previously assessed children who returned to DSS within six months for another assessment were computed for each of the two years prior to MRS and the two years after MRS implementation, for both MRS and control counties. A two-year window (in contrast with the three-year period used in other analyses) was examined because the six-month follow-up time period precluded tracking of the 2005 cases prior to the completion of this report.

The following figure depicts the average percent of children assessed in a calendar year who returned to DSS within six months for another assessment for the 9 MRS counties, the 9 control counties, and Mecklenburg.



Analyses indicated that in the 10 MRS counties, the proportion of previously assessed children who were assessed again within six months decreased significantly⁶ (though modestly) after MRS was initiated, (pre-MRS = 15.2%, MRS = 14.6%).

However, both MRS and control counties showed a lower re-assessment rate after the implementation of MRS (average decrease in the rate of re-assessment in the 9 pilot counties = 1.1%, excluding Mecklenburg; average decrease in the rate of re-assessment in the 9 control counties = .5%). **These findings suggest that the rates of repeated assessment have declined in all counties studied during this period, but this change cannot be attributed to MRS.**

Timeliness of Response

Timeliness of response was defined as both the length of time taken to initiate an assessment following a report of maltreatment and the length of time taken to reach a case decision.

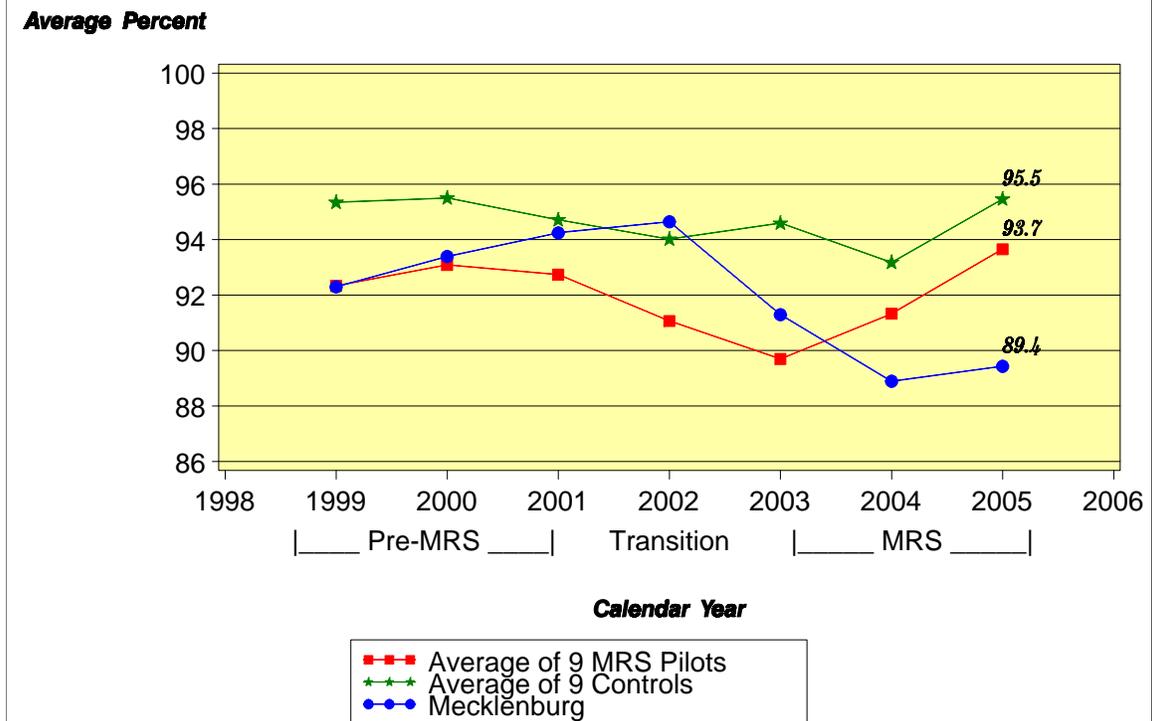
Has MRS altered the initial response to accepted reports of child maltreatment?

County Departments of Social Services are required to initiate a response within a maximum of 72 hours of receipt of an accepted report (dependent on the type of allegation). When a report is accepted for assessment, it is called a “case.”

The proportions of all cases for which the county DSS did initiate a response within the required 72-hour period are depicted in Figure 7 for each year from 1999 through 2005 for the average of the 9 MRS counties, the average of the 9 control counties, and Mecklenburg County.

⁶ These percentages include data from all 10 MRS counties including Mecklenburg, thus may differ from the percentages in Figure 6.

Figure 7: Percent of Cases Receiving a Response within 72 Hours Across Time, by Type of County



Numbers based on all cases.

Source: TimeFigures.sas

Analyses tested whether the timeliness with which an assessment was initiated changed with the introduction of MRS. The average proportion of all cases for which a response was initiated within 72 hours was compared for the pre-MRS (1999-2001) and MRS years (2003-2005). During the pre-MRS years, the 10 MRS counties initiated a response within 72 hours of an accepted report for an average of 92.8% of all cases⁷. In contrast during the MRS years that average dropped to 91.4% in these same counties. These percentages are significantly different from each other.

An additional analysis of the timeliness of initial response included examining the average proportion of cases responded to within 72 hours of the 9 MRS counties (excluding Mecklenburg) in comparison to the 9 control counties before and during MRS. Although the average rate of on-time initial responses has decreased in MRS counties since MRS was introduced, a similar decline has been evident in the control counties. Therefore, **these findings indicate that the initiation of MRS did not significantly alter the timeliness of initial response to accepted cases.**

It should be noted that the trends in timeliness of response across years indicate a decrease in timely response rates in 2003 or 2004, followed by an increase in timely

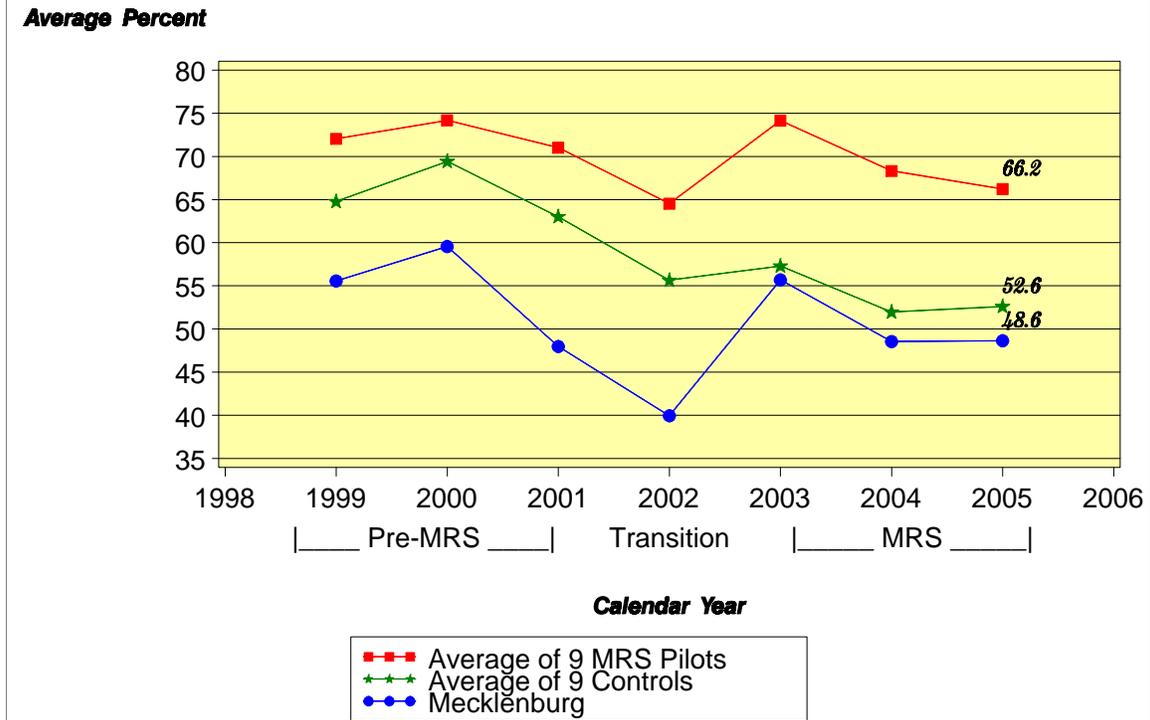
⁷ These percentages include data from all 10 MRS counties including Mecklenburg, thus may differ from the rates in Figure 7.

response rates in 2005, for both MRS and control counties. In 2003, the Structured Intake Process was introduced in all 100 North Carolina counties, which provided a more structured approach to screen reports of maltreatment and to make response priority decisions after a report has been accepted. The novelty and unfamiliarity of this process may have contributed to reduced timeliness initially. As indicated by the data, the timeliness of response improved significantly for both MRS and control counties in year 2005, which may reflect the effective implementation of these new tools. Mecklenburg is an important exception here. The next evaluation will be able to speak to this in greater detail.

Has MRS altered the on-time case decision of maltreatment cases?

A second aspect of timeliness is the time taken to complete an assessment and to reach a case decision. Before the introduction of MRS, all counties were required to complete their investigations and to reach a case decision within 30 days from the report date. On August 1, 2002, a new policy was implemented for the Family Assessment track only. In order to allow social workers to put services in place during the assessment period without compromising child safety, the time frame for the completion of Family Assessments was extended to 45 days. Investigative Assessments were still to be completed within 30 days. Figure 8 shows the proportions of cases for which case decisions were reached within their respective time requirements for each year from 1999 to 2005 for the mean of the 9 MRS counties, the mean of the 9 control counties, and Mecklenburg County.

**Figure 8: Percent of On-Time Case Decisions
Across Time, by Type of County**



Numbers based on all cases.

Source: TimeFigures.sas

To examine whether timeliness to case decision changed due to the initiation of MRS, the mean proportions of all cases for which a case decision was reached within their expected time frame (30 days for Investigative Assessments and 45 for Family Assessments) was compared for the pre-MRS (1999-2001) and MRS years (2003-2005). During the pre-MRS years, the average proportion of cases that resulted in a case decision within the expected time frame in the 10 MRS counties was 70.6%⁸. During the MRS years, the average was 67.7%, and this slight decline is statistically significant. In the MRS counties, a smaller proportion of cases were decided on time after MRS was introduced.

Next, the change in timeliness of case decision for the 9 MRS counties (excluding Mecklenburg) was contrasted with the change in timeliness for the 9 controls. Although the percentage of timely case decisions has decreased in MRS counties since MRS was introduced (pre MRS: 72.4%, MRS: 69.6%), the decrease has been significantly greater in the control counties (pre-MRS: 65.4%, MRS: 54.0%). **This finding indicates that the implementation of MRS has not caused fewer on-time case decisions; in contrast, it has led to a higher proportion of on-time case decisions, relative to control counties.** It must be noted, however, that MRS allows a 45-day period to reach a decision for some

⁸ These percentages include data from all 10 MRS counties including Mecklenburg, thus may differ from the rates in Figure 8.

cases, whereas the control counties continue to operate with a 30-day period, thus making strict comparability impossible.

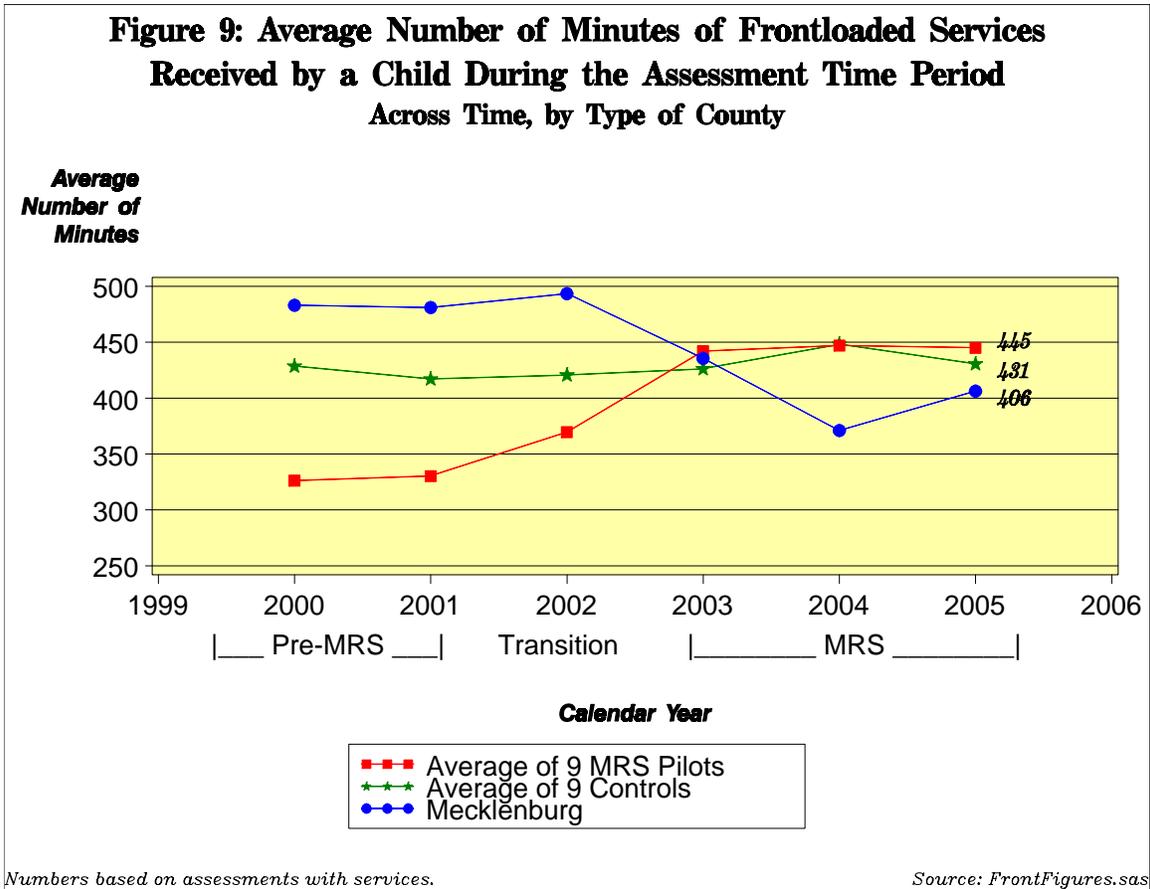
Frontloading of Services

One of the major premises of MRS is that a family should be offered services that will support their ability to keep their children safe and stable as early as possible. Further such frontloading of services may influence not only the role of DSS in the lives of these families but also the rate at which cases return to DSS for subsequent assessments. In other words, if a family is offered services as early as possible and those services address the family's needs, the social worker and their supervisor have the option to decide that no additional services are needed and that DSS no longer has to monitor the safety of the child. Of course, such a decision is always weighed against the risk of a family returning to DSS for another assessment. To test this hypothesis, analyses examined: 1) whether frontloading of services occurred at higher rates after the initiation of MRS; 2) whether frontloading occurred at higher rates in the MRS counties vs. their control counties; and 3) whether frontloading of services reduced the probability that a child returned to DSS for another assessment within six months of the original report.

For evaluation purposes, frontloading of services was defined as the number of minutes of services provided subsequent to an accepted report of maltreatment and before a case decision was made.⁹ The Services Information System (SIS) Daysheet records from the Client Services Data Warehouse were utilized in these analyses (see Appendix A). Minutes of frontloaded services were not available electronically from the Client Services Data Warehouse before the middle of 1999. Consequently all analyses involving comparisons of the pre-MRS years to MRS years included years 2000 and 2001 for the period before MRS, and 2003, 2004, and 2005 for the MRS time period. The average number of frontloaded minutes was calculated and used in the analyses (see Appendix B for a detailed description).

⁹ Frontloading minutes included both time spent in assessment activities as well as services put in place during the assessment period.

Figure 9 shows the average number of minutes of frontloaded services received for each year from 2000 to 2005 in the 9 MRS counties, the 9 control counties, and Mecklenburg County.



Did MRS increase the frontloading of services?

The 10 MRS counties significantly increased in the average number of frontloading service minutes¹⁰ in the three years after the initiation of MRS (pre-MRS = 344 minutes/child, MRS = 441 minutes/child).

When the 9 MRS counties (excluding Mecklenburg) were contrasted with the 9 matched control counties, the average increase in the number of frontloading minutes was significantly higher in the MRS counties than in the control counties (change in average number of minutes for MRS counties = 117 min.; change in average number of minutes for control counties = 12 min.). **This pattern indicates that the initiation of MRS is associated with an increase in the average number of frontloading minutes that a family receives.**

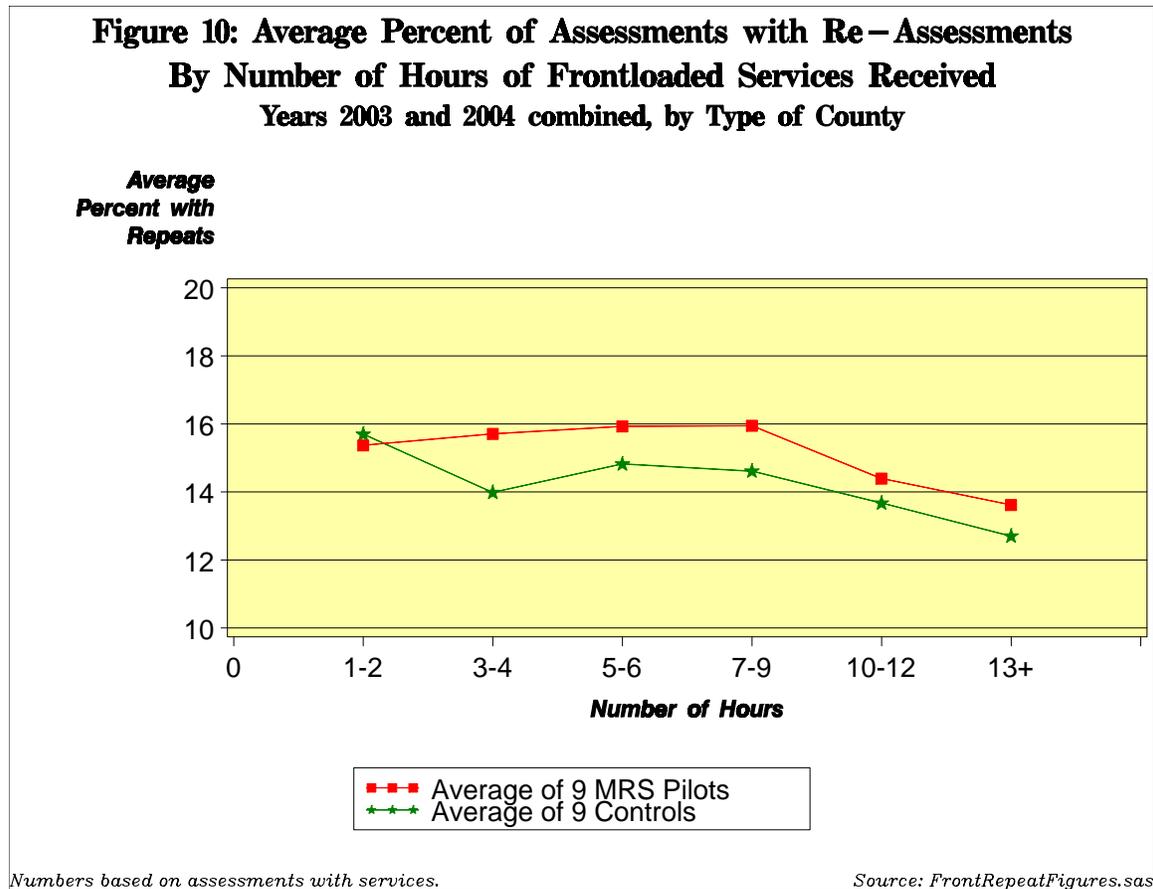
¹⁰ These minutes include data from all 10 MRS counties including Mecklenburg, thus may differ from the rates in Figure 9.

Did the frontloading of services lead to reduced probability of future maltreatment?

To examine whether frontloading of services reduced the probability that a child returned to DSS for a re-assessment within six months of a report, the evaluation focused only on the MRS years 2003 and 2004.

Analyses of the 9 MRS counties (excluding Mecklenburg) and the control counties showed that frontloading moderately (but statistically significantly) decreased the probability that a child with an accepted report would return to DSS attention, regardless of MRS status. In other words, **for both MRS and control counties, families that were assessed and received more frontloaded services during that period were less likely to be re-assessed for maltreatment in the next six months than were families that received fewer frontloaded services.**

The graph below shows that as frontloaded service minutes increase, the probability that an already assessed child will return to DSS attention decreases in the 9 MRS counties and in the 9 control counties. More specifically, the findings suggest that a family needs a minimum of 10 hours of service before the likelihood of a future repeated assessment is lowered¹¹.



¹¹ Hour intervals are grouped so that the number of records is equally distributed across the categories.

These analyses were then repeated to examine whether this pattern holds true for both: 1) assessments with a case decision of Substantiated Abuse and 2) assessments of Neglect that were either Substantiated or found to be Services Needed. Consistent with the above results, among Substantiated Abuse cases, those that received on the average more minutes of frontloaded services had a lower probability of returning to the system for a subsequent assessment than did children who received fewer minutes of service, and this pattern held true in both MRS and control counties. Among Substantiated Neglect or Services Needed assessments, a higher number of frontloaded minutes decreased the probability of a return assessment significantly more in MRS counties than in the control counties. In other words, **these findings suggest that frontloaded services significantly reduced the likelihood that a ‘neglected’ child would come back to the system for another assessment within six months of a case decision.**

Overall, these analyses reveal that frontloading of services is associated with reduced probabilities of future re-assessments for children who were assessed previously, substantiated for abuse, or had a case decision of neglect. Moreover and more importantly, the analyses show that frontloading of services is good practice, and should be encouraged on a consistent basis.

Original Data

Data from case reviews, social worker interviews, and a telephone survey provided qualitative information to assess the extent to which MRS counties are on target and complying with the goals and standards for MRS practice. Since increasing family engagement is an important element of MRS reform, caregiver feedback was solicited through a telephone survey. The qualitative findings, while illustrative, cannot be considered conclusive due to the small number of case records reviewed; incomplete documentation; limitations in the social worker interviews; and self-selection by the caregiver respondents to the telephone survey. Nevertheless, these findings point to areas where MRS strategies have infused DSS practice and ways they can be implemented more effectively going forward.

The qualitative evaluation focused on implementation of four of the core MRS strategies: Redesign of in-home services; Child and Family Teams; Child Welfare-Work First collaboration; and Shared Parenting. All of these strategies were part of the original roll-out of MRS in August of 2002. With the exception of the alternative response component, other elements of MRS practice were not restricted to the pilot counties. Since MRS built on some pre-existing tools in the DSS toolkit, such as using foster parents as mentors for caregivers, other counties may also have adopted some of these practices. In addition, all counties began to use the new Structured Decision Making Intake Process in 2003. However, MRS standardized and formalized these activities into a coordinated system of response adopted by the pilot counties. Although some strategies received more attention than others and counties varied in their emphasis on one or another of them, all of the pilot counties implemented the choice of tracks and restructured their approach to families. This section examines how effectively 4 pilot

counties carried out four reform strategies with some comparison to practices in four non-MRS counties.

Redesign of In-home Services

How has the redesign of in-home services affected case planning and provision of services?

This key strategy of MRS reform incorporates a continuum of service responses to child maltreatment. The intensity of contact with families, as well as the type and range of services offered, depends on the specific risks and needs identified in the assessment process; families with the highest risk and greater needs receive the most extensive contact and assistance, while those with lower risk and fewer needs get a more limited response with appropriate service referrals. At the same time, case plans are tailored to fit the individual circumstances of each family, with services chosen to reflect their personal and cultural preferences. In the MRS model, the benchmarks for the redesign of in-home services strategy include individualizing case plans and targeting services to address a broader range of family needs. Evaluation of the effectiveness of this strategy depends on the quality and accuracy of the assessments, including those for safety, risk, and strengths and needs; it also requires a clear record of services, including those offered and those received.

Case reviewers were not able to easily correlate information from family assessments (safety; risk; strengths and needs) with information about services, making evaluation of this strategy difficult. From the case reviews, evaluators found that few assessments provided as much specific detail as might be needed to determine whether needs and services were effectively matched. In some cases needs identified in case notes were not accounted for in the assessments while in others it was not clear how designated strengths were incorporated into service plans. Further, information about service referrals and actual initiation or receipt of services was inconsistent and difficult to locate.

Nevertheless, comparison of the Strengths and Needs assessments completed by social workers for families involved in sampled reports in the MRS pilot counties and the non-MRS counties showed some differences. Although social workers for families in the two county groups were equally likely to rate “family relationships” and “parenting skills” as problematic areas, their ratings across the other dimensions of family strengths and needs were quite different (see Table 1).

**Table 1
PERCENTAGES OF STRENGTHS AND NEEDS
IN FAMILY ASSESSMENTS BY TYPE OF COUNTY**

STRENGTHS/NEEDS	MRS Counties		Non MRS Counties	
	% of cases that had item as a NEED	% of cases that had item as a STRENGTH	% of cases that had item as a NEED	% of cases that had item as a STRENGTH
Emotional/Mental Health	60.7	32.8	22.4	77.6
Parenting Skills	47.5	52.5	57.4	42.6
Substance Abuse	55.7	42.6	36.7	63.3
Housing/Environment/Basic Physical Needs	70.5	21.3	23.2	76.8
Family Relationships	52.5	47.5	51.7	48.3
Child Characteristics	54.1	37.7	44.1	55.9
Social Support Systems	63.9	32.8	37.5	62.5
Caregiver(s) Abuse/Neglect History	55.7	41.0	33.9	66.1
Communication/Interpersonal Skills	67.2	29.5	31.5	68.5
Caregiver(s) Life Skills	70.5	24.6	32.7	67.4
Physical Health	62.3	29.5	30.9	69.1
Employment/Income Management	62.3	34.4	39.6	60.4
Community Resource Utilization	77.1	21.3	33.3	66.7

Compared to assessments in the non-MRS counties, family assessments in the MRS counties denoted a greater range of needs with more specificity about areas where families could benefit from assistance, such as community resource utilization; housing and physical needs; caregiver life skills; emotional/mental health; employment and income management; and substance abuse. Non-MRS assessments identified only a few areas of need within the more generic categories of family relationships and parenting skills. This pattern appears to support the hypothesis that the MRS approach provides a deeper understanding of family situations.

Few differences were found between the MRS and non-MRS case samples in the documented patterns of service referrals. Incomplete information for service referrals and service provision showed similar numbers and types of family supports offered in pilot and control counties, including direct help or referrals for counseling/therapy, parenting classes, anger management, substance abuse and mental health evaluations, basic clothing or food needs, medical care, child care, transportation, Medicaid, Work

First, housing, and drug treatment. At the time of this review, neither assessments nor service referrals were computerized or documented in a consistent fashion across either the MRS or control counties. Therefore, it was not possible to validate the actual level of services offered, to determine whether the services were initiated or provided, or to assess whether service plans were more individualized in MRS counties. Adoption of the new MRS data tracking system developed by DSS will help fill this gap so that the next phase of evaluation for this strategy should be more informative. Better documentation will help to determine whether efforts are being made to tailor services to meet a family's unique situational or chronic needs, a primary aim of MRS. To further link service provision with improvement in child well-being outcomes also requires better documentation. A lack of consistently documented information about children's emotional and physical health and educational progress needs to be addressed before the effectiveness of in-home services in improving child well-being outcomes can be evaluated.

Due to the small number of caregiver interviews from the case review sample, evaluators were not able to assess the level of family involvement in assessment and case planning. Because family participation is a primary goal of MRS reform, further effort should be made to evaluate this aspect of the redesign implementation and the extent to which cultural sensitivity informs the process. These important dimensions of case planning and management require more comprehensive evaluation than was possible at this time.

Child and Family Teams

To what extent have Child and Family Team meetings occurred in MRS counties?

The formation and utilization of a Child and Family Team (CFT) after case decision is at the core of MRS redesign of case planning and management. Team meetings bring family members together with social workers, service providers and others to brainstorm, set goals, discuss strategies, mobilize resources and develop plans and provide ongoing coordination. The purpose of the CFT is to increase caregivers' capacity to care for their children by creating a supportive network that maximizes available resources and helps them achieve their goals. Key elements of the Child and Family Team strategy include:

- Meetings are used during in-home services to bring all those who support the family to the table
- Caregiver and social worker jointly decide whom to invite
- Meetings are conducted “with” not “about” the family.
- The purpose of the meetings is to honestly discuss the situation, identify needs, problem-solve and reach consensus on a service plan.
- Monitor progress and make changes in service plans as needed.

To assess implementation of the Child and Family Team strategy in the MRS counties, evaluators reviewed case files for reports with findings that required case planning and management. From a sample of 63 case reports reviewed in 4 pilot counties, 25 had case decisions of Services Needed and eight were Substantiated for Abuse and/or Neglect for a total of 33 cases in which Child and Family Team meetings would be expected to occur. To capture information about CFT meetings, reviewers read case notes and looked for sign in sheets, case plans, confidentiality agreements or other documents that indicated that a team meeting was held or described what occurred. Additionally, interviewers asked social workers associated with these cases about their participation in CFT meetings.

Twelve out of the 33 relevant cases in the MRS case sample had some documentation for a planning meeting in the case files, five each in two counties and the remaining two in a third county. In one county all five cases reviewed for case planning had some CFT documentation for at least one meeting, such as a sign in sheet, case notes, and a case plan with a list of participants. In another county five case records for reports with Services Needed or Substantiation documented CFT meetings with case notes, a sign in sheet, and, in one case, a confidentiality agreement. In this county, two additional reports with a finding of Services Recommended provided some documentation for a CFT meeting. DSS policy states that in cases where domestic violence is involved, the non-offending adult victim and the children shall not be placed in danger by having to meet with the perpetrator. The case review included a few examples where separate meetings with different family members were held for this reason.

In all 4 MRS pilot counties, with a few exceptions, case notes and service agreements did not give details about how participants were chosen or what was addressed at a planning meeting other than the goals, activities and responsible persons listed on the plan. It was therefore difficult to determine when a meeting qualified as a Child and Family Team Meeting; how the participants were selected; what was discussed; how much involvement families had in choosing the participants, time, and location; and how active they were in setting goals and making plans. The MRS Policy and Practice Manual says that Child and Family Team Meetings may serve as Permanency Planning Meetings when that purpose is addressed; CFT meetings may also serve as Shared Parenting meetings. However, while some aspects of these meetings may overlap, each type of meeting has specific goals and requirements. Without clear information to indicate what purpose(s) a particular meeting serves and how the goals were accomplished, it is impossible to evaluate how these strategies are being implemented. In interviews, social workers from MRS counties generally reported that the caregivers and they worked together to choose participants but this could not be consistently determined from the case notes.

While non-MRS counties are not prevented from adopting this strategy, and may have had some exposure to the concepts and practices, there is no evidence that Child and Family Teams are a normal part of DSS activity in the non-MRS counties at this time. For example, when asked how participants were chosen for planning meetings, including those for permanency planning, social workers in the non-MRS counties typically

responded that they made this decision with input from their supervisor or other DSS staff in contrast to social workers from MRS counties who generally reported that the caregivers and they worked together to choose participants. The different approaches could not be consistently validated in the case notes.

Planning meetings in MRS counties were also more likely to have facilitation. In two MRS pilot counties, most of the documented CFT meetings were facilitated by someone other than the social worker or the supervisor. These meetings tended to be with high- or moderate-risk cases and significant family conflict. Social workers who participated in facilitated meetings reported that the availability of a trained facilitator (who does not have a history with the family) increases family involvement and makes meetings more effective.

Social workers in MRS counties reported positive experiences with Child and Family Teams, saying these meetings made it easier to formulate realistic plans; many felt that this strategy facilitated family cooperation and increased the likelihood that they would achieve their goals. They also noted some implementation challenges. For example, caregivers are sometimes reluctant to involve others in their personal affairs and prefer to limit their team to themselves and their social worker. At times supporters or family members invited by the family do not show up due to work or other demands. When there are more professionals than family members at a meeting this imbalance can feel intimidating to caregivers and, if not counterbalanced by good facilitation, can make it seem as if the experts are overwhelming the family's input. Finally, coordinating the work schedules of family members and professionals from multiple agencies can be time consuming and difficult. Some agencies and providers are more willing than others to make the effort to participate in CFT meetings; and be further complicated when the providers of key services such substance abuse, therapeutic foster care or mental health services are offered by out-of county providers since several counties have limited resources.

Implementation of the CFT strategy is highly linked to the capacity of community resources to provide services and support and the level of coordination between these entities and local human service agencies. MRS reform encourages partnership among local agencies and communities to address all the needs of children and families. This review of the utilization of Child and Family Teams during in-home services illustrates both the progress and continuing challenges involved in maintaining effective partnerships among local agencies in order to support families and protect children. An important part of social workers' effort is based on collaboration with other professionals who assist families with issues such as mental illness, school problems, substance abuse or domestic violence. In interviews, social workers expressed appreciation for those agencies and service providers who made this collaboration easier and noted that where these links are weak their work to support families' efforts to change becomes more difficult.

Child Welfare-Work First Collaboration

How has collaboration between the Child Welfare and Work First components of DSS been implemented in MRS counties?

MRS best practice mandates that Child Welfare and Work First collaborate because these two service areas share many of the same clients and address many similar family situations. The goal for counties is to integrate these services beyond simple referrals through intra-agency protocols that promote communication, collaboration and joint planning.

To include families with overlapping Child Welfare and Work First involvement, evaluators created a sub-sample of cases in which a Work First payment three months prior to or three months after the targeted report date was identified from Work First administrative data. Fifteen of the 63 cases in the MRS counties fit this criterion. However, this selection measure was not very sensitive and may not have accurately captured meaningful connections to Work First for the appropriate caregivers in the case sample. When the case files were reviewed, some of these cases had no verification of Work First while other cases not picked for Work First indicated some connection (whether lapsed or current). From case records or social worker report, evaluators found seventeen cases with some reference to Work First in the MRS counties; eleven of these cases had some documented reference in the files.

Lacking a consistent place to check for Work First information in the Child Welfare files across counties, reviewers looked for any documentation related to Work First associated with the report that would indicate some level of communication or coordination, such as a form verifying Work First eligibility or evidence of contact between Work First and Child Welfare social workers in written case notes or case plans. The following examples were found in MRS counties:

- A joint case plan developed by the family with both Child Welfare and Work First caseworkers — 1 case
- Work First contact noted on the Structured Assessment Case Decision Process form—1 case
- Case notes documenting telephone calls to Work First workers to verify status, obtain or share information about families, request assistance or services, or coordinate efforts to get caregivers reconnected with Work First —7 cases
- Two forms verifying Work First eligibility—2 cases
- Printed email communication between Child Welfare and Work First workers sharing information and coordinating activities—1 case
- Income Maintenance Transmittal Forms (vouchers for Work First assistance with utilities, day care, or transportation)—2 cases
- Child Welfare case plans that included participation in Work First as a goal – 3 cases
- CFT or Permanency Planning meeting with a Work First representative listed as a participant—2 cases

Two cases from two different MRS counties involved extensive interaction and coordination between the child welfare and family assistance components of social services. In one case, many emails were exchanged between the Child Welfare and Work First workers that relayed information about the family and coordinated efforts to get the mother reconnected to Work First. The social worker wrote in her notes: “Mom did not have a phone so messages were sent through the Work First rep to CPS SW and vice versa depending on whom she saw.” In the other case the Child Welfare social worker and the Work First Representative worked together with a mother to develop a case plan. The Child Welfare social worker’s case notes read: “SW notes that the activities on the CPS and Work First Family Assistance case plans are the same so that mother does not have any problem understanding what she needs to do for both.”

Shared Parenting

What has been the scope of Shared Parenting activities since MRS was implemented?

Shared Parenting activities aim to build a bridge between birth and foster parents to enhance a child’s transition, facilitate stability and promote reunification and permanency. The Shared Parenting concept was incorporated into the MRS reform strategies but has been available to all counties. To find out the extent to which Shared Parenting has been implemented, a random sample of 19 cases with foster care placements from MRS counties and 20 cases from non-MRS counties were reviewed. CPS and Foster Care records were examined for evidence of documentation of Shared Parenting meetings and any specific case notes describing efforts by a social worker to connect the birth parents and foster/kin caregivers.

In a review of the case records in MRS counties, Shared Parenting meetings were not clearly documented, with the exception of two cases in which an initial Shared Parenting meeting within seven days of placement was documented in both the case notes and case plan. Notes in the case records provided a few examples of social workers’ efforts to facilitate contact between birth and foster parents by providing transportation to visits, arranging for a mother to accompany her child and the foster parent to a dentist appointment, or sharing information with foster parents about the child or birth parent’s wishes. Overall, however, Shared Parenting activities were not systematically noted or recorded in either MRS or non-MRS counties.

Social workers associated with these cases were interviewed about their involvement in Shared Parenting. When asked about training for Shared Parenting, only one social worker reported that she had participated in training at some time in the past one to two years. Another social worker described her efforts to learn about Shared Parenting principles by researching materials on her own. Social workers identified the following barriers to implementation of Shared Parenting: reluctance on the part of foster families; resistance of foster care placement contractors; parents incapacitated by drug use, mental health issues or low mental functioning; domestic violence or safety concerns; and parental abandonment.

There was no evidence in the case records that Shared Parenting practices have been consistently applied; discussions with social workers reinforced this conclusion. A major difficulty in assessing this strategy is the lack of specific documentation for Shared Parenting activities. As discussed above for Child and Family Teams, Shared Parenting functions can be carried out at Permanency Planning Meetings as well as at CFT meetings. For this reason, Shared Parenting activities should be clearly identified if they occur when meetings serve multiple purposes. There should be a clear indication that the birth parent(s), foster parent(s), with the help of the social worker, shared information about the child and the best way to meet his/her needs.

Family Satisfaction

What have the families said about MRS?

Evaluators conducted 122 telephone surveys with caregivers from 7 MRS counties. Responses to these surveys were tallied and the most pertinent results follow:

- Over 50% of the caregivers who got services from Work First at the time of the report and indicated that the Child Welfare social worker helped them get or keep these services.
- 68% said that the assistance they received from DSS helped them to know who to contact in the community when they need help.
- 52% said that help they got from DSS helped them improve their parenting skills.

Of the 62 caregivers who responded to questions about the services they received from one or more DSS social workers:

- 60% felt that their ideas were taken seriously and included in plans for their family.
- 64% felt good about the help they received or were offered in this matter.
- Over 50% felt good about the way they were treated by the social worker(s).
- Over 50% agreed that the social worker(s) tried to understand their family's situation and needs.
- Over 60% felt that the social worker respected their family's values, beliefs and ways of doing things.
- Over 50% said the social worker asked for their ideas about what would be best for their family.
- 54*-65%** said a social worker helped them get services they needed.
- 50*-65%** agreed that overall the social worker treated them with respect.

*first social worker, n=62

** second social worker for those who had more than one, n=29

Satisfaction with DSS Assistance

Although many respondents gave no answer when asked about what the social worker did to help them the most, several expressed appreciation for assistance with basic necessities and transportation, information about domestic violence, and referrals to counseling or parenting classes, as described in these comments:

Basic Needs

- The winter clothes for my kids helped me the most.
- The food assistance was really helpful while I was out of work.

Transportation

- The social worker made sure we got to our appointments since we didn't have a car, which helped a lot.
- She took me to all of our appointments; that helped so much!

Parenting/counseling

- The parenting classes helped a lot.
- The therapy that the social worker referred us to was really helpful.
- The social worker gave me ideas of things to do with my kids and how to better parent my kids.
- The social worker helped my daughter get the therapy that she needed that I couldn't pay for.

Referral to services

- He helped me find a house for me and my children.
- He helped me get into Work First and that was how I got day care and a job.
- [Helped me get] the WIC (Women, Infants and Children Supplemental Feeding Program).

Domestic Violence

- The information on domestic violence and the restraining order against my husband.

Overall Support

- Well, those meetings we had helped us to hear what everyone in the family thought, so that was helpful.
- This social worker was much more helpful than the last one; I felt like she really believed in me and wanted me to be able to keep my kids.

- This social worker really tried to work around my schedule and understood that I had two jobs and I couldn't just drop everything to do something at the last minute.
- The social worker helped show the judge that I was really trying to change.
- The social worker helped me see that my husband was abusing my kids and she helped us get out of that environment.
- All of the help that the social worker got my family helped, like the information on domestic violence, the substance abuse counseling, the housing, everything.
- She helped me see that the path that I was going down was wrong and I needed help.
- She helped me see that it wasn't too late for me to change for me and my kids.

Additional Feedback

A few caregivers who responded to the question expressed negative feelings about the placement of their children in foster care or frustration about the difficulty of getting access to services. There were very few explicitly negative comments about the social workers.

Problems with Access to Services

- The social worker tried to help me but I needed child care but no slots were available at that time and the waiting list was long. I could tell the social worker was as frustrated as I was.
- It seemed like I didn't qualify for any of the services I applied for – food stamps, housing, WIC (Women Infants and Children Supplemental Feeding Program), Work First, nothing.
- I wanted a house with Section 8 but there was a waiting list.
- I wanted food stamps or WIC (Women, Infants and Children Supplemental Feeding Program) or something to help me buy food for my children, but I didn't get anything and they wouldn't tell me why.

Foster Care Issues

- I wanted all the help I could get so I could keep my kids, but the next thing I knew they were in foster care.
- She didn't help me at all; they were trying to take my kids away from me during the whole ordeal.
- I know I have made mistakes but that doesn't mean I don't deserve a second chance or a break but they make me feel like the best thing is for my kids to be in foster care. They don't want to do anything to help me.
- At first she tried to help me get my kids back, but all the other people involved turned her against me and she stopped.

Dissatisfaction with DSS Social Worker

- I guess she helped me see that I was punishing my kids the wrong way, but she wasn't very nice about it.
- She didn't help me; she was part of the problem.

Caregivers were asked for their ideas about what they would like to change about the way DSS works with families like theirs. Those who responded to this question recommended improving access to and availability of services and increasing social workers' knowledge, sensitivity and responsiveness to parents. For example:

Improve Service Availability/Access

- They need to change the qualifications for services. I really needed help but I couldn't qualify; I am really trying to work and am making barely enough to survive and I can't get help.
- There need to be more services that they can offer to families; there are waiting lists for everything.

Improve Options for Children with Problems

- DSS social workers should be more educated. My child had autism and the social worker just didn't know anything about autistic children.
- They need more options of places to put kids who have problems; they kept putting my son in these group homes and detention centers that didn't help him.
- They need to consider family members. I was more than willing to take my grandson in but they still put him in a detention center.

Follow Family-Centered Practices

- They should not be so prejudiced against families that have been in the system before.
- They need to try to understand the family that they are working with.
- The social workers could be nicer. I felt like a little child the way she was talking to me; these social workers need to learn how to talk to people.
- They need to stop calling people and telling them my business; that social worker called my daughter's school, my in-laws, everybody. It was so embarrassing.
- They ought to stop popping up at peoples' houses. They have my phone number, they can call first. How would they like it if people just showed up at their house accusing them of things?
- They need to answer their phones.
- If they really do what you explained as that family assessment, I think that would be good.
- I understand that change comes through the state; people need to become more involved at the state level for change to happen.

In sum, families in the assessment track generally expressed satisfaction with the help that they received from their DSS social workers. The majority reported that the social workers treated them with respect and connected them to needed services. In particular, caregivers felt that their experience with DSS improved their parenting and helped them know whom to contact in the community for assistance. Those caregivers who were unsatisfied recommended changes that coincide with DSS goals to implement a more family-centered approach, indicating that families support this effort. However, families remain frustrated with difficult access and gaps in services in their communities. These findings must be tempered by the possibility that, even though care was taken to recruit a random sample, caregivers who participated in the survey might have been selected by caseworkers and self-selected to complete the survey. In order to reach more definitive conclusions, a more thorough and objective sampling of families would be required. Further, no comparison with caregivers from non-MRS counties could be drawn due to lack of a sufficient survey sample.

Conclusions

The introduction of MRS in North Carolina represents a major paradigm shift in family support and child welfare practice. Yet the focus remains on insuring the safety, stability, and well-being of children through timely and appropriate response. By many measures, the changes implemented through the MRS reform are enhancing these goals or, at a minimum, maintaining the same level of performance. MRS does not compromise child safety nor adversely affect the time it takes for DSS to respond and make a case decision. A very positive finding is that MRS has increased frontloading of services, a practice which reduces recidivism. With only four years of implementation, the full impact of the Multiple Response System reform awaits further evaluation. Yet on the most important dimension, the impact on child safety, the findings are encouraging.

Organizational change of this magnitude requires time to be fully realized and it is expected that some elements of the system may be incorporated more quickly than others. Since the initial adoption of MRS, the primary challenge for the pilot counties has been to implement the dual track option and to develop the capacity to carry out the family assessment process that is at the heart of the MRS model. It is clear that the pilot counties have significantly shifted their response mode to the family assessment track. Beyond adopting the alternative response option, individual counties have chosen to focus on particular MRS strategies before attempting to fully implement others. Because social services in North Carolina are State administered and county run, each county may decide for itself how best to accomplish the transformation. Variations in fidelity to specific strategies in the MRS model thus reflect both the comprehensive nature of the desired reforms and the level of county autonomy in the State's social services system. With the extension of MRS statewide and a third wave of counties adopting the new system, continuing evaluation and feedback will ensure progress towards full and consistent implementation.

The results of the current phase of evaluation are summarized in the following conclusions:

Dual Track Distribution of Assessments and Case Decisions

The MRS pilot counties significantly increased their use of the Family Assessment Track to respond to reported maltreatment from 2003 to 2005; during this two-year span a sizeable shift from investigative to family assessments took place, with 16% more cases handled by the new Family Assessment track. There was also a shift in the distribution of case findings within the Family Assessment Track; while the proportion of cases with a finding of Services Needed remained relatively constant, there was an increase in the use of the Services Recommended category that was matched by a corresponding decline in cases receiving a finding of Services Not Recommended. Within the Investigative Assessment track in the pilot counties, the percentage of cases substantiated as serious maltreatment stayed the same across the two-year period.

Child Safety

Implementation of MRS has not adversely affected child safety. Comparisons between pilot and control counties pre and during MRS show that the initiation of MRS is associated with a dampening of the rate of assessment in the MRS counties as compared with control counties. The 10 pilot counties experienced a small but significant decline in rates of substantiated abuse after MRS was introduced, but this decline was also found in the control counties and cannot be attributed to MRS. Another measure of child safety is the extent to which children return to the DSS system. The average rates of repeated assessment declined in both MRS and control counties and cannot be attributed to MRS.

Timeliness of Response

MRS has not significantly altered the timeliness of initial response to accepted reports of child maltreatment. The likelihood that families will receive an initial response from DSS within 72 has not been affected by MRS status. In contrast, MRS has led to a higher proportion of on-time case decisions in pilot counties relative to control counties.

Frontloading of Services

MRS practice is built on the premise that offering services to families early in the process can impact both the nature of the resulting case decisions and the rate at which families return for subsequent assessments. Comparisons with control counties showed that the initiation of MRS caused an increase in average number of frontloaded service minutes in the MRS counties. More importantly, analyses revealed that frontloading of services is associated with reduced future re-assessments for children who were previously assessed or had a case decision of Neglect or Substantiated Abuse.

Redesign of In-home Services

MRS counties have implemented changes in their approach to case planning and management, but it was not possible to gauge the full extent of these changes due to limitations in documentation. There is some evidence that social workers in MRS counties are obtaining more targeted assessments of family risks and needs. However, it was not possible to link assessment information with accurate data for services to determine whether case plans are more individualized or more effective. Further evaluation should focus on the extent to which families participate in all aspects of assessment and planning, an essential dimension of MRS reform. More attention should be paid to collaboration with community partners to increase the capacity of communities to respond to substance abuse, domestic violence, mental health issues, homelessness, poverty, and lack of education, important contributing factors for child maltreatment.

Child and Family Teams

Qualitative evaluation showed that in counties where this strategy has been more fully implemented, and particularly when trained facilitators have been available, social workers felt that the use of Child and Family Teams increased family participation and improved case planning. More thorough and consistent documentation is needed to evaluate the quality and impact of this strategy.

Child Welfare-Work First Collaboration

Examples of collaboration between Child Welfare and Work First caseworkers were found in MRS pilot counties but inadequate documentation prevented evaluators from determining the full scope or effectiveness of coordination efforts. Social worker feedback acknowledged the importance of this relationship in their work with families and the desire for more learning opportunities to foster cooperation between these two agencies.

Shared Parenting

There is no systematic documentation for Shared Parenting meetings or activities in either MRS or non-MRS counties at this time. Further, there is a lack of specificity in case records regarding the purpose and activities of meetings that fulfill multiple functions, including Shared Parenting, Child and Family Teams, and Permanency Planning Action Teams. No evidence of Shared Parenting training was offered by social workers in the MRS or non-MRS counties.

Feedback from Families

In a telephone survey sample of caregivers in 7 MRS counties, the majority felt that their social worker treated them with respect and helped them get the services they needed. In line with MRS goals, caregivers reported that the assistance they got from

DSS improved their parenting skills and helped them know whom to contact in the community when they need help.

Recommendations

Based on the quantitative and qualitative findings in this report, the following recommendations address ways to build on and improve Multiple Response System strategies in a number of areas:

Benchmarking and Practice Recommendations

With a large system change such as MRS reform it is important not only to set goals but also to provide clear, specific definitions of strategies and activities; assess implementation for quality and fidelity to the model; and evaluate the effectiveness of the strategies in achieving desired outcomes. The recommendations in this section speak to the need for greater rigor in specifying and implementing best practices. Although the MRS Policy and Practice Manual provides guidelines for counties, DSS needs to specify further the key components of the MRS model and to work with counties to ensure fidelity. Qualitative review supports the recommendation that clear and measurable indicators for the full spectrum of activities for Child and Family Teams, Shared Parenting, Child Welfare-Work First coordination, and Redesign of in-home services are needed.

Another area that requires further exploration and specification is the designation of best practice for the use of external facilitators for Child and Family Team meetings. At present, policy and practices vary by county with regard to the availability of a designated facilitator (an agency staff person who does not carry a caseload or an independent person from outside the agency). The evaluators recommend that DSS encourage a dialogue among State and County personnel to explore when facilitation is most appropriate, what works, and what resources are needed to effectively implement this strategy.

Based on analysis of administrative data, the demonstrated impact of increased frontloading of services on the reduction of repeat assessment suggests that this strategy be strongly and consistently encouraged in DSS practice.

- Refine indicators and activities for each MRS strategy so that fidelity can be measured, progress of implementation assessed, and outcomes attributed to specific practices, particularly for Child and Family Teams, Shared Parenting, Child Welfare-Work First coordination, and Redesign of in-home services.
- Encourage a dialogue among State and County personnel to explore the value of facilitation for Child and Family Team meetings: when it is most

appropriate and effective and what resources are needed to consistently implement.

- Emphasize frontloading of services in practice to build on the demonstrated effectiveness of early support in preventing repeat assessment.

Documentation

The case review component of this evaluation brought to light the need for better documentation of MRS strategies. Without an accurate and complete record of assessment, planning, and outcomes, a valid evaluation of both implementation quality and child outcomes will remain elusive. The MRS tracking form being developed by DSS will go a long way toward filling this gap. In further support of this goal, it is recommended that DSS continue to develop standardized forms to document and track progress for MRS strategies, including forms for Child and Family Team meetings, Shared Parenting meetings, and in-home services. Further, it is recommended that DSS strongly encourage counties to adopt and supervise for consistent use of standardized documentation.

- Develop standardized forms to document and track progress for MRS strategies including forms for Child and Family Team meetings, Shared Parenting meetings, and in-home services.
- Encourage counties to adopt and supervise for consistent use of standardized documentation.

Training

Qualitative case studies across four MRS counties support the value of more training for both staff and supervisors on specific MRS strategies; additional training should reinforce benchmarks and include a focus on the importance of documenting activities for Child and Family Teams, Shared Parenting, Child Welfare-Work First collaboration, and the redesign of in-home services. In addition to facilitating agency training for Shared Parenting, DSS should also work with counties to expand training opportunities for foster care contractors and caregivers to increase their willingness and capacity to work with birth parents.

- Increase training opportunities for both Child Welfare and Work First staff members to increase their knowledge about the policies and practices of their counterparts and to focus on ways to partner to meet the needs of families.
- Provide additional training for MRS strategies that emphasizes fidelity to the model and documentation of specific activities for Child and Family

Teams, Shared Parenting, Child Welfare-Work First collaboration, redesign of in-home services and other components of MRS reform.

- Expand training opportunities for foster care contractors and caregivers to increase their willingness and capacity to work with birth parents.

Supervision

The backbone of MRS reform comes through supportive supervision of the day to day activities of social workers who are interacting with families in new ways. It is vital to the success of MRS that supervisors reinforce and monitor implementation of all of the reform strategies. In doing so, they require appropriate training and mentoring.

- Refine methods and procedures for more rigorous supervision of staff for MRS implementation.
- Increase training of supervisors for monitoring of MRS strategies.
- Provide on-going mentoring and assistance to supervisors.

Collaboration with Community Partners

Based on interviews with social workers and families, it is clear that the existence and adequacy of community resources is an important dimension of efforts to carry out the family-centered MRS approach. DSS can play a pivotal role in collaborating with county agencies to build capacity and develop resources that meet the needs of children and families, especially to address important contributing factors for child maltreatment such as substance abuse, domestic violence, mental health issues, poverty, lack of education and homelessness. Strategies and lessons learned can be taken from the counties already building this capacity through the implementation of a System of Care in their respective communities.

- Work with counties to build capacity and collaboration with community partners to develop resources that meet the needs of children and families, especially to address substance abuse, domestic violence, and mental health.

Evaluation

Ongoing evaluation is important for several reasons: to ensure that standards are being met statewide in the implementation of MRS; to gauge family response; and to determine whether strategies are effective in improving child safety, permanence, and well-being. To ensure the quality of MRS implementation, DSS should continue to develop ongoing quality assurance tools and to evaluate the effectiveness of service delivery, documentation and supervision; such tools will enable counties to assess their progress in implementing MRS. Given the difficulty in soliciting sufficient participation

from families in the current evaluation, it is important for DSS to work with counties to develop a process to solicit ongoing, valid feedback from caregivers. In addition, it is recommended that DSS evaluate the Services Recommended finding to determine how it is being used and the extent to which family members seek out and benefit from voluntary services. Further, to ensure that MRS is achieving desired outcomes, it is recommended that state and county DSS officials engage in ongoing meetings with the evaluators to define and identify appropriate indicators for child well-being.

Quality Assurance

- Work with counties to develop a process to solicit ongoing, valid feedback from caregivers.
- Work with counties to develop ongoing quality assurance process to evaluate the progress in implementing MRS strategies and the effectiveness of service delivery, documentation and supervision.
- Initiate study of the Services Recommended case finding to determine how it is being used and the extent to which families follow through and benefit from voluntary services.

Future Evaluation

- Engage in ongoing meetings with officials from state agencies, counties, and the evaluators to define goals and improve the quality of evaluation with regard to outcomes including the quality of MRS practice and child safety, permanence and well-being.

Appendix A

Data Sources and Data Processing

Child Protective Services (CPS) Assessments

Source

Data provided in the Central Registry records of the Client Services Data Warehouse are from the DSS-5104 form. These data include records for all CPS assessments. For this evaluation, data were extracted with the following parameters:

Dates of Downloads – March 15, 2006 (pilots) and April 10, 2006 (controls).

Time Period – 1996-2005. Records from 1/1/1996 through 12/31/2005 (inclusive) were selected based on the Report Date.

County – County Name was used to select data for the 10 pilot counties, and the 9 comparison counties identified for administrative data analyses.

View – All fields were selected from the Central Registry Victim View.

Fields – The following fields were included:

Initial Report Date	Investigation Initiated Date	Investigation Completed Date
County Case Number	Form Number	County Name
First Name	Middle Initial	Last Name
Birth Date	Race	Sex
SIS Client ID	Social Security Number	
Type Reported	Type Reported Code	
Type Found	Type Found Code	Primary Maltreatment Type Found
Risk Assessment Rating	Risk Assessment Rating Code	

Processing

Initial Processing

The 19 data files were downloaded from the Data Warehouse, and converted into a SAS® dataset¹². This process included re-naming variables, converting dates, converting “#EMPTY” values to blanks, and other non-substantive changes. In addition, a unique ID was assigned to all records for each child according to the following rules:

¹² All data processing was done with the SAS® statistical package, version 9.1.

1. Records in the same County with the same SIS # were assigned the same ID, AND
2. Records in the same County with the same Last Name, First Name, Birth Date, and Sex (where all values for these fields are non-missing) were assigned the same ID.

There were a total of 414,736 records (all 19 counties, all years 1996-2005).

“Fuzzy” Matching

The data were further processed to assign the same unique ID to records with slight variations in the Last Name, First Name, Birth Date, or Sex fields. In all cases, the records were required to be within the same county, and the identifying fields were required to be non-missing. In some cases, SSN, the Case Number, or the Form Number were used to verify whether variations in the identifying variables indicated the records were for different children.

Duplicate Records

Duplicate records for the same child exist in the CPS data, and were processed as follows:

1. *Complete Duplicates* – There were 112 records that were exact duplicates (56 records with an exact duplicate second record). While there may be some distinguishing information in the fields that were not downloaded from the Data Warehouse, all fields pertinent to MRS are exact duplicates.

Only one of these records was kept.

2. *Children with Duplicate Records Except Form Number* – Like the complete duplicates, all information used for analyses was duplicated in both records.

Only one of these records was kept.

3. *Children with Multiple Records from the same Form* – In all cases, these have the same Case # and Report Date. In most cases, the SIS # is the same. If not, the First/Last Name, Birth Date, and Sex fields are the same. In most cases, the difference is in the report information (type of report, finding, and type of maltreatment).

Only one of these records is kept. Where there are differences in the report information, the record for the most severe case is kept.

Multiple Overlapping Assessments

Records showing multiple overlapping assessments for the same child exist in the CPS data. State policy dictates that only one record should be submitted for all reported incidences within an assessment time period. For example, if a child is actively involved in an assessment for a reported case of neglect (case decision has not yet been made), and a second incidence is reported for that child, the second report should be included in the active case. When the case is closed, the county should report only one record to the state, with only one finding.

In addition, according to state policy, MRS Family Assessment cases should be completed within 45 days of the report date, while all other cases should be completed within 30 days. However, there are some CPS assessments that were completed well after the 30 or 45 day limit. In keeping with state policy as much as possible, overlapping assessments were combined if they overlapped within 60 days of each other. If the overlap occurred because the first assessment was not completed within 60 days, the two incidences were considered separate assessments.

All assessments within 60 days are combined into one record. Each field is looked at separately, and the worst-case for the field is kept in the combined record.

Final Data File

The final data file contains 398,261 records. The final SAS® programs to process these data are as follows:

ReadPilot05	03/15/2006	01:51:23 PM
ReadControl905	04/11/2006	03:49:48 PM
ID1_Init_M05	03/16/2006	10:50:24 AM
ID1_InitC9_M05	04/14/2006	02:01:19 PM
ID2_Fname_M05	03/16/2006	03:34:43 PM
ID2_FnameC9_M05	04/17/2006	01:25:31 PM
ID3_LName_M05	03/17/2006	02:23:35 PM
ID3_LNameC9_M05	04/18/2006	03:08:15 PM
ID4_BDate_M05	03/20/2006	10:20:04 AM
ID4_BDateC9_M05	04/18/2006	03:50:43 PM
ID5_Sex_M05	03/20/2006	12:07:14 PM
ID5_SexC9_M05	04/18/2006	04:00:27 PM
CrMastCPS_M_9605	03/21/2006	12:53:57 PM
CrMastCPSC9_M_9605	04/18/2006	04:09:53 PM
CleanCPS_M_9605	03/21/2006	01:53:11 PM
CleanCPSC9_M_9605	04/18/2006	04:16:01 PM

Services Information System (SIS) Daysheet Data

Source

Data provided in the SIS Daysheet records of the Client Services Data Warehouse are from the DSS-4263 form. These data include a record for every time a person receives a service. For this evaluation, data were extracted with the following parameters:

Dates of Downloads – March 15, 2006 (pilots) and April 12, 2006 (controls).

Time Period – July 1999 - Dec 2005. The query selected records from 1/1/1999 through 12/31/2005 (inclusive) based on the Service Begin Date. Since these data are only available starting on July 1, 1999, this selection criteria yielded records from July 1999 through 2005.

County – County Name was used to select data for the 10 pilot counties, and the 9 comparison counties identified for administrative data analyses.

Service Code – Only records for Service Code 210 (CPS-Investigative Assessment) were selected.

Fields – The following fields were included:

Service Date	Report Month	Keyed Date
Service Code	Service Name	Minutes Amount
County Name	Form Number	
Program Code	Program Code Description	
SIS Client ID	Worker Name	

Processing

Initial Processing

The 19 data files were downloaded from the Data Warehouse, and converted into a SAS® dataset. This process included re-naming variables, converting dates, converting “#EMPTY” values to blanks, and other non-substantive changes. There were a total of 2,000,845 records (all 19 counties, all years 1999-2005).

Summarizing Number of Minutes for CPS Assessments

The data were further processed and combined with the Central Registry data to determine the number of 210 service minutes associated with each CPS assessment. Only CPS assessments that occurred from July 1, 1999 through December 31, 2005 were used when working with the Daysheet data.

First, results from work done with the CPS assessments to assign a unique ID to all records for the same child were used to assign the same unique ID to all Daysheet records. Within each county, SIS numbers found in the CPS records were matched to the SIS numbers in the Daysheet data. Where a match was found, the associated unique ID was attached to the Daysheet records. Daysheet records with no matching SIS number in the CPS records were excluded.

Using the unique ID assigned to both the CPS assessment and Daysheet records, along with the report/investigation dates and service dates, these data were combined to identify all 210 service records associated with a CPS assessment. The 210 services were noted as happening during the assessment time period, within 7 days before the CPS report/investigation initiated date, or 30 days after the investigation completed date. The 210 services were then summarized by CPS assessment to yield the total number of minutes of 210 services provided before, during, or after the assessment time period for each CPS record.

It is possible to have CPS assessments for the same child with overlapping time periods. In this case, both assessments may match to the same 210 service records. When this happens, the 210 service record is associated with the CPS assessment that is closest in time.

Relationship between CPS assessments and Daysheet 210 Services

It is important to note that, while every CPS assessment should have corresponding 210 service minutes, and vice versa, this relationship is not consistent in the data provided through the Data Warehouse. For example, 16.6% of the CPS assessments had no corresponding 210 service minutes before, during, or after the assessment time period. Table A1 shows the breakdown of the relationship between all CPS assessment and Daysheet records processed for the time period of 7/1/1999 through 12/31/2005.

Table A1

	CPS Records		Daysheet Records	
	#	%	#	%
CPS Assessments with 210 Services	229,421	83.4	1,683,718	84.2
210 Services within 7 days BEFORE	4,157	1.5	5,615	0.3
210 Services DURING	222,241	80.8	1,515,855	75.8
210 Services within 30 days AFTER	85,199	31.0	162,248	8.1
CPS Assessments with no 210 Services	45,553	16.6		
210 Services with no CPS Assessment			317,127	15.8
No SIS Number match			145,705	7.3
Service Date not within Assesment dates (or 7 days before/30 days after)			171,422	8.6
Total	274,974		2,000,845	

Notes: The "CPS Records" component numbers and percentages for 210 services BEFORE, DURING, and AFTER will not sum up to the totals for CPS assessments with 210 services because a CPS assessment may have 210 service records for more than one of the BEFORE, DURING, or AFTER time periods.

In all analyses performed for this report, only the assessments with some 210 service minutes were included. In addition, only 210 service minutes that were received during the assessment or within 7 days before the assessment were included. According to state DSS personnel, 210 service minutes received before the assessment start date involved a pre-assessment of the family. Those received within 30 days after the case decision date are primarily for completing paperwork, and do not usually include services provided directly to the child or family.

Final Data Files

Three final data files, with information from both the Daysheet and Central Registry data systems were created. Each file includes one record per CPS assessment, with the total number of 210 service minutes before, during and after the assessment. One file, with 139,496 records, contains information for six of the MRS pilot counties. The second file, with 34,554 records, contains data for four of the MRS pilot counties. The final file contains information for the nine comparison counties, with 100,924 records.

The final SAS® programs to process these data are as follows:

ReadPilot4_Day_210_1999_2005	03/15/2006	02:00:09 PM
ReadPilot6_Day_210_1999_2005	03/15/2006	02:07:53 PM
ReadControl9_Day_210_1999_2005	04/12/2006	02:42:45 PM
Sum210_Pilot4_9905	03/29/2006	08:46:10 AM
Sum210_Pilot6_9905	03/29/2006	08:57:34 AM
Sum210_Control9_9905	04/19/2006	09:11:02 AM

Population Estimates

Source

All county level source data files for child population were downloaded from the NC State Demographics web site (<http://demog.state.nc.us/>). While both the Census Bureau and the NC State Demographics web site release intercensal population estimates for July 1 every year, the NC State Demographics data use a methodology that is more precise than that used by the Census Bureau. For this evaluation, population estimates were downloaded as follows:

Date of Download – July 27, 2005.

Time Period – 1990 - 2004. 1990 is the 1990 Census (posted on the NC State Demographics web site). The 1991-2004 data are July 1 estimates.

Counties – All North Carolina counties.

Processing

For the years 1990 and 1999-2004, the NC State Demographics (NCSD) data files provide estimates for individual ages 0-17. For the remaining years 1991-1998, NCSD supplies population estimates for select child age groups 0-2, 3-4, 5, 6-9, 10-13, 14, 15, and 16-17. In each case, the child population was calculated as the sum of the population for the individual ages, or the age groups, for ages 0-17. As of the time of this evaluation, population estimates for July 2005 were not available. Therefore, the 2004 population counts are used for both the 2004 and 2005 child population estimates.

Case Reads

Data Sources and Processing

The sample of CPS cases identified for the purpose of collecting original data was drawn from assessments recorded in the Central Registry of the Client Services Data

Warehouse. These data were augmented with information from a variety of data files that helped determine whether a child was involved with Work First or foster care. The source for all data files is the Client Services Data Warehouse. In all cases, data were extracted and processed only for the 4 pilot and 4 comparison counties identified for original data collection and qualitative analysis: Pilots – Alamance, Caldwell, Franklin, Nash; and four control counties. The following data sources within the Client Services Data Warehouse were used:

Central Registry

This includes records for all CPS assessments. Data for 1996 through 2004 were downloaded and processed.

SIS Daysheet

This includes a record for every time a person receives a service. Only records for years 2003-2004 that indicated involvement with foster care (service codes 109, 119-123) were downloaded.

EIS and SIS – “WF” linking data

State DSS personnel supplied the evaluators with a query in the Data Warehouse to help identify children who were involved with Work First. The query matched EIS (Eligibility Information System) records with SIS (Services Information System) records, and identified children found in both systems, with a SIS Service Code of 210 or 215 (CPS Investigative Assessment), and a Program Category Code of “AAF” (Work First Family Assistance). This resulted in a list of children with a possible link between assessments in the Central Registry and Work First, regardless of the dates of involvement in either system.

EIS Check History

Information on checks written for Work First is stored in the EIS Check History table in the Data Warehouse. All check history records for 2003-2004, Report Month 4/2005, were downloaded and processed.

Both the foster care and the Work First data were subset to include children who were also involved in a CPS assessment (Central Registry data) during the time period July 2003-Dec 2004. These data were then condensed into one record per case, including the SIS and unique ID numbers for every child associated with the case, the outcome of the case, and the report date. In addition, the foster care data included the number of days between the report date and the first foster care Daysheet services record. One child was designated as the representative child for the case. If more than one outcome was associated with the case, the most severe outcome was kept, and a child associated with that outcome was selected as the representative child. Otherwise, the representative child was selected randomly.

In addition, the sample of Work First/CPS cases during this time period were matched to the Check History data for Work First. Children who received checks within 3 months of the CPS report date were identified for use in further sampling. The Work First data processing produced a list of all CPS cases from July 2003 through December 2004 that included children involved with Work First. The foster care data processing produced a similar list for CPS cases with children who were also involved with foster care.

Sampling Methodology

A stratification plan was devised such that 16 cases would be selected from each county, with the cases representing a sample of outcomes and involvement with other DSS services (Work First and foster care). Table A2 shows the stratification criteria used to select the sample.

Table A2

Pilot/ Control	# of Cases	Clusters (Stratification Criteria)
Pilot	4	Investigative Assessment Track – Substantiated
	4	Family Assessment Track – Services Needed
	5	Family Assessment Track – Services Recommended
	3	Family Assessment Track – Services Not Recommended
Control	4	Substantiated – Abuse
	8	Substantiated – Neglect
	4	Unsubstantiated

In addition, for both the pilot and control counties:

- 5 of the cases would be for children involved with Work First/TANF
- 5 of the cases would include children in foster care

Sample lists were created for each type of case – Work First, foster care, and case outcome – yielding 6 lists for the pilot counties, and 5 lists for the control counties. These lists were sorted by quarter (using report date, most recent quarter first) and random representative child. Using these lists, a sample of 15-16 cases was selected for review from each of the four MRS counties and the four non-MRS control counties as described below.

A list of 50 cases was comprised and sent to each participating county. The 50 cases included the first 10 cases from the Work First list, and the first 10 cases from the foster care list. The remaining cases were selected from the outcome lists such that the total number of cases for each decision category was:

MRS Pilot Counties – 20 Services Needed, 15 Services Recommended, 10 Services Not Recommended, and 15 Substantiated.

Control Counties – 20 Substantiated as Neglect, 15 Substantiated as Abuse, 15 Unsubstantiated.

The first list of 50 was sent to the counties so that primary caregivers could be called by the DSS representative and asked for their consent to be contacted by someone from the evaluation team. Additional lists of 50 were sent to the participating counties as needed until the evaluation team was to visit the county. The evaluation team then compiled a list of 16 cases for each county that were pulled for the evaluation. These lists were comprised of cases where the primary caregiver had agreed to participate, cases where the primary caregiver had not yet been reached, but the county representative thought that caregiver may consent, with the remainder of cases filled in to best represent all of the case decision categories. Since cases where the primary caregiver had agreed to participate were given priority, and limited numbers of caregivers agreed to participate, the 16 case stratification plan deviated slightly from the original conception.

County staff had difficulty locating caregivers to participate in interviews. Two counties generated a sample of cases in half or more of which the caregivers were willing to be interviewed. The remaining counties, with one exception, located a smaller number of caregivers from the randomly selected case lists who agreed to participate. The evaluation team successfully contacted these individuals and met with them either in their homes or in a neutral community setting. A few of these caregivers did not show up and evaluators were unable to reschedule their interviews. Client transportation issues and scheduling difficulties, combined with budgetary and time constraints for the counties and the evaluation team, played a role in limiting the number of case reviews that could be coordinated with face-to-face caregiver interviews.

Method for Reviewing Case Files

After the case sample was selected, evaluators visited each of the eight counties for an initial two to three day period to read the case records and interview the consenting caregivers and the available social workers associated with the cases in the sampled reports. Some counties received additional follow-up visits to complete the process. Evaluators read the case notes and looked for documentation related to the specific report dates selected for the sample. When foster care was involved, the records from both CPS and foster care were reviewed. In a few cases, evaluators were able to access the Work First files for the families, but this was not generally the case. The case read form can be found in Appendix C located with the report on the DSS website:
<http://www.dhhs.state.nc.us/dss/publications/index.htm>.

Interviews and Phone Survey

Method for Interviewing Caregivers

After reviewing the case file for a specific report, a member of the evaluation team contacted the caregiver if consent had been given to do so. Arrangements were made to conduct the interview at a location convenient to the caregiver such as in the home or at a community resources center. The interviewer explained the purpose of the interview and described how the respondent's confidentiality would be protected. After the caregiver signed a consent agreement, the interview began and lasted approximately forty-five minutes. Caregivers received a \$10.00 gift card from Wal-Mart or Food Lion at the completion of the interview. The interview schedule is included in Appendix C which can be found with this report on the DSS website:

<http://www.dhhs.state.nc.us/dss/publications/index.htm>.

Method for Interviewing Social Workers

Evaluators recorded the names of all social workers who had worked with a family for the specific report sampled for the case review. These included the social worker who conducted the assessment, the social worker who was responsible for case planning and management after the case decision (if the case was transferred), as well as any foster care or prevention worker associated with the report. Those social workers who were still employed at the agency and were available during the time of the evaluators' site visit were interviewed when their schedules permitted. For those social workers who could not be interviewed in person, a time was arranged to conduct the interview over the telephone. The interview lasted from 20-40 minutes depending on the type of involvement the social worker had with the family. The interview questions can be found in Appendix C on the DSS website noted above.

Method for Telephone Survey

The evaluator requested that the MRS pilot counties and four non-MRS counties offer all caregivers with current accepted reports the opportunity to be contacted by the Center for Child and Family Policy to participate in a brief telephone survey about their experiences with DSS. Counties distributed the consent form to caseworkers and mailed the sign forms back to CCFP. Seven pilot counties participated in this part of the evaluation and sent varying numbers of consent forms to CCFP, with the majority of the collection occurring between June and October 2005. It was not possible to determine how many caregivers were approached or how many declined in each county. After receiving the consent forms, the evaluation team called the caregivers at the contact numbers they provided. In some cases it took numerous attempts and the cooperation of family members to locate the respondent. The interview was conducted at a convenient time for the caregiver, usually in the evening or on the week-end. The interviewer explained that the survey would be anonymous and no personal identifying information would be shared with DSS. The interview took approximately 20 minutes to complete. The questions can be found in Appendix C included with this report on the DSS website.

Appendix B

Data Analyses and Statistical Findings

Data Setup

To investigate child safety and timeliness of response in counties piloting MRS, Child Protective Services reports and Services Information System Daysheet data were used. For all analyses, individual counties were clustered into county groups. One group consisted of the 10 pilot counties. Additional analyses grouped the 9 paired pilot counties together, and separately the 9 control counties. Within each county grouping, data were weighted so that each county contributed equally to the analysis. Data from 2002 were not utilized as MRS was not yet fully implemented across pilot counties during that year. All data analyses were performed using the SAS® Version 9.1 statistical software.

Unit of Analysis

Different datasets were used for each analysis, with appropriate individual records created dependent upon the type of analysis. Three types of records, or units of analysis, were created for the analyses as described below:

“All Assessments” – Individual records consist of all assessments for all children.

“Unduplicated Assessments” – Individual records consist of one assessment per child within a year. For children with more than one assessment during the year, the assessment with the most severe finding was used¹³. For example, if a child had two assessments in 2003, one with a finding of substantiated Neglect, and the other with a finding of Services Recommended, only the record for Substantiated Neglect was kept for use in the analysis.

“All Cases” – Individual records consist of all assessment cases, including only one record for the case whether the case involved one child or multiple children.

Weighting Methods

Child population and the number of children and cases assessed annually varied by county. To ensure that each county contributed equally within each analysis, a weighting method was employed. Some analyses required individual records for the unit of analysis, and some required that the individual records be summarized to the county

¹³ The order of severity of findings was defined, from most severe to least severe, as: Abuse, Neglect, Dependency, Services Needed, Services Recommended, Unsubstantiated, and Services Not Recommended.

level. Two weighting methods were used, dependent upon which of these two levels of data were appropriate for the analysis.

“Individual Record Level Weighting” – The individual records for the unit of analysis were weighted equally by county for each year. A sampling weight was calculated as N/n , where N = the average number of records across all counties in the dataset for the year, and n = the actual number of records in the dataset for the county during the year. For example, for analyses of rates of assessment in pilot counties in 2003 the number of assessments in Mecklenburg County was $n=10368$ while the number of assessments analyzed in Nash County was $n=1295$. The average number of assessments analyzed across the 10 pilot counties was $N=2823$. Therefore the weight for Mecklenburg was calculated as $N/n=2823/10368$ or 0.272, while the weight for Nash County was $2823/1295$ or 2.180.

“County Level Weighting” – Whether the analysis was based on percentages, rates, or means within a county and year, each county was weighted equally within a county group. Using rates of assessment as an example, the annual raw rates of assessment were obtained by dividing the yearly assessment counts by the estimated child population of the county for each county and year. The “trials” for the analysis were calculated as the mean population of the county grouping of interest by each year. The “trials” were then multiplied by the raw rates of assessment for each county for each year, creating a new variable defined as the projected number of assessments a county would have had if its population were the same as the average population of all counties in the group for the year. This new variable is entered into the model as the “events”.

Matrix of Dummy Variables

Due to the high correlation of cases within counties and the fixed, non-random selection of the counties analyzed, generalized linear and logistic regression models incorporated the deviations from means methodology. The deviation from means method required setting up a matrix of dummy variables for the group of counties analyzed. When pilot counties were analyzed as a group, Transylvania County was set as the reference county, with a value of -1. For the non-reference counties, the dummy variable for each county was set to 1, with the value of the remaining 8 counties’ dummy variables set to 0. Separate matrices of dummy variables were setup for the 9 paired pilot and 9 control counties respectively, with separate reference counties established for the pilot and control county groupings.

Case Distribution

Use of Dual Tracks and Case Distribution

Data Preparation

To investigate use of the dual track strategy and changes in case findings, all assessments in 2003 and 2005 were examined in the 10 pilot counties. The variables of interest were county name, year (2003 vs. 2005), track (Family Assessment vs. Investigative), case decision, and the weight variable. Case decision had three ordinal categories for Family Assessment cases: Services Needed (most severe cases), Services Recommended (less severe cases), and Services Not Recommended (least severe cases). Case decision was dichotomous for Investigative cases with Substantiated or Unsubstantiated the possible values. Individual record level weights were calculated for all assessments in the 10 pilot counties as described previously. In addition, data were subset by track, and separate individual record weights were calculated for the Family Assessment track subset and for the Investigative Assessment track subset so that counties would contribute equally to analyses of those data subsets.

Statistical Methods

Chi square tests were used to test for associations between the year and the distribution of assessments by track and by decision. First, the proportion of the overall pilot county assessments in the Family Assessment track versus Investigative Assessment track during 2003 was compared to data for 2005. Of those cases in Family Assessment, the proportions with decisions of Services Needed, Services Recommended, and Services Not Recommended were examined to determine if the distribution changed from 2003 to 2005. Finally, the proportion of Investigative Assessments which were Substantiated versus Unsubstantiated was compared for 2003 and 2005. Each analysis was conducted on the pilot county group data weighted to the individual record level so that each pilot county contributed equally to the analyses (see Table B1).

Child Safety

Changes in Rates of Assessments and Abuse Findings

Data Preparation

In order to examine changes in rates of assessments and Abuse findings over time, unduplicated assessments were used as the unit of analysis. Estimated population counts of children under the age of 18 in each county for each year 1999-2005 were obtained and attached to the data (see Appendix A). Two summarized datasets were created, one for the 10 pilot county group, and another for the 18 paired pilot and control county groups. Each summarized dataset included one record per year and county. Using the county level weighting method, unduplicated assessments and child population were used to calculate the “events” and “trials” for the models. This ensured that each county contributed equally to the analysis. Similarly, the county level weighting method was applied to the Substantiated Abuse findings. A pre- and post-MRS flag was defined as a binary variable for the summarized data, setting the years 1999-2001 as pre-MRS and 2003-2005 as post-MRS, with data from the year 2002 excluded from these analyses.

Statistical Methods

Logistic Regression analyses were performed to test rates of assessments and Substantiated Abuse findings because of the binomial distribution of the data. First, using the 10 pilot counties’ summarized data, a logistic regression using the events/trials syntax was conducted with the pre-/post-MRS variable set as the main effect. The dummy variables created for the counties, with Transylvania County set as the reference group, were also included in the model in order to adjust for the correlation among the observations within county. Next, a logistic regression model for the events/trials outcome was run on the data summarized by county and year for the 18 paired pilot and control counties. The main effects included in the model were the pre- and post-MRS flag and the pilot/control county flag. Additionally, the dummy variables created for each county were included as well as a pre-/post-MRS by pilot/control county interaction term. Finally, two more parallel logistic regression analyses were conducted for the pilot and paired counties’ summarized data for the Substantiated Abuse findings using their respective events/trials outcomes. The SAS® procedure TABULATE was also used to provide descriptive statistics of the mean assessment rates and Substantiated Abuse rates per 1000 children by the pilot and control county categories and pre- versus post-MRS status (see Tables B2-B3).

Repeat Assessment

Data Preparation

In order to assess trends in repeat assessments within six months, two summarized datasets were created, one for the 10 pilot counties and another for the 18 paired pilot and control counties. Each summarized dataset included one record per year and county for the years covering pre-MRS (2000-2001) and post-MRS (2003-2004) implementation. Only two full years of post-MRS implementation data were included in these analyses in order to allow for enough follow-up time to determine if a repeat assessment occurred within six months. The unit of analysis was unduplicated assessments. Using the county level weighting method, the count of within six month re-assessments and the count of unduplicated assessments were used to calculate the “events” and “trials” for the models. This ensured that each county contributed equally to the analyses. Variables of interest included in the summarized datasets were county name, year, a pilot/control county flag, a pre- and post-MRS flag, and the county’s percentage of within 6-month re-assessments.

Statistical Methods

Logistic Regression analyses were performed to test for six month re-assessment outcomes because of the binomial distribution of the data. First, using the 10 pilot counties’ summarized data, a logistic regression using the events/trial syntax was conducted with the pre-/post-MRS variable set as the main effect. The dummy variables created for the counties, with Transylvania County set as the reference group, were also included in the model in order to adjust for the correlation among the observations within county. Next, a logistic regression model was run for the events/trials outcome on the data summarized by county and year for the 18 paired pilot and control counties. The main effects included in the model were the pre- and post-MRS flag and the pilot/control county flag. Additionally, the mean deviation model dummy variables created for each county were included as well as a pre-/post-MRS by pilot/control county interaction term. The SAS® procedure TABULATE was also used to provide descriptive statistics of the mean re-assessment rates, expressed as a percentage of all assessments, by pilot and control county categories and by pre- versus post-MRS implementation status (see Table B4).

Timeliness of Response: Initial Response and Time to Case Decision

Initial Response

Data Preparation

Using all cases as the unit of analysis, data were compiled to include the length of time to initial response, and an “on-time” flag. The length of time to initial response was calculated as the number of days from report date to case start date. The on-time flag was then set to 1 if DSS responded to the case within 3 days or less of initial report date for all pilot and control county cases. The on-time flag was set to 0 for cases in which the number of days until case response was greater than 3 days.

Summarized data sets were then created by county and year, one including data for the 10 pilot counties, and the other for the 18 paired pilot and control counties. Each summarized dataset included one record for each year for each county for the years covering pre-MRS (1999-2001) and post-MRS (2003-2005) implementation. Again, 2002 was excluded from the timeliness to case response analyses as MRS was not yet in full usage across pilot counties. Using the county level weighting method, on-time response and case counts were used to calculate the “events” and “trials” for the models. This ensured that each county contributed equally to the analysis. Variables of interest included in the summarized datasets were county name, year, the pilot/control county flag, the pre- and post-MRS flag, and the county’s weighted percentage of on-time responses.

Statistical Methods

Logistic regression models were run to test effects for the binary outcome variable of whether or not a case was responded to on-time. First, using 10 pilot counties’ summarized data, a logistic regression using the events/trial syntax was conducted with the pre-/post-MRS variable set as the main effect. Dummy variables created for the counties using the mean deviation methodology were also included in the model in order to adjust for the correlation among the observations within county. Next, a logistic regression model for the events/trials outcome was run on the data summarized by county and year for the 18 paired pilot and control counties. The main effects included in the model were the pre-/post-MRS variable and the pilot/control county variable. Additionally, the dummy variables created for each county were included, as well as a pre-/post-MRS by pilot/control county interaction term. The SAS® procedure TABULATE was also used to provide descriptive statistics of the mean on-time case response rates, expressed as percentage of all cases by pilot and control county categories and by pre- versus post-MRS status (see Table B5).

Time to Case Decision

Data Preparation

Using all cases as the unit of analysis, data were compiled to include the length of time to case decision, and an “on-time” flag. The length of time to case decision was calculated as the number of days from case start date to case decision date. The on-time flag was set to 1 if case decision was made within 30 days for all cases in control counties and for Investigative track cases in MRS pilot counties, or within 45 day for pilot county Family Assessment Track cases. The on-time flag was set to 0 for cases in which the number of days until case decision exceeded those guidelines.

Two summarized data sets were created, one for the 10 pilot counties, and the other for the 18 paired pilot and control counties. Each summarized dataset included one line for each year for each county for the years covering pre-MRS (1999-2001) and post-MRS (2003-2005) implementation. Again, 2002 was excluded from the timeliness to case decision analyses. Using the county level weighting method, on-time case decision and case counts were used to calculate the “events” and “trials” for the models. This ensured that each county contributed equally to the analysis. Variables of interest included in the summarized datasets were county name, year, a pilot/control county flag, a pre- and post-MRS flag, and the county’s weighted percent of on-time decisions.

Statistical Methods

Logistic regression models were run to test effects for the binary outcome variable of whether or not a case was decided on-time. First, using the 10 pilot counties’ summarized data, a logistic regression using the events/trial syntax was conducted with the pre- and post-MRS flag included as the main effect. The dummy variables created for the pilot counties were also included in the model in order to adjust for the correlation among the observations within county. Next, a logistic regression model was run for the events/trials outcome on the data summarized by county and year for the 18 paired pilot and control counties. The main effects included in the model were the pre- and post-MRS flag and the pilot/control county flag. Additionally, the dummy variables created for each county were included as well as a pre-/post-MRS by pilot/control county interaction term. The SAS® procedure TABULATE was also used to provide descriptive statistics of the mean on-time case decision rates, expressed as percentage of all cases by pilot and control county categories and by pre- versus post-MRS status (see Table B6).

Frontloading of Services

Data Preparation

All assessments were used as the unit of analysis for the frontloading analyses. “Frontloading services” were defined as 210 services received during an assessment, or within 7 days before an assessment; 210 services received after the assessment end date were not included in these analyses. For each assessment the total number of minutes of 210 services was determined, and this number of minutes was used to measure frontloading of services. Several data subsets were created to answer the questions of interest regarding frontloading minutes. These subsets included data summarized by county and year, and datasets with individual assessment information.

Summarized data subsets were created for the 10 pilot counties as well as for the 18 paired pilot and control counties including information only for those assessments with frontloaded services minutes¹⁴. Each summarized dataset included one line for each year for each county for the years 2000-2005. Within each county group and year, county level weighting was used to calculate the weighted mean number of frontloading minutes. The mean number of assessments across the county group, with the individual county mean number of minutes, was used for this weighting. The summarized datasets’ variables of interest included county name, year, pilot/control county flag, pre-MRS/post-MRS flag, and the weighted average number frontloaded minutes for the county for the year. In addition, the mean deviation matrix of dummy variables was included.

Three individual assessment data subsets were created for the paired pilot and control county groups – all assessments, assessments with Substantiated Abuse, and assessments with a finding of Neglect or Serviced Needed. Again, only assessments with frontloading services minutes were included. Each assessment was assigned a six month re-assessment flag, with “1” signifying that a re-assessment occurred within 6 months, and “0” signifying that a re-assessment did NOT occur within 6 months. Only assessments that occurred during 2003-2004 were ultimately used, including only the time period after MRS was implemented, and allowing enough follow-up time to determine if children were re-assessed by DSS within 6 months. The individual record level weighting method was used to ensure that each county contributed equally to each analysis. The final analysis datasets included the following variables of interest: county name, year, pre- and post-MRS flag, pilot/control flag, and weighted frontloading services minutes. Additionally, the mean deviation matrix was applied to these data to adjust for the high correlation of individual data within counties.

Statistical Methods

General linear models were run on the summarized pilot counties datasets for all assessments. The pre- and post-MRS flag was the main effect in the model to test for changes in mean frontloaded services minutes pre-(2000-2001) versus post-MRS (2003-2005). The LSMEANS statement was invoked in the SAS® GLM procedure in order to

¹⁴ According to the data sources, 18.8% of assessments received no 210 services during the assessment time period, or within 7 days prior to the assessment.

output the mean frontloaded minutes within each category of the main effect. A parallel analysis was run on the summarized dataset for all assessments for the 18 paired pilot and control counties. The main effects in this model included the pilot/control county flag in addition to the pre- and post-MRS flag. The mean deviation model dummy variables were also included in the model. An additional term for pilot/control by pre-/post-MRS was included in the model in order to test for any interaction between these two effects.

A logistic regression was run on the paired county datasets of individual cases for all assessments and separately for Substantiated Abuse and Neglect assessments. The goal was to determine if the number of 210 services minutes frontloaded during an assessment could be used to predict whether or not a repeat assessment would occur within six months of the initial assessment. The outcome variable was the binary six month re-assessment flag. The main effects in the models were the pilot/control flag and the total minutes of frontloaded services for each assessment. A test for the interaction of these two variables was also performed in each model. The SAS® procedure TABULATE was also used to provide descriptive statistics of the mean frontloaded services minutes by re-assessment status (at six months after the initial assessment end date) and by pilot and control county categories (see Tables B7-B10).

Table B1: Case Distribution

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Proportion in Family vs. Investigative Track	Pilot Counties 2003 to Pilot Counties 2005	Chi-Square (N=55361)	$\chi^2=640.7, p<0.0001$	The proportion of assessments in the Family Track increased from 61.8% in 2003 to 71.9% in 2005; while the proportion in the Investigative Track decreased from 38.2% to 28.1% during the same time period. This finding was statistically significant.
Of Those in Family Assessment, Proportion with Decisions of Services Needed, Services Recommended, and Services Not Recommended	Pilot Counties 2003 to Pilot Counties 2005	Mantel-Haenszel Chi-Square (N=34979)	$M-H \chi^2=181.7, p<0.0001$	The proportion of pilot county assessments where services were not recommended fell from 56.2% in 2003 to 46.2% in 2005; Conversely, the proportion in Services Recommended rose from 28% to 37.3%, and the proportion of cases classified as Services Needed remained relatively constant, 15.8% in 2003 vs. 16.5% in 2005. This finding was statistically significant.
Of Those in Investigative Assessment, Proportion with Decisions of Substantiated vs. Unsubstantiated	Pilot Counties 2003 to Pilot Counties 2005	Chi-Square (N=20382)	$\chi^2=0.18, p=0.67$	The proportion of Substantiated versus Unsubstantiated assessments remained constant; 65.0% Unsubstantiated and 35.1% Substantiated in 2003 to 65.3% Unsubstantiated and 34.8% Substantiated in 2005, a non-significant difference.

Table B2: Rates of Assessment

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Rate of Assessments (Pilot Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=60)	$\chi^2=32.7$, $p<0.0001$	The mean assessment rate in the 10 pilot counties increased from 56.8 per 1000 children pre-MRS to 58.4 per 1000 children post-MRS, a statistically significant increase.
Rate of Assessments (Paired Pilot and Control Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=108)	$\chi^2=102.1$, $p<0.0001$	The mean assessment rate in the 18 paired pilot and control counties increased from 57.9 per 1000 children pre-MRS to 60.7 per 1000 children post-MRS, a statistically significant increase.
Rate of Assessments (Paired Pilot and Control Counties)	Pilot vs. Control Counties	Logistic Regression (N=108)	$\chi^2=2.5$, $p=0.11$	Overall during the years immediately preceding and following the implementation of MRS, there was not a significant difference in assessment rates between paired pilot and control counties.
Rate of Assessments (Paired Pilot and Control Counties)	Pre/Post-MRS by Pilot/Control County Interaction	Logistic Regression (N=108)	$\chi^2=61.2$, $p<0.0001$	The mean assessment rate for MRS pilot counties increased from 58.9 to 59.6 per 1000 pre- to post-MRS. The increase in control counties was far greater, from 56.8 to 61.8 per 1000. Contrary to pre-MRS, the pilot counties had a lower assessment rate than the controls post-MRS implementation, a statistically significant interaction.

Table B3: Rates of Substantiated Abuse

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Rate of Substantiated Abuse Findings (Pilot Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=60)	$\chi^2=44.2$, $p<0.0001$	The mean Substantiated Abuse rate in the 10 pilot counties decreased from 1.9 per 1000 children pre-MRS to 1.5 per 1000 children post-MRS, a statistically significant decline.
Rate of Substantiated Abuse Findings (Paired Pilot and Control Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=108)	$\chi^2=35.4$, $p<0.0001$	The mean Substantiated Abuse rate in the 18 paired pilot and control counties decreased from 1.9 per 1000 children pre-MRS to 1.5 per 1000 children post-MRS, a statistically significant decline.
Rate of Substantiated Abuse Findings (Paired Pilot and Control Counties)	Pilot vs. Control Counties	Logistic Regression (N=108)	$\chi^2=11.5$, $p=0.0007$	Overall during the years immediately preceding and following the implementation of MRS, there was a significant difference in Substantiated Abuse rates between paired pilot (1.8 per 1000) and paired control (1.6 per 1000) counties.
Rate of Substantiated Abuse Findings (Paired Pilot and Control Counties)	Pre/Post-MRS by Pilot/Control County Interaction	Logistic Regression (N=108)	$\chi^2=0.46$, $p=0.50$	The interaction test was not significant, the decline in Substantiated Abuse pre- to post-MRS was similar for the pilot and control county groups.

Table B4: Repeat Assessments

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Rate of Repeated Assessments (Pilot Counties)	Pre-MRS (2000-2001) vs. Post-MRS (2003-2004)	Logistic Regression (N=40)	$\chi^2=7.6$, $p=0.006$	The percentage of assessments in the 10 pilot counties with a repeated assessment within six months decreased significantly, from 15.2% to 14.6%, pre- to post-MRS.
Rate of Repeated Assessments (Paired Pilot and Control Counties)	Pre-MRS (2000-2001) vs. Post-MRS (2003-2004)	Logistic Regression (N=72)	$\chi^2=9.9$, $p=0.0017$	The percentage of assessments in the 18 paired pilot and control counties with a repeated assessment within six months decreased significantly, from 15.0% to 14.4%, pre- to post-MRS.
Rate of Repeated Assessments (Paired Pilot and Control Counties)	Pilot vs. Control Counties	Logistic Regression (N=72)	$\chi^2=35.7$, $p<0.0001$	Pilot counties had a significantly higher repeated assessment rate compared to control counties during both the pre-MRS (15.9% vs.14.1%) and post-MRS (14.8% vs. 13.9%) time periods.
Rate of Repeated Assessments (Paired Pilot and Control Counties)	Pre/Post-MRS by Pilot/Control County Interaction	Logistic Regression (N=72)	$\chi^2=3.6$, $p=0.06$	The interaction term was not significant. Both pilots and controls had decreased re-assessment rates post-MRS, and the rate remained higher in pilot counties compared to control counties pre- and post-MRS.

Table B5: Initial Response

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
On-time Initial Response (Pilot Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=60)	$\chi^2=55.0, p<0.0001$	The percentage of assessments responded to on-time in the 10 pilot counties decreased significantly from 92.8% to 91.4% pre- to post-MRS.
On-time Initial Response (Paired Pilot and Control Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=108)	$\chi^2=38.8, p<0.0001$	The percentage of assessments responded to on-time in the 18 paired pilot and control counties decreased significantly from 94.0% to 93.0% pre- to post-MRS.
On-time Initial Response (Paired Pilot and Control Counties)	Pilot vs. Control Counties	Logistic Regression (N=108)	$\chi^2=315.6, p<0.0001$	Pilot counties had significantly lower on-time response rates compared to control counties during both the pre-MRS (92.7% vs.95.2%) and post-MRS (91.6% vs. 94.4%) time periods.
On-time Initial Response (Paired Pilot and Control Counties)	Pre/Post-MRS by Pilot/Control County Interaction	Logistic Regression (N=108)	$\chi^2=0.03, p=0.87$	The interaction term was not significant. Both pilots and controls had decreased on-time response rates post-MRS, and the on-time response rate remained lower in pilot counties compared to control counties pre- and post-MRS.

Table B6: Time to Case Decision

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
On-Time Case Decision (Pilot Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=60)	$\chi^2=75.3$, $p<0.0001$	The percentage of assessments decided on-time in the 10 pilot counties decreased significantly from 70.6% to 67.7% pre- to post-MRS.
On-Time Case Decision (Paired Pilot and Control Counties)	Pre-MRS (1999-2001) vs. Post-MRS (2003-2005)	Logistic Regression (N=108)	$\chi^2=583.0$, $p<0.0001$	The percentage of assessments decided on-time in the 18 paired pilot and control counties decreased significantly from 69.1% to 61.8% pre- to post-MRS.
On-Time Case Decision (Paired Pilot and Control Counties)	Pilot vs. Control Counties	Logistic Regression (N=108)	$\chi^2=1111.4$, $p<0.0001$	Pilot counties had significantly higher on-time decision rates compared to control counties during both the pre-MRS time period (72.4% vs. 65.4%) and post-MRS (69.6% vs. 54.0%) time periods.
On-Time Case Decision (Paired Pilot and Control Counties)	Pre/Post-MRS by Pilot/Control County Interaction	Logistic Regression (N=108)	$\chi^2=200.5$, $p<0.0001$	The interaction was significant. On-time decision rates decreased at a far greater rate in control counties pre- to post-MRS, from 65.4% to 54.0%, while pilot counties declined moderately from 72.4% to 69.6%.

Table B7: Frontloading

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Frontloaded Services Minutes (Pilot Counties)	Pre-MRS (2000-2001) vs. Post-MRS (2003-2005)	General Linear Model (N=50)	F=37.0, p<0.0001	The mean number of frontloaded minutes increased significantly from 344 minutes pre-MRS to 441 minutes post-MRS implementation in the pilot counties.
Frontloaded Services Minutes (Paired Pilot and Control Counties)	Pre-MRS (2000-2001) vs. Post-MRS (2003-2005)	General Linear Model (N=90)	F=29.1, p<0.0001	The mean number of frontloaded minutes in the 18 paired counties increased significantly from 376 minutes pre-MRS to 440 minutes post-MRS.
Frontloaded Services Minutes (Paired Pilot and Control Counties)	Pilot vs. Control Counties	General Linear Model (N=90)	F=12.7, p=0.0007	During the years immediately preceding the implementation of MRS, control counties frontloaded more minutes than pilot counties (423 vs. 328), though this changed post-MRS implementation.
Frontloaded Services Minutes (Paired Pilot and Control Counties)	Pre/Post-MRS by Pilot/Control County Interaction	General Linear Model (N=90)	F=19.11, p<0.0001	The interaction was significant. Frontloaded services minutes have increased substantially in pilot counties since MRS was implemented in 2002, from 328 to 445 minutes on average. Control counties saw a much smaller increase pre- to post-MRS implementation, from 423 to 435 minutes.

**Table B8: Frontloaded Minutes as a Predictor of Repeated Assessments
(All Assessments 2003-2004)**

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Repeat/No Repeat Assessment Within 6 Months (Paired Pilot and Control Counties)	Number of Frontloaded Services Minutes	Logistic Regression (N=57982)	$\chi^2=39.8$, $p<0.0001$	For a 60 minute increase in frontloaded minutes, the odds of a re-assessment within six months decreased by 1.1% for paired counties' assessments during 2003 and 2004.
Repeat/No Repeat Assessment Within 6 Months (Paired Pilot and Control Counties)	Frontloaded Minutes by Pilot/Control County Interaction	Logistic Regression (N=57982)	$\chi^2=0.13$, $p=0.71$	The interaction was not significant; the effect was the same for both pilot and control counties

**Table B9: Frontloaded Minutes as a Predictor of Repeated Assessments
(Substantiated Abuse Assessments 2003-2004)**

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Repeat/No Repeat Assessment Within 6 Months (Paired Pilot and Control Counties)	Number of Frontloaded Services Minutes	Logistic Regression (N=1480)	$\chi^2=4.5$, $p=0.03$	For a 60 minute increase in frontloaded minutes for Substantiated Abuse assessments in paired counties, the odds of a re-assessment within six months declined by 1.4%
Repeat/No Repeat Assessment Within 6 Months (Paired Pilot and Control Counties)	Frontloaded Minutes by Pilot/Control County Interaction	Logistic Regression (N=1480)	$\chi^2=2.1$, $p=0.15$	The interaction was not significant; the effect was the same for both pilot and control counties

**Table B10: Frontloaded Minutes as a Predictor of Repeated Assessments
(Substantiated Neglect/Services Needed Assessments 2003-2004)**

Variable	Comparison	Statistical Test	Test Statistic	Conclusions:
Repeat/No Repeat Assessment Within 6 Months (Paired Pilot and Control Counties)	Number of Frontloaded Services Minutes	Logistic Regression (N=13289)	$\chi^2=19.4$, $p<0.0001$	For a 60 minute increase in frontloaded services minutes for the Neglect/Services Needed assessments in paired counties, the odds of a re-assessment within six months decreased by 1.3%.
Repeat/No Repeat Assessment Within 6 Months (Paired Pilot and Control Counties)	Frontloaded Minutes by Pilot/Control County Interaction	Logistic Regression (N=13289)	$\chi^2=4.1$, $p=0.04$	The interaction was significant. Though there was a significant association between increased frontloaded minutes and reduced repeat assessments for neglect cases in the pilot MRS counties, no such association was found in the control counties' neglect cases.



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Terry Sanford Institute of Public Policy
Duke University
Box 90545
Durham, North Carolina 27708-0545
919.613.7319 phone
www.childandfamilypolicy.duke.edu

Kenneth A. Dodge, Director

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