North Carolina
Child and Family Leadership Council

July 2012 Report To The

Office of the Governor
Joint Appropriations Committees and Subcommittees on Education
Joint Appropriations Committees and Subcommittees on Justice and Public Safety
Joint Appropriations Committees and Subcommittees on Health and Human
Services Fiscal Research Division of the Legislative Services Office

July 2012

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Pursuant to Session Law 2011-145, Section 10.15, the North Carolina Child and Family Leadership Council (NCCFLC) submits its July 2012 Legislative Report to the Office of the Governor; the Joint Appropriations Committees and Subcommittees on Education; the Joint Appropriations Committees and Subcommittees on Justice and Public Safety; the Joint Appropriations Committees and Subcommittees on Health and Human Services; and the Fiscal Research Division of the Legislative Services Office.

Respectfully Submitted,

The North Carolina Child and Family Leadership Council

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Executive Summary

The Child and Family Support Teams (CFST) Initiative was authorized during the 2005-2006 school year. It places nurse-social worker teams into schools in 21 school districts across North Carolina. The teams work with students who are at risk for out-of-home placement and/or academic failure by organizing and leading child and family teams. Child and family teams are a means of empowering families and youth by utilizing Child and Family Team meetings to ensure that they have a key voice in determining the appropriate services and steps necessary to improve their outcomes.

This report has four main sections. The first section describes the CFST Initiative. The second section documents information regarding the number of students who were referred to and served by the program during the 2011-2012 school year. The report also examines change over time across several process measures that are thought to be core components of the model. The third section examines the risk profile of students who are served by the program. It is hoped that by better understanding who is served by the program, state leadership will be best able to prepare the CFST nurses and social workers for working with these families. The fourth section examines the progress of students who are served by the program on three areas: reading scores, math scores and the number of days absent.

Highlights from the CFST report are listed below.

The CFST Initiative serves students who have a variety of needs.

In 2011-2012, 10,089 students had team meetings through the CFST program. During these meetings, a primary unmet need is identified. Across all ages, the most frequent reasons are inappropriate behavior (15%), excessive absences (11%) and "other health concerns" (9%). Among the 1,721 high school students who had a team meeting, pregnant or parenting was the most frequent reason, affecting 17 percent of students.

While some components of the CFST model have been implemented to a high degree, other aspects of the model are used less frequently.

The authorizing legislation outlined programmatic measures that should be in place. Over time, program staff have improved parent participation from 60 percent in '07 to 93 percent in '12. However, in 2012, only 13 percent of the meetings included natural supports and only 12 percent were led by an agency other than the schools.

Students served by the CFST program are at risk for academic failure.

This report compares the prevalence of nine risk factors for youth who had team meetings. Across all school levels, students served by the CFST program were more likely than both their classmates and students across NC to have each risk factor during the 2009-2010 school year:

- Not reading at grade level: 41 percent of elementary students served by the CFST program were not at grade level in reading relative to 17 percent of students across the state.   Similarly 44 percent of middle school students served by the CFST program were not reading at grade level relative to 18 percent of students across the state.
- Not at grade level in math: 60 percent of elementary students were not at grade level in math relative to 29 percent of students across the state.   Similar numbers were observed among middle school students (57% for CFST students relative to 28% for NC middle school students).
- Missing more than 10 days of school: In high schools, 68 percent of CFST students missed more than 10 days relative to 30 percent of all NC students.
- Repeating a grade: In middle school, 5 percent of youth served by the CFST program were repeating a grade relative to 1 percent of their peers.
- Cross-sector involvement: Students in the CFST program were more likely to have a complaint in the juvenile justice system and be in foster care than their peers.   In middle school, 10 percent of students serviced by the CFST program had a juvenile justice complaint relative to 2 percent of NC students and 1.5 percent were in foster care placement relative to 0.4 percent of NC students.
- In a low-income family: Students served by the CFST program were more likely to be from a low income family, as measured by their receipt of free and reduced lunch. In elementary schools 91 percent of CFST students were eligible relative to 52 percent of students across the state.   In high school 71 percent of CFST students received free and reduced lunch relative to 41 percent of NC students.
- Receiving exceptionality services: Exceptionality services are provided to ensure that youth receive a free and appropriate education and often help students overcome a disability.   Across all school types, students served by the CFST program were more likely to receive exceptionality services than their peers.   In middle school 27 percent of CFST students receive exceptionality services relative to 14 percent of their peers.
- Old for grade: Being older than one's classmates has been identified as a risk factor for poor academic performance.   Among students served by the CFST program, 44 percent of elementary school students and 47 percent of middle and high school students were old for grade.   (Old for grade was defined as being in the top 25 percent of the age distribution for a given grade.)

Students who had team meetings had fewer days absent in subsequent years.

This report examines change over time in end-of-grade reading and math scores and in the number of days absent for students who had a team meeting from 2006-2007 through 2009-2010. By using a fixed effect model, we examined change within individual students. Although no statistically significant finding for end-of-grade scores was found, on average students were absent about one day fewer in years following the CFST initiative.

Students referred by the CFST program to tutoring services have improved academic outcomes.

Students in 3rd-8th grade who were referred by the CFST team to tutoring services experienced improved math and reading scores in the school year they received tutoring.

Recommendations

The following are a list of recommendations for leaders of the program initiative:

Identify effective interventions and strategies for the types of students that CFST leaders see. It is clear that CFST leaders are working with students who are at risk for academic failure. For example, 15 percent of the students who are referred to the program have excessive absences. Identifying schools that have made progress on improving this outcome for youth, and then systematically using their strategies for improving attendance, may help the program see larger effects.

Ensure best use of parental involvement. Over 90 percent of the 10,000 team meetings were attended by the students' parents or primary caregivers. Parental involvement is a key factor in school success. Team meetings have the potential to build strong relationships between school staff and parents that may help youth succeed.

Strategize ways to provide CFST leaders with more timely feedback. This report identifies a statistically significant effect on the number of days absent related to receipt of CFST and improvements in math and reading scores for students referred to tutoring programs. While this information may provide insight for schools in how the teams can be helpful, the information is from the 2009-2010 school year – and two school years have passed since then. Information that is more timely on effective strategies may help schools to fully realize the potential of the CFST program.

I. Introduction

On August 13, 2005, the North Carolina General Assembly authorized and funded the North Carolina Child and Family Support Teams Initiative (CFST) through the enactment of Session Law 2005-276, Senate Bill 622, "2005 Appropriations Act." This legislation provided $11 million annually to support 100 school nurse and school social worker teams across the state.

The intent of the Initiative is two-fold:
- To create a program of student support designed to identify and coordinate appropriate community services and supports for children at risk of school failure or out-of-home placement due to physical, social, legal, emotional and developmental factors that negatively affect their academic performance.

- For state agencies that provide services to children and youth to share responsibility and accountability for improving academic and well-being outcomes for at-risk children and their families. The agencies include the Department of Health and Human Services, the Department of Public Instruction, the State Board of Education, the Department of Juvenile Justice and Delinquency Prevention, the Administrative Office of the Courts and others.

Leadership for the CFST program comes from the North Carolina Child and Family Leadership Council (NCCFLC). The NCCFLC is co-chaired by the Superintendent of the Department of Public Instruction (DPI) and the Secretary of the Department of Health and Human Services (DHHS). Its other members include the Secretary of the Department of Juvenile Justice and Delinquency Prevention (DJJDP), Chairman of the State Board of Education (SBE) and the Director of the Administrative Office of the Courts (AOC). The members of the NCCFLC work together to ensure their agencies collaborate in the development and implementation of the CFST program and provide needed support to ensure it is successful.

The CFST program shares many of the family-centered principles and values used by the Division of Social Services' Multiple Response System child welfare reform (MRS), the Division of Mental Health/Developmental Disabilities/Substance Abuse Services' Child and Family Mental Health Services (CFMHS), the Department of Juvenile Justice and Delinquency Prevention's Juvenile Crime Prevention Council Program, and the North Carolina Healthy Schools Program (a Department of Public Instruction and Department of Health and Human Services collaborative effort). The CFST program also shares common principles and values with several specific programs in the Department of Public Instruction. Specifically, the CFST program was implemented based on the following principles:

- Development of a strong infrastructure of interagency collaboration;
- One child, one team, one plan;
- Individualized strengths-based care;
- Accountability;

- Cultural competence;
- Children at risk of school failure or out-of-home placement may enter the system through any participating agency;
- Services should be specified, delivered and monitored through a unified Child and Family Plan that is outcome-oriented and evaluation-based;
- Services should be most efficient in terms of cost and effectiveness and should be delivered in the most natural setting possible;
- Out-of-home placements for children should be a last resort and should include concrete plans to bring the children back to a stable, permanent home, their schools and their community; and
- Families and consumers must be involved in decision making throughout service planning, delivery and monitoring.

Overview of the CFST Model

Figure 1 summarizes the process used by CFST leaders (i.e., CFST nurses and social workers) to serve students and families.   The flow of services includes identifying students at risk of academic failure or out-of-home placement, facilitating Child and Family Team (CFT) meetings, building service plans and following-up with families to monitor service receipt and progress toward goals.   In addition, as home visits are often used by the teams to engage families, they are included in the model.   This is not intended to reflect all the activity of CFST leaders, but simply the parameters from which they function during the provision of CFST services.

Figure 1. The Child and Family Support Team Model
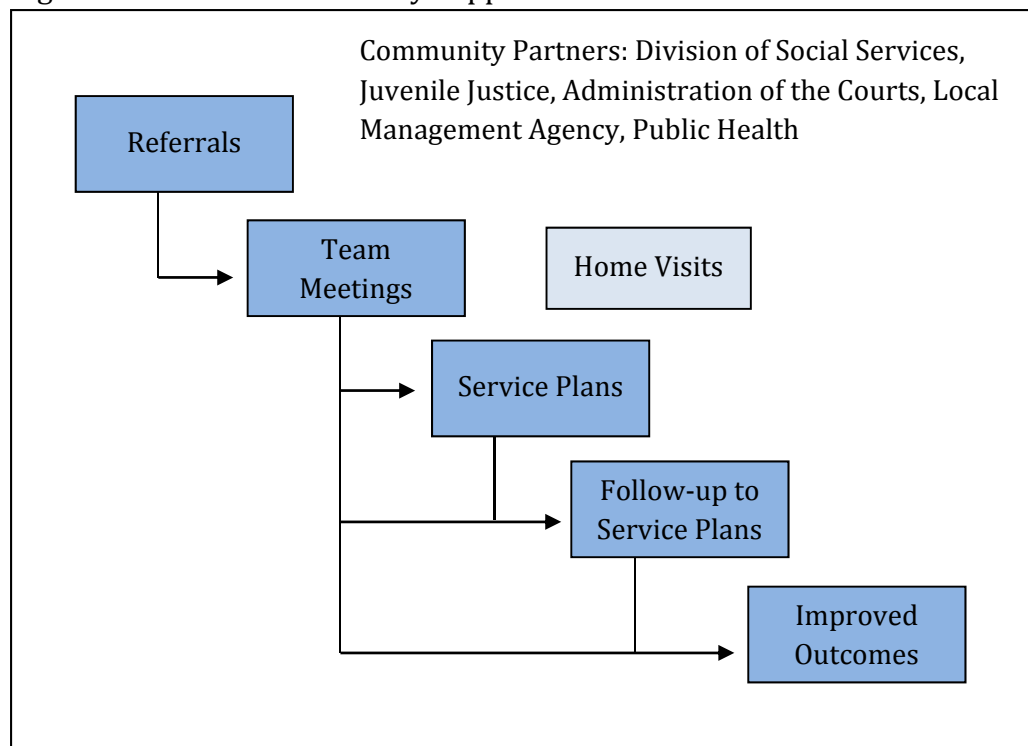
Referral Process

The CFST's authorizing legislation requires that nurse/social worker teams "identify and screen children who are potentially at risk of academic failure or out-of-home placement." The teams use school records and conversations with students, parents, teachers, principals or other contacts to identify students who are potentially at risk.

If it is determined that CFST services may be appropriate, the teams contact the student's parents to explain the program, its services and how it may be used to benefit the student. As all of the CFST program's services are voluntary, the teams do not plan, make referrals or directly provide any specific services prior to contacting the parents and getting informed consent.

Once parents have consented to participate in the CFST program, a meeting is arranged to include the parent(s), the student (when age and developmentally appropriate), the nurse/social worker team, those close to the family who best know the student and staff members of other service agencies believed to be relevant to the student's needs. This CFT meeting is the first of potentially several meetings during the course of the team's involvement with the student and family.

Throughout their work with students and families, nurses and social workers may also periodically visit students' homes. This provides an opportunity to engage families, learn more about families' situations and make the program more accessible to those facing barriers such as transportation, child care for younger siblings or disengagement and lack of trust in government agencies.

Child and Family Team Meetings

Child and Family Team meetings are critical to the CFST model of services. The authorizing legislation requires that families and consumers be involved in all levels of decision making, including all service planning, delivery and monitoring. In the CFST program, this means that plans for services cannot be implemented without the students' parents or caretakers being present during a CFT meeting. The meetings are to be held at times and in locations so families can attend. A primary objective of an initial CFT meeting is to establish goals for the student that builds on student and family strengths, and to define a strategy to achieve those goals – including a plan for all necessary health and social services. Instead of having separate service plans with each agency, the student and his or her family should have a single plan that integrates the individual services being provided across different agencies. This is the goal summarized as "one child, one family, one plan." The agency most relevant to the student's primary unmet need is charged with leading the CFT process (e.g., schools for academic issues, the local management entity for unmet mental health needs, social services when the primary unmet need relates to child welfare or child abuse and neglect, DJJDP Chief Court Counselor for juvenile justice issues and public health for health-related needs). Through subsequent meetings held as frequently as the situation necessitates, the team monitors progress and adjusts plans as the student's and family's situation changes.

Service Plans/Strength-based Interventions

During the CFT meetings, those assembled consider the students' strengths, needs and goals and develop a plan to help the students achieve those goals.   This plan consists of all the strength-based interventions upon which the team has jointly agreed.   This plan could entail services from the school or from a community agency.   The interventions discussed and agreed upon during the CFT meetings are then incorporated into a unified plan that functions as a "road map" guiding the process throughout the service period.   CFST leaders are expected to manage the case and service provision by periodic follow-up with students and families to monitor receipt of services and progress toward goals – and also to identify and potentially address any barriers that may be preventing progress.

Summary of Findings from Previous Evaluation Reports

This section highlights a few findings from previous reports submitted to the North Carolina legislature.   A legislative report is submitted on January 1 and July 1 each year.   The January reports focus on findings from surveys with key program participants, including the nurses and social workers, principals, parents, students, and, recently, the community partners.   The July reports focus on process measures from the case management system (described below) as well as outcomes of the CFST program.   These outcomes rely primarily on administrative data provided by the NC Departments of Public Instruction, Social Services and Juvenile Justice.

- *The CFST program has been placed in high-needs schools.* In the baseline year, students in CFST schools were more likely to be below grade level in math and reading, more likely to be retained in grade, less likely to take the SAT, and to score lower if they took the SAT.
- *Principals report high levels of success with the program.* In the 2010-2011 survey, over 80 percent of principals reported that the CFST program was successful or very successful at identifying vulnerable youth and families, connecting youth and families to services, following up with youth and family about services, improving academic performance, improving behavioral outcomes, improving attendance and positively impacting the school overall.
- *Primary caregivers and students report high levels of satisfaction with the program.* In 2011, 93 percent of parents surveyed strongly agreed or agreed that the CFST program helped their children be more successful at school.   Students who responded to the survey rated the CFST process highly with 43 percent rating it as excellent, 31 percent rating it as very good, and 19 percent rating it as good.
- *CFST leaders generally report that agency representatives are willing to attend meetings.*   While CFST leaders report that it is very or fairly easy to get representatives from other agencies to attend meetings, a few agencies are more challenging.   For example, among those who indicated they had requested a

particular agency to attend a meeting, leaders reported that it was difficult or impossible to get attendance from health care providers (62%), social services (43%), drug and alcohol treatment providers (52%) and legal and court representatives (40%).

- *CFST leaders report they are generally successful in accessing services for families.* Across a range of different service providers, CFST leaders report they are generally successful in connecting families with services. However, of the 87 nurses and social workers that reported wanting to connect families with drug/alcohol treatment providers, 23 percent reported having difficulty in the 2010-2011 school year. This is one area that could be improved.

- *The CFST program is becoming routinized and institutionalized within the schools.* The CFST program has now been operating for five years and there is evidence that school personnel are better understanding the role of CFST leaders. For example, in 2006-2007, nurses and social workers reported that 26 percent of teachers and 67 percent of administrators understood their role as a CFST leader relative to 88 percent and 93 percent in 2009-2010.

- *Previous work has identified that performance measures can be constructed from the case management system.* During the 2009-2010 year, measures were constructed from the case management system to identify which schools were implementing the CFST program well. These measures were grouped into three categories: basic process, family-centered and quality. The July 2011 legislative report further refined these measures and demonstrated that students who had "better run" team meetings were more likely to receive the services that the team recommended. The odds of receiving the recommended services were 30 percent higher for youth whose meetings were attended by an individual whose professional role matched their primary unmet need. The odds of service receipt were 29 percent higher for youth whose meeting was led by the agency that matched their primary unmet need. For students who had a meeting with a natural support, the odds of service receipt were 58 percent higher. For students who attended a team meeting, the odds of service receipt were 50 percent higher. Follow-up within 30 or 90 days were each associated with very large increases in the odds that the CFST leader was aware the student received services. Having a second team meeting was associated with more than a doubling of the odds of receiving services.

- *To implement the CFST program in the most effective manner, core components of the program need further investigation. The* CFST program was based on system of care philosophies and adapted the use of child and family teams to a new setting. This model, packaged in this format, is relatively new and the exact implementation of these components needs to be evaluated in order to use resources optimally.
  - o For example, previous reports have suggested the need to revisit the feasibility and importance of the lead agency matching the student's primary

unmet need.   Although the primary unmet need is academic in 34 percent of the cases, the school is the lead agency in 80-85 percent of the team meetings.

- o In addition, representatives from partner agencies were asked how well it worked for someone else to lead a CFT meeting even if the greatest need was one their agency addressed; 80 percent replied very or pretty well.   Here is a case where policy calls for greater diversity in which agency takes the lead in CFT meetings, practice indicates that this policy is not being implemented well, but practitioners reports few problems with the practice.

- *CFST is an innovative way to improve outcomes for youth.*   In order for the model to successfully and consistently improve child outcomes, it is important to ensure that key components of the model are used.
- *To track the use of key model components, we developed a series of fidelity measures related to team meetings.*   While these measures did not predict differences in academic outcomes, team meetings that incorporated these measures were more likely to lead to receipt of services.

The Current Report

The current report has three main aims.   The first aim is to report basic process measures as identified by the case management system, including the demographics of the students referred to the program, the number of students referred, the number of team meetings held, the number of students with a service plan, the percentage of students whose plans are being followed-up with, as well as an examination of whether students are receiving these services.   The second aim is to examine who is being served by the CFST program. The third aim is to examine whether the CFST program is linked to better outcomes for students in CFST schools.

II. Process and Performance Measures of the CFST Model

The introduction described the theoretical underpinnings of how the CFST program is expected to work.   This section describes the process measures collected to monitor program implementation.   We first describe the case management system that collects information from the school systems and then report on program implementation measures.

The Case Management System

As part of the evaluation of the CFST program, a Web-based case management system was developed.   The case management system was designed to capture encounters with individual students so as to track the items legislatively required.   The case management system was designed around the core program elements described in Figure 1.   The elements captured include:

- *Referrals* – the total number of students referred or identified as being at-risk, the needs of the students, and referred students demographic characteristics.
- *Child and Family Team Meetings* – the number of CFT meetings, the attendees at CFT meetings, the students' primary unmet needs, the lead agency.
- *Home Visits* – total number of home visits.
- *Service Plans* – the strength-based interventions to which youth are being referred.
- *Follow-up* – a measure of whether youth are receiving intended services and progressing toward their goals.
- *Case Closed* – A means of understanding the positive and negative reasons for why youth and families stop participating in the program (e.g., the student has met his or her goals or no longer wishes to continue).

The information collected through the case management system has several purposes:

- CFST leaders use this system to track the progress of individual students – what has occurred in the past, what goals have been set and how the student is progressing.

- When the data are aggregated to the school level, it provides a sense of what is occurring within a given school.   Is the model being used?   What agencies are involved?   What are the needs of students these teams are addressing?
- The information on students who are served by the CFST program has been linked to their education records that have been provided by the North Carolina Department of Public Instruction to the North Carolina Education Research Data Center (NC-ERDC).   In turn, the education data have been linked to three other state data systems, including those of the Division of Social Services, the Department of Juvenile Justice, and, recently, the Department of Medical Assistance.   This provides valuable information for the evaluation to track whether the CFST initiative is improving academic outcomes and reducing out-of-home placements. Referrals are the entry point to receipt of CFST services, and they are an indicator of CFST leaders' progress in identifying students who are at risk of academic failure and out-of-home placement and who could potentially benefit from CFST services.

Table 1 provides information on the number of students referred by school system.   The numbers in parentheses are the number of schools served by CFST leaders.

Table 1. Referrals by School System July 1, 2011 – March 31, 2012	
School Systems (# of CFST Schools)	# of Students Referred (7,958)
Alamance (6)	538
Anson (5)	298
Bertie (3)	298
Caldwell (4)	207
Duplin (6)	536
Durham (6)	470
Greene (3)	296
Halifax (3)	229
Hoke (3)	277
Hyde (2)	77
Martin (4)	334
McDowell (4)	237
Nash Rocky MT (3)	301
Pamlico (4)	717
Person (2)	132
Richmond (3)	533
Scotland (6)	758
Swain (3)	294
Vance (5)	512
Wayne (5)	557
Winston-Salem/Forsyth (7)	357
Source: Authors' tabulations of the CFST Case Management System	

Table 2 below provides demographic information concerning students referred to CFST. During the 2011-2012 school year, from July 1 through March 31, 2012, students were referred for team meetings.   A larger percentage of the referrals were for males (54.9%) than female students (45.1%).   Approximately half of the students referred to the program were African American (48.6%) and a little over a third of the students were White (35.8%).   Nearly a quarter of the students referred were Hispanic (12.7%).

Table 2. Demographic Data Concerning Students Referred to the CFST program July 1, 2011-March 31, 2012						
Gender	#	%		Grade	#	%
Female	3,589	45.1		Pre-K	75	0.9
Male	4,369	54.9		K	619	7.8
				1st	524	6.6
Race	#	%		2nd	435	5.5
White	2,850	35.8		3rd	586	7.4
Black	3,870	48.6		4th	548	6.9
Asian	12	0.2		5th	595	7.5
American Indian	367	4.6		6th	792	10.0
Other	520	6.5		7th	745	9.4
Multi-racial	338	4.2		8th	716	9.0
				9th	493	6.2
Hispanic	#	%		10th	306	3.8
No	6,947	87.3		11th	267	3.4
Yes	1,011	12.7		12th	231	2.9
				Missing	1,025	12.9
Source: Authors' tabulations of the CFST Case Management System						

Table 3 describes referral sources.   Understanding who is referring students to the CFST program provides insight into program operations.   For example, referrals from principals, teachers and school personnel may indicate that the model is valued by these school professionals.   Referrals from family members and natural supports suggest that individuals outside the school system are familiar with the program.   Referrals from external community partners suggest an effort on the part of the agencies to work with the school system to address the students' needs.   As expected, most of the referrals come from school-based staff members (82.3% of the total).   CFST nurses and social workers identify about 28 percent of the students who are referred to the CFST program.   This pattern is consistent with the intent of the legislation that identifying at-risk students is their primary responsibility.   Other significant referral sources include principals (about 10.5%), teachers (about 27.2%) and parents of the students (about 9.7%).

Table 3. Percentage of CFST Referrals by Source July 1, 2011-March 31, 2012		All (n=9,631) %	Elementary (n=4,874) %	Middle/Jr. High (n=3,003) %	High (n=1,754) %
School	CFST Leader at Current School	27.7	26.8	31.6	23.4
	CFST Leader at Prior School	1	0.3	1.9	1.7
	Principal or other School Administrator	10.5	7.6	16	9.4
	School Based Team	1.2	1.6	0.8	0.7
	School Counselor	6.6	4.2	8.2	10.5
	Teacher	27.2	34	21.5	18
	Other School Staff	8.1	7.9	7.2	10.4
Family	Parent/Primary Caregiver	9.7	11.8	6.4	9.4
	Sibling	0.1	0.1	0	0.1
	Student (self)	1.8	0.1	0.8	8
	Other member	0.5	0.6	0.2	0.7
Community agencies	DJJDP	0.6	0.2	1.1	1.1
	Social Services	1	1.1	0.8	1
	LME	0.1	0.1	0.2	0.3
	Public Health	0.1	0.2	0	0.1
	Other Community Agency	0.6	0.5	0.5	1.2
Other referral sources	Mental Health Provider (private)	0.8	0.6	0.8	1.3
	Medical Provider (private non-school-based)	0.4	0.6	0.2	0.3
	Neighbor/Family Friend	0.1	0.1	0	0.2
	Religious Leader	0.2	0.2	0.3	0
	Student's friend or peer	0.1	0	0.1	0.3
	Other	0.6	0.4	0.6	0.8
	Missing	1	1.1	0.7	1
Source: Authors' tabulations of the CFST Case Management System					

Table 4 shows the primary unmet need identified at a CFT meeting.   Team meetings are the primary means of bringing all of the relevant parties together to develop a single strengths-based family-centered plan.   A precursor to developing an intervention plan for CFST students is to identify the student's needs.   Table 4 presents the issues which have been identified as the students' primary unmet needs at the team meeting.   The primary unmet need represents the team's joint decision regarding the single most urgent factor that is negatively impacting the student's capacity to succeed academically or to live in a stable home.   Primary unmet needs are identified through the assessment process and agreed upon during CFT meetings.   They become high priority service needs and service plans should be developed to address them.

Inappropriate behavior is the single largest primary unmet need in elementary and middle school.   Among academic factors, the most common reason is for excessive absences for each school level.   Further exploration should help better understand what CFST leaders are doing for students who are chronically absent from school.   The CFST program could play a role in helping students re-engage with school if they have become disconnected for a variety of reasons.   Better understanding of the reasons CFST leaders are seeing students for being chronically absent could help program planners better understand which types of interventions would be more effective in improving attendance.

Table 4. Primary Unmet Need as Identified during Child and Family Team Meeting July 1, 2011-March 31, 2012					
		All (n=10,089) %	Elementary (n=5,329) %	Middle/Jr. High (n=3,039) %	High (n=1,721) %
Academic Factors	Retained one or more years	1.5	1.9	1.1	0.9
	Failed 2+ subjects (failed semester)	4.9	3.6	7.4	4.4
	Sudden drop in grades	3.1	1.2	6.1	3.5
	EOC/EOG (score <3)	1.2	1.4	1.1	0.5
	SAT/CSI referred	0.5	0.8	0.1	0
	English as a second language	0.1	0.2	0.1	0
	Exceptional Children's Status	2.2	1.9	2.8	2
	Other	5.6	6.9	4.6	3.2
	Excessive Absences	10.7	10.7	10.3	11.6
	Excessive Tardy	1.5	2.3	0.6	0.8
	Skips Class	0.2	0	0.2	0.6
	Leaves Early	0.1	0.1	0.2	0
	Suspensions	1.9	0.7	3.5	3

Table 4. cont...		All (n=10,089) %	Elementary (n=5,329) %	Middle/Jr. High (n=3,039) %	High (n=1,721) %
Health Factors	Pregnant/ parenting	3.2	0	1.1	16.5
	Other Health Concerns	8.8	8.6	8.2	10.6
	Obesity/Overweight	0.1	0.1	0.2	0.1
	Asthma	1.5	1.7	1.4	1.1
	Diabetes	1.6	1	1.6	3.7
	Hearing	0.4	0.5	0.3	0.3
	Vision	1.6	2	1.4	0.7
	Dental	0.3	0.3	0.2	0.3
Legal Factors	Delinquent & Criminal Activity	1	0.1	2.2	1.3
	Family Custody	0.7	0.9	0.5	0.2
	Other	0.4	0.4	0.3	0.6
Mental Health	Suspected Substance abuse	0.3	0	0.6	1
	Developmental Issues	1.4	1.7	1.3	0.5
	Depression	1.9	0.7	2.3	5.1
	Aggressive behavior	5.4	6.2	5.1	3.5
	Inappropriate behavior	15.4	17.4	16	7.8
	Victim of bullying	0.5	0.2	1	0.4
	Withdrawn change in behavior	1.3	1.5	1.5	0.4
	Socially awkward	0.9	1	0.8	0.9
	Other	3.4	3.3	4.2	2.4
Social Services Factors	History of abuse/neglect/dependency/DV	2.4	3.2	1.3	2.2
	Low income	4.3	5.4	3.4	2.4
	Frequent moves	0.2	0.3	0	0.2
	Homelessness	4.9	6.4	3.6	2.3
	Family member military Involvement	0	0	0	0
	Gang Involvement	0	0	0.1	0.1
	Other	1.8	1.6	1.1	3.5
	Lack of food	1	1.3	0.7	0.3
	Latch-key child	0	0	0	0.1
	Incarcerated Parent	0.2	0.2	0.1	0.2
	Parent or family member needs	1.3	1.7	1	0.5
	Missing	0.4	0.4	0.4	0.3

Source: Authors' tabulations of the CFST Case Management System

Table 5 shows the designated lead agency. The authorizing legislation specifically stated that the CFST program was a multi-agency initiative. The student's primary unmet need was intended to drive the decision regarding the lead agency for the student. During the 2011-12 school year, 87.2 percent of CFT meetings were led by the school, 6 percent were led by representatives from the LME, 2.4 percent were led by representatives from county Departments of Social Services, 1.4 percent were led by representatives from DJJDP, and 2.2 percent by Public Health Departments (see table 5).

Table 5. Lead Agency by School Type: CFST Program July 1, 2011-March 31, 2012				
	All (n=10,089) %	Elementary (n=5,329) %	Middle/Jr. High (n=3,039) %	High (n=1,721) %
School	87.2	88.9	87.8	81
LME	6	6.5	5.2	6
DSS	2.4	2.7	1.8	2.7
Public Health	2.2	1.1	1.9	6.5
DJJDP	1.4	0.3	2.7	2.5
Missing	0.7	0.5	0.7	1.3
Source: Authors' tabulations of the CFST Case Management System				

Figure 2 describes who attends the meetings by school type. Although parent/primary caregivers attended most meetings that occurred in elementary, middle and junior high, they attended only 74.5 percent of those that occurred in high schools. Relatively few students in high schools have reached the age of 18 and, according to the CFST model, the parent or primary caregiver should be in attendance at CFT meetings. This pattern implies that additional conversations with CFST leaders are needed to determine whether the issues are training related or due to a lack of effort on the CFST leaders' part.

Figure 2. Description of CFT meetings by Attendees and School Type July 1, 2011-March 31, 2012

% of meetings attended by type of attendee: School

Attendee	Elementary	Middle/Junior High	High
CFST Leader at Current School	97.4	97.5	97.2
CFST Leader at Prior School	0.8	1.3	1.0
Teacher	29.8	30.0	18.4
Principal or other School Administrator	16.7	20.8	13.2
School Counselor	13.9	17.6	17.5
Other School Staff	13.2	15.9	8.9
School Based Team	2.7	1.3	1.6

% of meetings attended by type of attendee: Family

Attendee	Elementary	Middle/Junior High	High
Parent/Primary Caregiver	97.6	95.4	74.5
Student (self)	26.1	57.7	74.8
Other member	7.7	4.5	6.0
Sibling	7.0	5.2	6.3

% of meetings attended by type of attendee: Community agencies

Attendee	Elementary	Middle/Junior High	High
Social Services	5.9	4.1	6.4
Other Community Agency	2.3	3.9	5.2
LME	2.5	4.1	3.3
DJJDP	1.2	4.3	3.6
Public Health	0.2	0.1	0.5

% of meetings attended by type of attendee: Other referral sources

Attendee	Elementary	Middle/Junior High	High
Mental Health Provider (private)	5.6	7.1	4.9
Other	1.7	1.7	1.9
Neighbor/Family Friend	0.6	0.5	1.0
Medical Provider (private non school-based)	0.6	0.5	0.4
Student's friend or peer	0.1	0.2	0.6
Religious Leader	0.2	0.1	0.0

Legend: ■ Elementary ■ Middle/Junior High ■ High

Source: Authors' tabulations of the CFST Case Management System

Table 6 examines agency representation at CFT meetings.   This "representation" simply means that a staff member from the agency attended the meeting.   It does not imply the agency was the "lead agency" for the meeting or provide any information for how engaged that staff member was in the process.   Looking at all CFT meetings, the local Departments of Social Services were represented in 5.4 percent, the LME was represented in 3.1 percent, the Department of Juvenile Justice and Delinquency Prevention was represented in 2.5 percent, and Local Public Health agencies were represented at 0.2 percent.

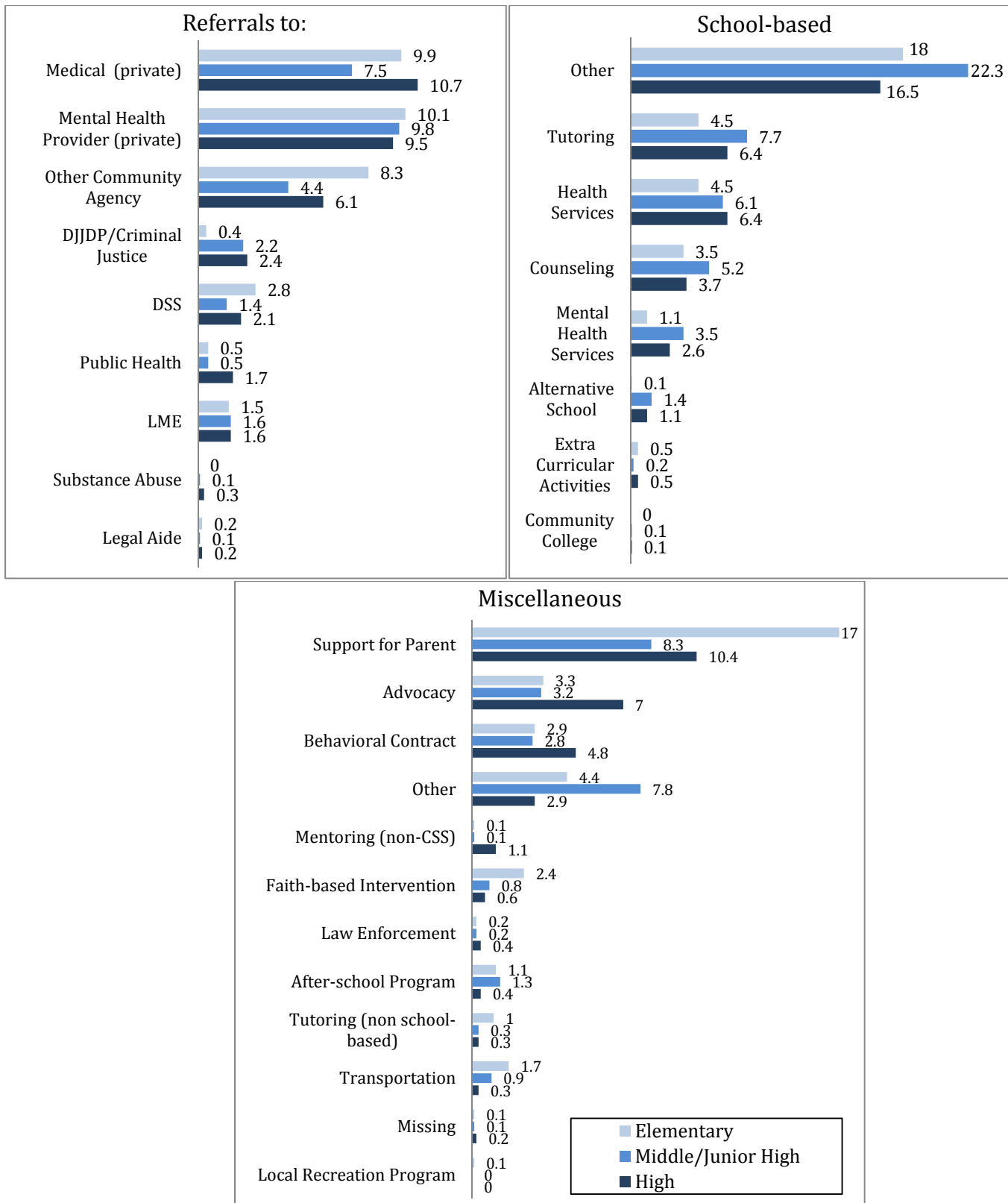| Table 6. Agency Representation in Meetings (Mtgs.) by County July 1, 2011-March 31, 2012					
	Total # of Mtgs.	DJJDP %	DSS %	LME %	Public Health %
Total	10,089	2.5	5.4	3.1	0.2
Alamance	539	3	4.1	3.9	0
Anson	368	1.1	4.1	3.5	0
Bertie	288	3.5	6.6	2.1	0.7
Caldwell	523	3.3	8.8	1.9	0.4
Duplin	705	2.3	4.4	2.6	0
Durham	547	4.9	3.7	3.5	0.2
Greene	498	1.4	1.8	0.8	0.2
Halifax	311	3.9	4.8	6.1	0.6
Hoke	365	0.3	1.1	0.3	0.3
Hyde	32	0	15.6	3.1	0
Martin	442	5	2.5	0.5	0.5
McDowell	414	6	11.8	7	0
Nash-Rocky Mount	468	1.3	4.5	0.4	0.6
Pamlico	235	1.3	6.4	14	0.4
Person	227	7.9	7.5	4.4	0
Richmond	923	4.1	7.4	9.8	0.1
Scotland	732	0.7	4.8	0.8	0.1
Swain	353	1.7	5.1	1.4	0
Vance	676	1.8	5.5	2.8	0.1
Wayne	787	1.4	7.8	0.5	0.4
Winston-Salem/Forsyth	656	0	4.6	0.3	0.3
Source: Authors' tabulations of the CFST Case Management System					

Table 7 presents information on home visits by school district. Completed home visits imply that the family was at home at the time of the visit. Attempted home visits imply that CFST leaders were unable to enter the home or communicate with anyone at the residence. Pamlico County's teams averaged the highest number of completed home visits with 105.5 per team.

Table 7. Home Visits by Local Education Agency July 1, 2011-March 31, 2012					
		Completed Home Visits		Attempted Home Visits	
School District	# Teams	#	Avg. per team	#	Avg. per team
Alamance	6	266	44.3	123	20.5
Anson	4 (serving 5 schools)	73	14.6	9	1.8
Bertie	3	54	18	16	5.3
Caldwell	4	198	49.5	26	6.5
Duplin	6	141	23.5	54	9
Durham	6	155	25.8	34	5.7
Greene	3	120	40	19	6.3
Halifax	3	66	22	9	3
Hoke	3	49	16.3	10	3.3
Hyde	1 (serving 2 schools)	5	2.5	1	0.5
Martin	4	104	26	14	3.5
McDowell	4	35	8.8	0	0
Nash-Rocky Mount	3	248	82.7	22	7.3
Pamlico	4	422	105.5	292	73
Person	2	54	27	12	6
Richmond	3	294	98	161	53.7
Scotland	6	459	76.5	250	41.7
Swain	3	58	19.3	12	4
Vance	5	177	35.4	71	14.2
Wayne	5	166	33.2	60	12
Winston-Salem/Forsyth	7	309	44.1	108	15.4
Source: Authors' tabulations of the CFST Case Management System					

Table 8 presents information regarding the types of strength-based interventions to which students are referred.   The three most common strength-based interventions are a) "other" school-based services (19.2%), b) support for the parent (12.9%), and c) private medical care (9.9%).   CFST leaders should be asked what school-based services are being captured in the "other" category so that the services provided to students are better understood.   Figure 3 provides a breakdown of the recommended strength-based services by school type.

Table 8. Service Plans: Description of Strength-based Interventions Recommended for Students July 1, 2011-March 31, 2012					
	Service/Intervention	%		Service/Intervention	%
Referrals to:	Mental Health Provider (private)	9.9	Miscellaneous	Support for Parent	12.9
	Medical (private)	9.2		Other	5.3
	Other Community Agency	6.5		Advocacy	3.9
	DSS	2.2		Behavioral Contract	3.2
	LME	1.6		Faith-based Intervention	1.5
	DJJDP/Criminal Justice	1.4		Transportation	1.2
	Public Health	0.7		After-school Program	1.1
	Legal Aide	0.1		Tutoring (non-school-based)	0.6
	Substance Abuse	0.1		Mentoring (non-CSS)	0.3
				Law Enforcement	0.2
School-based	Other	19.2		Missing	0.1
	Tutoring	5.9		Local Recreation Program	0
	Health Services	5.4			
	Counseling	4.1			
	Mental Health Services	2.2			
	Alternative School	0.7			
	Extra-Curricular Activities	0.4			
	Community College	0			
Source: Authors' tabulations of the CFST Case Management System (n=14,250)					

Figure 3. Service plans: description of strength-based interventions recommended for students in Elementary, Middle/Jr. High, and High School July 1, 2011-March 31 2012
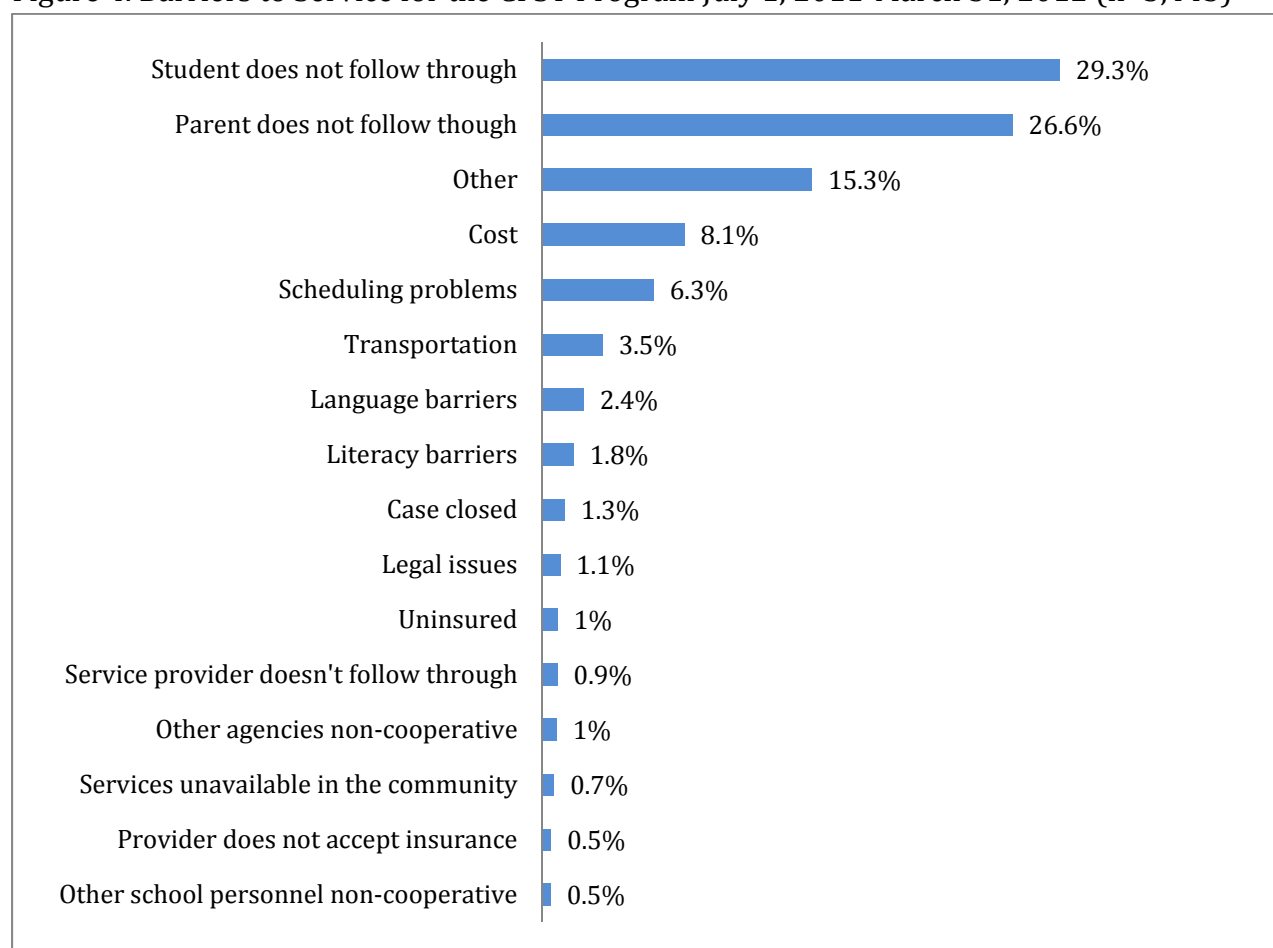
Source: Authors' tabulations of the CFST Case Management System

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After a service plan is created, CFST leaders are expected to follow-up with students and families in a timely manner to monitor service receipt and to determine what barriers may be presenting a challenge. Table 9 demonstrates both the overall number of service plans as well as the percentage of service plans that have received follow-up within two measures of timeliness (30 days and 90 days). Across counties, 30-day follow-up ranged from a low of 15.4 percent in Hyde county to a high of 76.4 percent in Bertie. Although Richmond county had a low 30-day follow-up rate (29.1%), it had a high 90-day follow-up rate (92.6%).

Table 9. Follow-up to Service Plans (Svc.) by School System July 1, 2011-March 31, 2012			
LEA	Total # of Svc. plans	% of plans followed up within 30 days*	% of plans followed up within 90 days*
Alamance	566	47.1	97.3
Anson	424	57.4	96.6
Bertie	258	76.4	90.8
Caldwell	482	31.3	75.2
Duplin	527	64.8	91.5
Durham	478	46.7	76.8
Greene	1089	59.6	91.3
Halifax	257	47.8	94.4
Hoke	210	43.1	95.7
Hyde	35	15.4	31.6
Martin	649	50.9	97.3
McDowell	634	53.6	97.8
Nash-Rocky Mount	688	57.2	95.8
Pamlico	171	39.1	88.3
Person	622	54.0	95.8
Richmond	643	29.1	92.6
Scotland	668	52.7	97.1
Swain	532	74.9	98.5
Vance	559	37.5	97.7
Wayne	1015	58.1	94.0
Winston-Salem/Forsyth	569	67.1	96.9
Source: Authors' tabulations of the CFST Case Management System			
*For 30- and 90-day follow-up, only service plans that were at least 30 or 90 days old, respectively, were examined.			

Through regular follow-up with students, CFST leaders identify whether the students received interventions recommended by the CFT and note any issues that may have presented a barrier (see Figure 4).   Most follow-ups (57.8% with missing included (9,806=freq)) did not list any barriers to service receipt.   However, among the service plan follow-ups that did list a barrier to accessing services, the most frequently mentioned were lack of follow-through among students (29.3%) and parents (26.6%).   Further work should examine what is captured in the "other category," which is listed for 15.3 percent of the barriers.   This information may help systems alleviate problems that prevent families from accessing services.   If a team believes that a service is unattainable by a family, then it is probable that the team will not recommend this service for the family – even if it would benefit the family.   For example, teams may be unlikely to recommend a service learning program that does not exist in the community.   The high percentage of services that are received without any barriers listed suggests that teams are knowledgeable about the accessibility of services prior to recommending a service for a family.

Figure 4. Barriers to Service for the CFST Program July 1, 2011-March 31, 2012 (n=5,443)

Barrier	Percent
Student does not follow through	29.3%
Parent does not follow though	26.6%
Other	15.3%
Cost	8.1%
Scheduling problems	6.3%
Transportation	3.5%
Language barriers	2.4%
Literacy barriers	1.8%
Case closed	1.3%
Legal issues	1.1%
Uninsured	1%
Service provider doesn't follow through	0.9%
Other agencies non-cooperative	1%
Services unavailable in the community	0.7%
Provider does not accept insurance	0.5%
Other school personnel non-cooperative	0.5%

Source: Authors' tabulations of the CFST Case Management System

When families end their participation in the CFST program, the case is considered closed. CFST leaders enter information for the reason that participation ended.   Unfortunately, in the 2011-2012 school year, CFST leaders did not supply a case close reason in two-thirds of the cases .   The most common reason cases close is because the students have met their objectives (11.9%) (See table 10).   The next three most common reasons for a case close are related to the student no longer attending a given school (moved within school district (5.1%), moved to a different school district (4.5%) or the student was promoted to the next school level (3.3%)).   Fortunately, a relatively small percentage (1.7%) of cases close because the parent refuses to participate in the program or the student refuses to participate in the program (0.3%).

Table 10. Case Closed Reasons for the 2011-12 Academic School Year July 1, 2011-March 31, 2012				
	Total (n=16,015) %	Elementary (n=6,504) %	Middle/Jr. High (n=4,666) %	High (n=3,276) %
Objectives Met	11.9	15.8	10	11.2
Moved within School District	5.1	6.7	4.1	4.6
Moved to Different School District Within NC	4.5	5.2	4.5	4.6
Promoted to next school level	3.3	3.1	6.2	0
Referred to Other Services	2.8	2.8	1.5	5.6
Other	2.5	2.5	2.4	3.7
Graduated	1.9	0.2	0.1	7.8
Parent Refused to Continue Within Program	1.7	1.8	1.7	1.7
Moved to Different State	1.2	1.2	1.3	1.5
Dropped Out of School	1.1	0.1	0.1	4.5
Case Already Open	0.9	0.6	0.9	1.1
Student Refused to Continue in Program	0.3	0.1	0.2	0.8
In Custody of Another Agency	0.3	0	0.5	0.5
Already in services	0.2	0.4	0.1	0.2
Died	0	0	0	0
Missing	62.4	59.5	66.3	52.1
Source: Authors' tabulations of the CFST Case Management System				

Next we examined how a few measures have changed over time (see Figure 5).   As shown in panel 5a. and 5b., both the number of schools served and the number of CFST teams receiving state dollars have been declining since the implementation of the initiative.
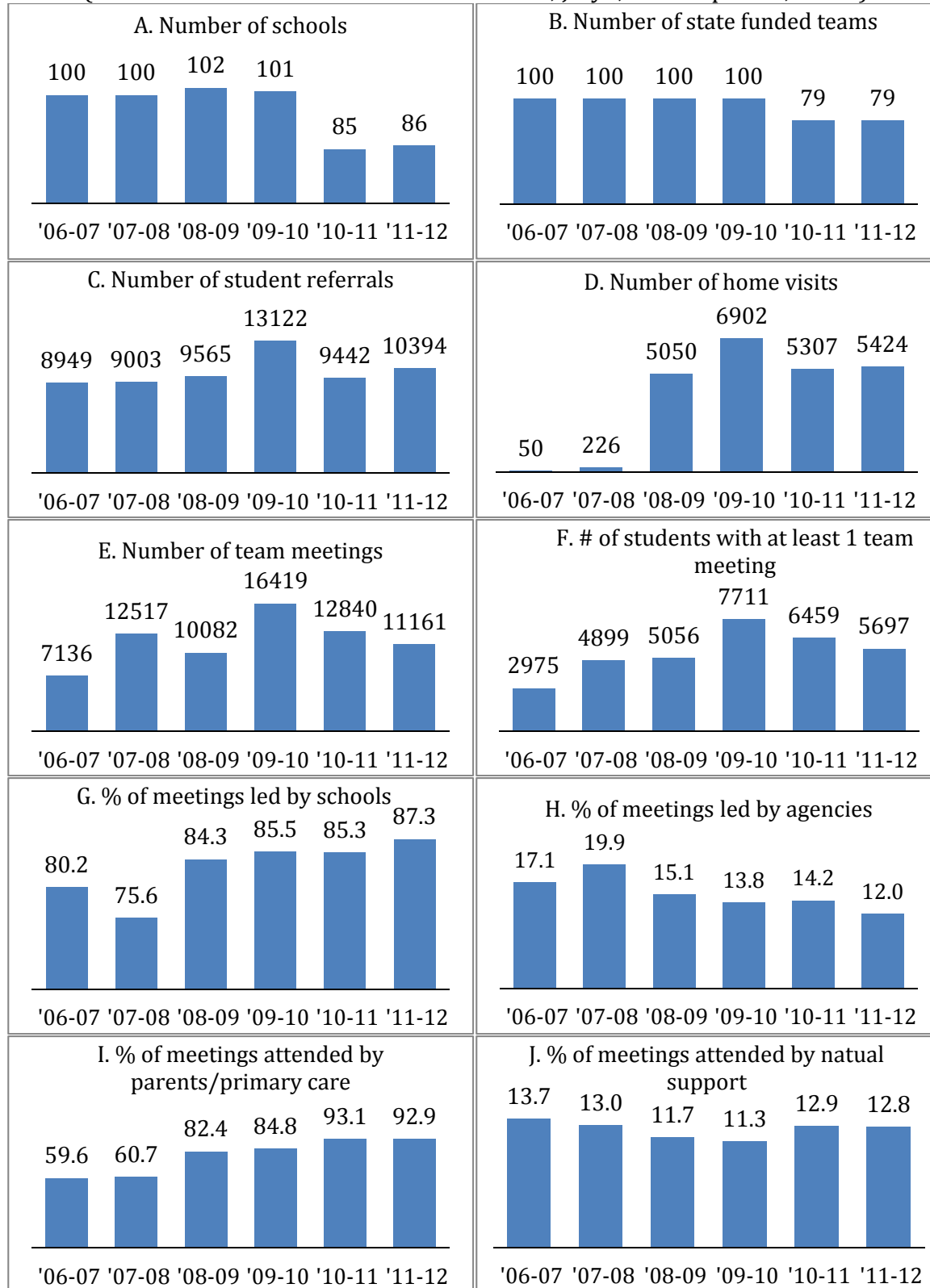
From 2006-07 through 2009-10 the state provided funding for 100 teams; however, these teams served 102 schools in 2008-09 and 101 schools in 2009-10.   In 2011-2012 the state provided funding for 79 teams and local school systems found additional dollars to fund another 10 teams.   The use of flexible dollars to fund additional teams is a strong indicator of the value that some local communities are placing on the work performed by these teams.

Panel 5c-5f shows the number of referrals, home visits, team meetings and students with a team meeting that occurred each year over comparable time periods (July 1 through April 30).   The numbers in 2006-07 are likely to be low for two reasons.   First, as this was the first year of the program, CFST leaders a) were occupied with their initial training learning how to perform their jobs, b) needed to work with teachers, principals and other school staff to integrate the CFST program into that school, and c) needed to begin to build relations with students, parents and community partners.   Second, for most of the 2006-2007 school year, CFST leaders entered information on paper forms and only were able to enter data electronically in 2007-08.   The numbers in 2009-10 are higher than usual because CFST leaders were under extreme pressure in the face of budget cuts.   CFST leaders were informed that schools which were cut may be based (at least partially) on information that was entered into the case management system.

It is interesting to note that in 2011-2012, despite there being 3 fewer teams than the previous year, there were more students referred and more home visits completed, yet there were fewer team meetings and fewer students who had a team meeting.   The rate of service provision declined between 2009-2010 and 2010-2011.   While there were 15 percent fewer teams, there was a 27 percent decline in the number of home visits, a 25 percent decline in the number of team meetings and a 19 percent decline in the number of students with a team meeting.   There are several explanations for the disproportional decline over time.   One explanation is that CFST leaders were aware of the potential budget cuts during the 2009-2010 school year and were more motivated to enter their data in a timely manner in case budget cuts were made based upon service provision.   Another explanation is that teams may have fewer resources to use such as reimbursement for making home visits and seeing families at non-school locations.

For the last four years, the percentage of team meetings led by the school relative to other agencies has remained around 85 percent, while the number of team meetings led by other agencies has declined to approximately 12 percent.   Yet, from information provided in table 4 we know that the students' primary unmet need is academic related in only 34 percent of cases.   Continued work should consider if there are ways to encourage agencies to lead more of the team meetings or whether the disconnect between policy and practice is worth addressing.

Figure 5: Performance measures across CFST Program years
(School Year '06-'07 to School Year '11-'12, July1, 2011-April 30, 2012)

A. Number of schools

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
100	100	102	101	85	86

B. Number of state funded teams

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
100	100	100	100	79	79

C. Number of student referrals

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
8949	9003	9565	13122	9442	10394

D. Number of home visits

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
50	226	5050	6902	5307	5424

E. Number of team meetings

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
7136	12517	10082	16419	12840	11161

F. # of students with at least 1 team meeting

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
2975	4899	5056	7711	6459	5697

G. % of meetings led by schools

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
80.2	75.6	84.3	85.5	85.3	87.3

H. % of meetings led by agencies

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
17.1	19.9	15.1	13.8	14.2	12.0

I. % of meetings attended by parents/primary care

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
59.6	60.7	82.4	84.8	93.1	92.9

J. % of meetings attended by natual support

'06-07	'07-08	'08-09	'09-10	'10-11	'11-12
13.7	13.0	11.7	11.3	12.9	12.8

Source: Authors' tabulations of the CFST Case Management System

III. The CFST Program is Serving At-Risk Youth

The CFST program is designed to improve academic performance and prevent out-of-home placement.   CFST leaders are charged with identifying students at risk for these negative outcomes.   To examine whether the CFST program is serving these at risk students, we developed a risk profile from factors that have been previously linked to poor academic performance (see Table 11 for a list of risk factors).   Data are from four sources. Students served by the CFST program were identified in the case management system and include all youth who had a team meeting with at least two attendees during the 2009-2010 school year.   These data were linked to the NC-ERDC, which was in turn linked to data from the NC Division of Social Services and the Department of Juvenile.

Table 11. Risk factors.

Risk Factor	Definition	Source
Academic Factors		
Not at grade level in math	Scored a 1 or a 2 on the end of grade math test. (3rd-8th graders)	NC-ERDC
Not at grade level in reading	Scored a 1 or 2 on the end of grade reading test (3rd-8th graders)	NC-ERDC
Missed more than 10 days of school	Numbers of days that the student missed school.	NC-ERDC
Currently repeating grade	Was retained in grade.	NC-ERDC
Social Factors & Cross Sector Involvement		
Exceptionality Status – Any (excluding the gifted category)	Student receives services due to his or her exceptionality	NC-ERDC
Receives Free or Reduced Price Lunch	Student is enrolled in the free or reduced price lunch program	NC-ERDC
In foster care	Currently in custody of the Division of Social Services	NC Division of Social Services
Had a juvenile complaint	Had a complaint filed with the Department of Juvenile Justice (6-12 graders; only relevant for students under 16 years old)	NC Department of Juvenile Justice
Old for grade	Being older than 75 percent of your classmates.	NC-ERDC

For a profile of the children served by the CFST program see Table 12.   The average number of risk factors varied, with CFST-served students having a higher average number of risk factors.   Middle, elementary and high school CFST-served students had roughly twice the average number of risk factors compared to all NC students in middle, elementary and high school.
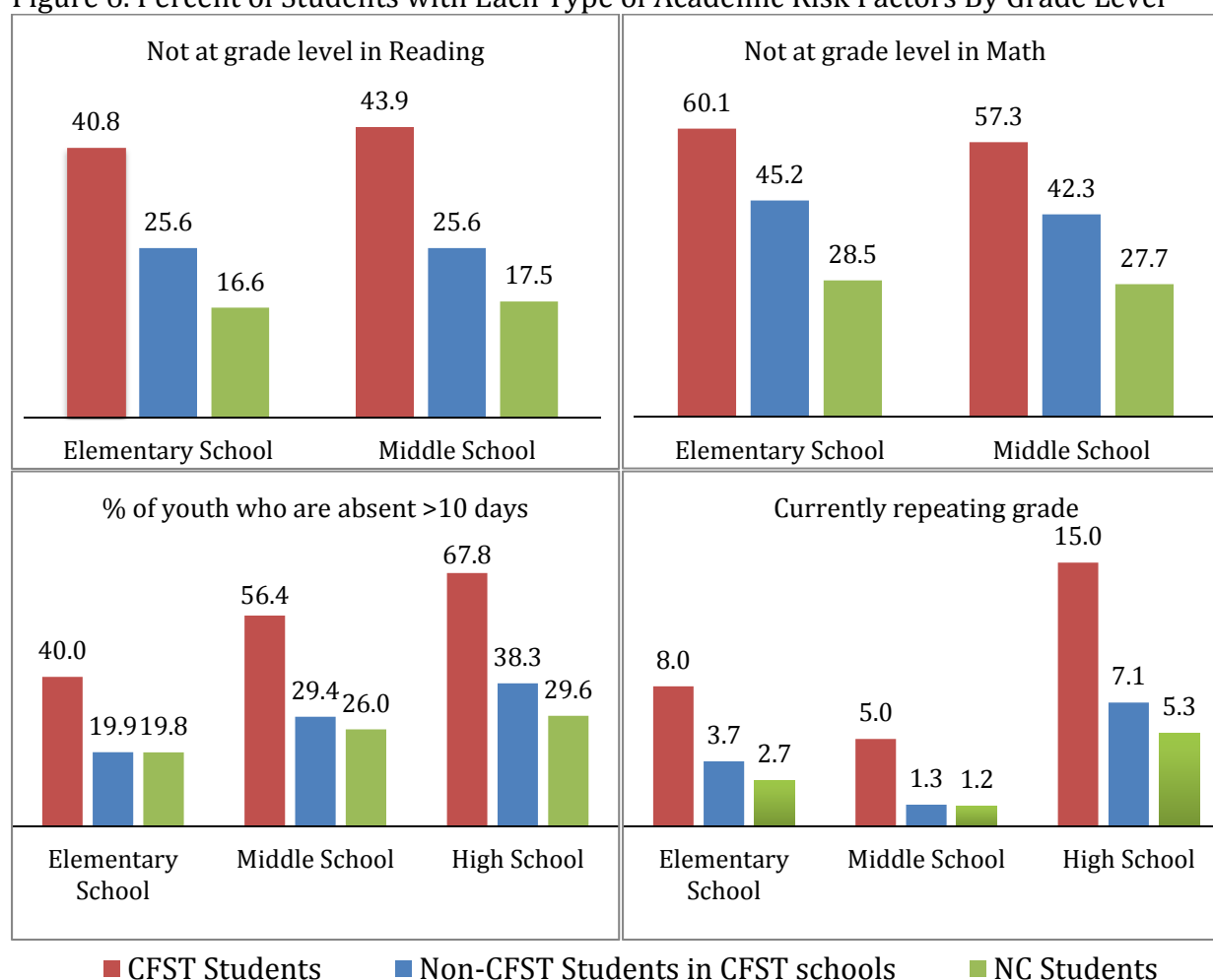
Table 12. Profile of students.

		CFST Students	Non-CFST students in CFST schools	All students in NC
Elementary School (8 potential risk factors)				
Grades 3, 4, 5	Number of Students	1,537	9,361	345,422
	Average # of risk factors	3.0	2.1	1.6
Middle School (9 potential risk factors)				
Grades 6, 7, 8	Number of Students	1,866	14,879	320,557
	Average # of risk factors	3.2	2.1	1.6
High School (7 potential risk factors)				
Grades 9, 10, 11, 12	Number of Students	1,324	19,328	408,869
	Average # of risk factors	2.1	1.4	1.0

Academic characteristics

There are a variety of factors that indicate a student is at risk for academic failure. Missing school, repeating grades and not performing at grade level are all indicators of academic failure.   For instance, CFST students miss more days of school compared to non-CFST students and all students across NC, almost two times as many more days. CFST students in high school are missing many more days of school, even compared to other younger CFST-served students.   A larger percentage of CFST students repeat grades, with three times the percentage of CFST students in high school repeating grades compared to all NC students.   While students in schools with the CFST initiative have a slightly larger percentage of all NC students that are not at grade level in math or reading, CFST students have at least two times the percentage of students not at grade level for math and reading compared to all NC students.

Figure 6. Percent of Students with Each Type of Academic Risk Factors By Grade Level
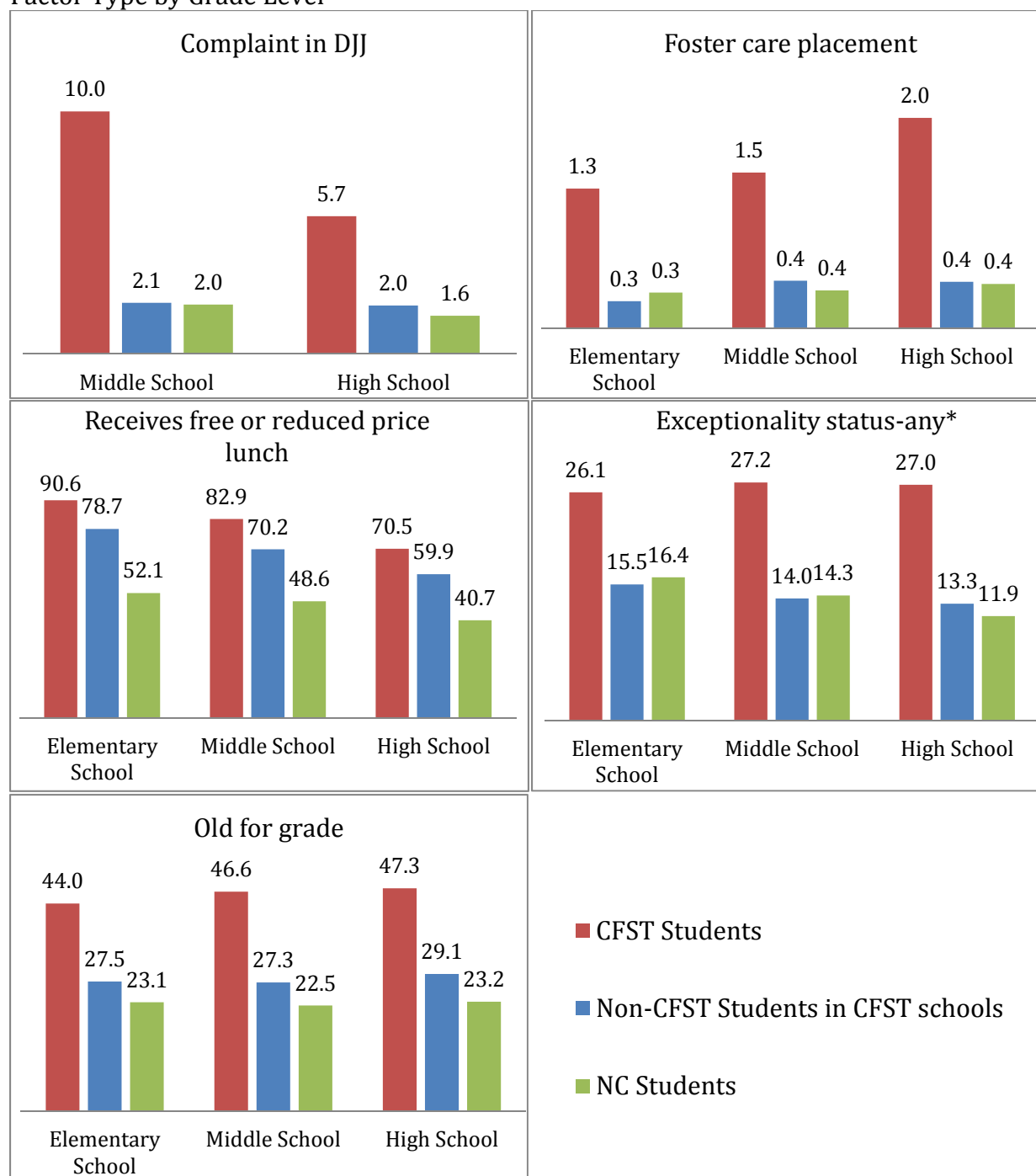
Not at grade level in Reading

	Elementary School	Middle School
CFST Students	40.8	43.9
Non-CFST Students in CFST schools	25.6	25.6
NC Students	16.6	17.5

Not at grade level in Math

	Elementary School	Middle School
CFST Students	60.1	57.3
Non-CFST Students in CFST schools	45.2	42.3
NC Students	28.5	27.7

% of youth who are absent >10 days

	Elementary School	Middle School	High School
CFST Students	40.0	56.4	67.8
Non-CFST Students in CFST schools	19.9	29.4	38.3
NC Students	19.8	26.0	29.6

Currently repeating grade

	Elementary School	Middle School	High School
CFST Students	8.0	5.0	15.0
Non-CFST Students in CFST schools	3.7	1.3	7.1
NC Students	2.7	1.2	5.3

■ CFST Students ■ Non-CFST Students in CFST schools ■ NC Students

Source: Authors' tabulations of the CFST case management system and North Carolina Education Research Data Center Data

Social factors

Students with cross-sector involvement are at risk for poor academic outcomes. These include youth who have contacted the juvenile justice and foster care systems. In addition, students from low-income families tend to have lower school performance. Free and reduced lunch status is used to proxy for family's income status. Students receiving exceptionality services for reasons other than their gifted status have a documented issue that can impede the student's progress in school if appropriate assistance is not provided. Studies have shown that students who are substantially older than their classmates often do less well in school. Across all grade levels, youth in the CFST program are more likely to have each risk factor than their peers in their school and across the state.

Figure 7. Percentage of Students with Each Social and Cross-Sector Involvement Risk Factor Type by Grade Level

Complaint in DJJ

- Middle School: 10.0, 2.1, 2.0
- High School: 5.7, 2.0, 1.6

Foster care placement

- Elementary School: 1.3, 0.3, 0.3
- Middle School: 1.5, 0.4, 0.4
- High School: 2.0, 0.4, 0.4

Receives free or reduced price lunch

- Elementary School: 90.6, 78.7, 52.1
- Middle School: 82.9, 70.2, 48.6
- High School: 70.5, 59.9, 40.7

Exceptionality status-any*

- Elementary School: 26.1, 15.5, 16.4
- Middle School: 27.2, 14.0, 14.3
- High School: 27.0, 13.3, 11.9

Old for grade

- Elementary School: 44.0, 27.5, 23.1
- Middle School: 46.6, 27.3, 22.5
- High School: 47.3, 29.1, 23.2

Legend:
- CFST Students
- Non-CFST Students in CFST schools
- NC Students

Source: Authors' tabulations of the CFST case management system, North Carolina Education Research Data Center Data, North Carolina Division of Social Services, and North Carolina Department of Juvenile Justice

*Students whose only exceptionality was gifted were not counted as exceptional.

IV. Outcomes for Students Served by the CFST Program

The CFST program is an innovation that aims to empower students and families by giving them a voice in decisions related to service delivery. By partnering with students and families to develop a plan that addresses the unique needs of each student, the hope is that improved academic outcomes will be achieved. This section of the report examines three outcomes for students who have been served by the CFST program from 2006-2007 through 2009-2010.

- Math scores for 3rd-8th graders
- Reading scores for 3rd-8th graders
- Number of days absent for 3rd-12th graders

Methods

To examine whether the CFST program improved outcomes for youth who are served, we used a differencing approach that examines variation within each student over time. There are three outcome measures which are particularly well suited for this analysis because the North Carolina Department of Public Instruction collects information on the same measure each year. They are end-of-grade math scores, end-of-grade reading scores and number of days absent.

Data and Measures

The main source of information for these analysis come from the NC-ERDC which contains information on all students in 3rd-12th grade public schools. These data were linked to data from the CFST Case Management System which collects information on youth who are served by the CFST program. The NC-ERDC data were also linked to data from the Division of Social Services for information related to whether the youth were placed out-of-home and linked to the Department of Juvenile Justice regarding whether a student had a complaint filed.

The sample for this analysis includes all students who had a team meeting anytime from 2006-2007 through 2009-2010. For each of these students, we pulled all available records from the 2004-2005 through the 2009-2010 school-year (the most recently available school year). The 2004-2005 school year is the first year in which data from the juvenile justice department is available for evaluation.

The key outcome measures are math scores, reading scores and days absent.   Because the North Carolina test changes from year to year, test scores were standardized by grade and year.   This makes year-to-year comparison of scores possible.   Across all students, the number of days that a student is absent has a distribution that is skewed right, with most students missing zero or a few days but a few students missing a large number of days. Therefore, we used a log transformation, a mathematical tool used to normalize this variable.

The model includes several variables related to the timing of the intervention.   The variable "received CFST this year" is a binary variable that indicates a year in which a student had a team meeting.   The causal interpretation of this coefficient is difficult because the value of the variable is both an outcome and a reason that the student is referred.   For example, since the CFST program works with students who are observed as having a risk factor for academic issues, students may be referred to the program for an issue directly related to the outcome.   For example, a student who has been absent for 10 days may be referred to the CFST program and have a team meeting related to this issue. Therefore, having a team meeting during a given year maybe endogenous (i.e., directly cause) with the outcome.   The second variable of interest is "years following the CFST initiative."   This variable allows for the comparison of the student's outcomes in years following the intervention relative to that same student's outcomes during the first team meeting and prior years.

The model includes student fixed effects, which controls for all time invariant student characteristics such as gender, race/ethnicity and even time invariant characteristics that are hard to observe such as family characteristics.   School district fixed effects are also included to control for regional variation.

Time varying characteristics that are included in the models are: students' free and reduced lunch status, whether or not the child is receiving special education services, grade-level, currently in foster care and had a juvenile justice complaint.

Time varying school characteristics related to achievement were also included.   For our analysis of math and reading scores, we included school-level variables that described the percentage of students at grade level in math and in reading.   Since these variables are not relevant for high schools, we did not include these variables in our analysis of days absent. The model also included one-year teacher turnover rate, the percentage of teachers with 0-3 years teaching experience, the percentage of students who are Black and the percentage of students who are Hispanic.

Results

The results of the models are in Table 13.   For both reading and math, the coefficients of our intervention variables are not statistically significant at the p=.05 level.   However, the intervention variables are statistically significant for the number of days absent.   Students from the CFST program are more likely to be absent in the year in which they have their first team meeting but miss fewer days in the years following the team meeting.

Time varying student characteristics also affected the outcomes we examined.   As grade-level increases, youth tend to have lower end-of-grade reading and math scores and miss more days of school.   In years during which a student is in special education, he or she tends to do better on the end-of-grade math test but also to miss more days of school.   In years in which a student is in foster care, he or she misses fewer days of school.   In years in which a student is involved with the juvenile justice system, he or she is more likely to have lower performance on the end-of-grade reading test and math test and to miss more days of school.   Students tend to perform better on the end-of-grade math and reading tests in the year in which they are repeating a grade; however, they are also more likely to miss more days of school.

Time varying school characteristics also affected end-of-grade scores and the number of days absent.   Students tend to perform better on the end-of-grade reading test when they are in schools where a higher percentage of students are at grade-level in reading and math.   Similarly, students tend to perform better on the end-of-grade math test when they are in schools where a higher percentage of students are at grade-level in math.   A higher teacher turnover rate is associated with lower student reading and math scores and more days absent.   A higher percentage of teachers with 0-3 years experience is related to additional days absent.   Students tended to have better reading scores, better math scores and fewer days absent when they attended schools with a higher percentage of Black students.   Similarly a higher percentage of Hispanic students was associated with better reading and math scores.

Table 13. Regression results for reading, math and attendance.

	Student Reading Scores		Student Math Scores		Log Days Absent	
	Beta	p-value	Beta	p-value	Beta	p-value
Intervention						
Received CFST this year(reference=did not have team meeting this year)	0.012	0.343	-0.010	0.401	0.241*	0.000
Years that are after CFST intervention (reference=year of and prior to having a team meetings)	0.020	0.315	-0.003	0.883	-0.101*	0.000
Student Characteristics						
Free and Reduced lunch status	0.012	0.539	0.035	0.066	0.027	0.174
In Special Education	-0.002	0.955	0.070*	0.005	0.062*	0.048
Grade-level	-0.043*	0.000	-0.047*	0.000	0.134*	0.000
In foster this year	0.028	0.578	0.090	0.124	-0.344*	0.000
Had a juvenile complaint this year	-0.135*	0.000	-0.102*	0.000	0.355*	0.000
Currently repeating grade	0.210*	0.000	0.224*	0.000	0.124*	0.000
School-level variables						
% at grade level in reading	0.106*	0.005	-0.005	0.893		
% at grade level in math	0.277*	0.000	0.493*	0.000		
1 year teacher turnover rate	-0.243*	0.001	-0.132*	0.041	0.194*	0.012
Teachers with 0-3 years experience	-0.036	0.577	-0.022	0.712	0.150*	0.048
% of students that are Black	0.147*	0.012	0.126*	0.020	-0.339*	0.000
% of students that are Hispanic	0.324*	0.000	0.374*	0.000	-0.075	0.526
Number of students	5,213		5,239		9,680	
The model also controls for school district and student fixed effects with robust standard errors *p<.05						

Discussion

The findings displayed in Table 13 suggest that the CFST initiative may help improve student attendance.   The limitation of this analysis is the lack of an additional control group.   While this analysis shows that students miss fewer days following the CFST program, it is not known if the observed change would have occurred in the absence of the intervention.   The fact that students tend to have more absences in the year that they have a team meeting is likely attributable to the fact that students who frequently miss school are often referred to the program.   In years following the CFST intervention, students have fewer absences than in previous years.   This finding is particularly interesting because older students are more likely to miss days of schools.   Therefore, the effect of the CFST program on preventing days absent is fighting against a trend whereby students would be more likely to miss days in the future.   The effect represents about one fewer day absent per student served by the CFST program.

The CFST initiative has team meetings and develops a service plan for the family and student but is not primarily responsible for providing services.   As a supplemental analysis, we examined whether students who were referred to tutoring services have improved academic outcomes.   There were 1,533 instances where students were referred to tutoring.   When the same model as described above had a variable for "student referred to tutoring" added to the model, this variable had a statistically significant and positive effect on end of grade scores for reading (b=0.062, p<.007) and math (b=0.078, p<.001). This demonstrates that if the CFST program can help students and families access the appropriate services then gains in the right areas can be realized.

Attachment 1

Timeline of Major Events in the CFST Project

This section provides a brief timeline of major events surrounding the CFST Initiative.

- August 11, 2005 – CFST Authorizing Legislation ratified as part of the 2005 Appropriations Bill (Section 6.24.(a).
- September 2005 – Interagency workgroup formed and met to develop program functioning and select the participating school systems.
- November 29, 2005 – 33 school districts were invited to apply to become a pilot site for the CFST program.
- January 2006 – 21 school districts were selected to receive funding.
- March 2006 – the 21 selected school systems received authorization to begin hiring nurses and social workers.
- March 2006 – the State's CFST Program Development Coordinator was hired and began to coordinate CFST efforts statewide.
- June 30, 2006 – the CFST program connected county Departments of Social Services and Local Management Entities and received state allocations to partially fund required services in support of the school nurses and social workers.
- August 2006 – each of the school districts had hired nurses and social workers and reported being fully staffed.
- March 2007 – Case management system version 1.0 went online.
- July 2009 – CFST State allocations to fund the nurses' and social workers' salary and fringe benefits were reduced approximately 10 percent.
- August 2009 – Case management system version 2.0 went online.
- July 2010 – CFST State allocations to fund the nurses' and social workers' salary and fringe benefits were reduced approximately 21 percent.   This reduced the number of CFST-funded nurse-social worker positions from 100 to 79.

Attachment 2
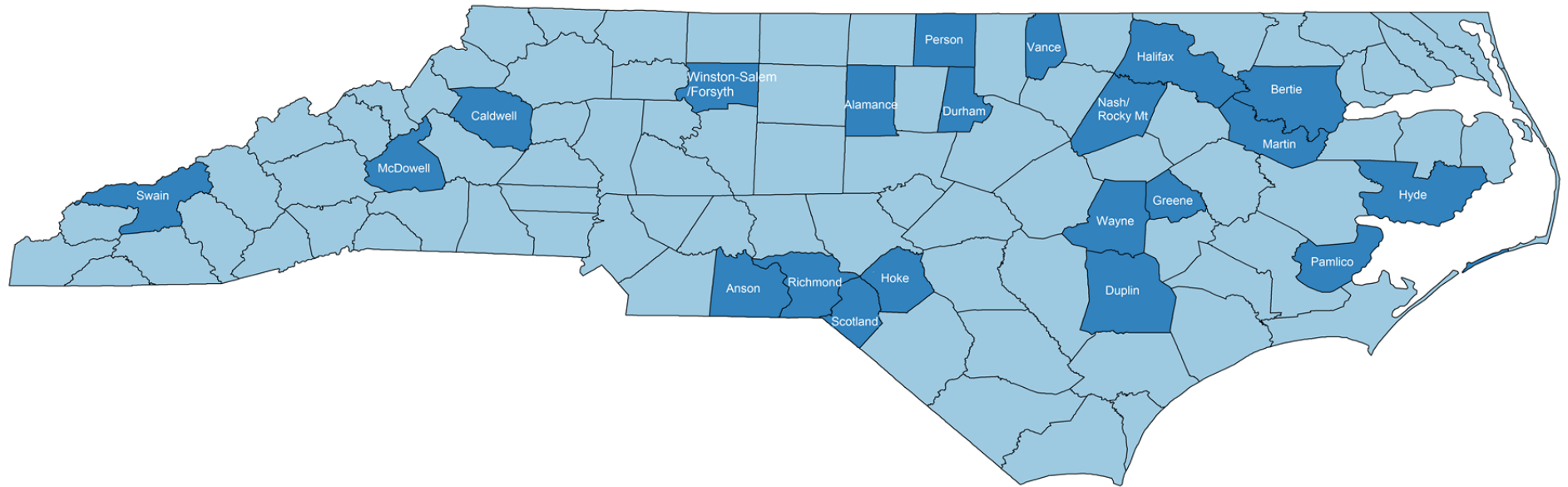
In 2011- 2012, the CFST program was in 86 schools in 21 school districts across the state.