Evaluation Brief

Implementation of the Collaborative Action Process (CAP) 2006–2007: Problem-solving Process

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The Department of Shared Accountability (DSA) is conducting an evaluation of the Collaborative Action Process (CAP) with a focus on the extent to which schools are implementing CAP as designed. This brief, the first in a series of four, focuses on evaluation of the CAP problem-solving process and related procedures.

Background

The Montgomery County Public Schools (MCPS) developed CAP to provide an improved service delivery model and to impact overrepresentation of certain student groups in special education (Weast, 2005). CAP is a problem-solving framework that seeks to resolve student difficulties within general education through the application of evidence-based interventions and systematic monitoring of student progress. Student response to these interventions is the major determinant of the need for special education referral, evaluation, and service. CAP was designed to modernize the Educational Management Team (EMT) process that often was used too late for interventions to be successful. CAP can target academic or behavioral concerns with any individual student or group of students and is open to all teachers. The key component of CAP is the problem-solving process, which involves four steps: problem identification, problem analysis, intervention planning and implementation, and monitoring and evaluation.

As of fall 2006, 61 schools were signed up to use CAP. To implement CAP, a school organizes teams by grade level or subject area with a coach for each team, creates a building-level team, and identifies a facilitator as the key CAP coordinator within the school. District-level CAP consultants support implementation in schools.

The evaluation uses a multi-method data collection strategy to address the following questions:
1. What is the current level of implementation in terms of agreement between proposed components and implemented components?
2. How consistent is the level of implementation across CAP teams or schools?
3. What challenges with implementation have staff members experienced?
4. What improvements or best practices for implementation have staff members suggested?

Summary of Methodology

A sample of 30 schools was selected for data collection activities. To assess implementation of the problem-solving process, 112 CAP teams (75% of all teams) submitted documents representing the team's best case (defined as one of the team's most fully implemented cases). Each set of CAP case documents was analyzed using rubrics for ten criteria of the problem-solving process. Information on problem-solving procedures, challenges, and best practices was collected through interviews and surveys. The school administrator responsible for CAP at each school, typically the principal, was interviewed in person. CAP facilitators from 28 schools (93% of the sample), 107 CAP coaches (66% of sampled coaches), and 403 teachers or other school-based staff (48% of sampled teachers and CAP team members) completed online surveys.

Summary of Findings

The first finding addressed the current level of implementation which was classified as full, partial, or low (low included no implementation). Overall, implementation of the CAP problem-solving process and the procedures related to this process was partial.

The second finding addressed consistency of implementation. Overall, implementation was not consistent. Specifically, the problem-solving process was not consistently implemented across CAP teams. Likewise, for three of the four procedures related to problem-solving, implementation was inconsistent across schools (and unclear to at least a quarter of the respondents).

The most commonly mentioned challenge to implementing the CAP problem-solving process was the time needed to make it work. The most common suggestions for improvement were more support and training. Recommendations from the evaluation include refresher training for veteran schools, supports on three criteria of the problem-solving process, and creating clear criteria for the following procedures: referring cases to the building-level team, referring students to special education screening, and referring students to screening for other services.

Detailed Methodology

As of September 2006, 61 schools had signed up to implement CAP—47 elementary schools, 10 middle schools, and 4 high schools. A sample of these schools was selected for data collection. Initially, all high schools were included in the sample because there were only four. For elementary and middle schools, the statistical technique of cluster analysis was used to form five groups of similar schools based on the following building-level variables of particular relevance for CAP:

- Number of years implementing CAP
- Student enrollment, 2005–2006
- Combined percentage of African American and Hispanic students, 2005–2006
- Percentage of students receiving special education services, 2005–2006
- Suspension percentage, 2005–2006

Half of the schools in each of the groups formed by the cluster analysis were randomly chosen. Any schools with members serving on the CAP evaluation advisory group were excluded. The final sample of 30 schools included 22 elementary, 5 middle, and 3 high schools. (See list in Appendix A.)

All evaluation data were collected during April, May, and June 2007. To address the evaluation questions, the following three data sources were used: interviews, surveys, and case documents.

The first data source was in-person interviews with the school administrator primarily responsible for CAP at each school in the sample. A semi-structured protocol was used; interviews lasted 45 to 60 minutes. A total of 29 interviews, including 25 with principals and 4 with assistant principals, were completed.

The second data source was online surveys. Surveys were developed for each of the three following groups: CAP facilitators, CAP coaches, and teachers plus other school-based staff on CAP teams. Links to the surveys were provided via e-mail to each CAP facilitator who distributed the links to other staff within the school. Multiple reminders were sent via e-mail to facilitators whose school response rates were below 50%.

The third data source was CAP case documents. Each CAP team was asked to submit all documents related to their best case. Teams had sole discretion over the selection of their case. As recommended in the literature, the "best case" strategy was employed to incorporate some standardization of the case documentation submitted by providing a common criterion for selection (Telzrow, McNamara, & Hollinger, 2000).

Teams from 26 schools submitted a total of 112 cases. Ratings of implementation fidelity were derived from

analysis of these actual work products using a rubric—a scoring tool for subjective assessments. A previous evaluation used CAP experts to develop and pilot the rubric used (Wilson, 2006). The rubric included 10 criteria for the CAP problem-solving process and 5 implementation levels for each criterion.

To clarify the rubric for consistent coding, four DSA evaluators independently coded five CAP cases and discussed coding differences. Each remaining case was coded for 10 criteria (see descriptions in Table 1), using the final rubric (Appendix B). To check reliability, 54 cases were coded independently by a second evaluator. If the coders' ratings differed by one point, the final value was calculated as the mean of the two values. Any difference of two or more points was resolved by discussion. The resulting inter-rater reliability of 84% (i.e., exact agreement or agreement within one point) was acceptable.

Table 1
Descriptions of the CAP Problem-solving Process Criteria by Number

	Description
1.	Problem definition is measurable, observable & prioritized (if multiple)
2.	Student's current performance specified and data used to justify concern
3.	Evidence that team considered all factors that influence student progress
4.	Specific goals set *(time frame, condition, behavior, criteria)*
5.	Evidence of direct link between analysis and intervention
6.	Intervention clearly specified (strategies, materials, when, where, how often, persons responsible)
7.	Intervention plan monitored (graphs/charts, consistently)
8.	Student progress was monitored consistently over time
9.	Direct comparison of student's post intervention performance with baseline data
10.	Decision to continue, modify, or terminate intervention made based on data

For each criterion, a value of 5 or 4.5 (which reflected a rating of 5 from one coder and 4 from the second coder for twice-coded cases) indicated full implementation. A value of 4 or 3.5 (due to a rating of 4 from one coder and 3 from the second coder) indicated partial implementation. A value of 3 or less represented low implementation, including no implementation.

Detailed Findings

During data collection, it was learned that one school had not implemented CAP. Therefore, the following findings are based on 29 schools.

Problem-solving Process

To assess implementation of the problem-solving process, results from coding the CAP case documents were used.

Level of implementation. The median value for each code was used to identify the "average" level of implementation. The median level of implementation was less than full for almost all criteria of the problem-solving process (Table 2). The median level was partial for criteria 1, 2, 5, 6, and 9 and low for criteria 3, 4, 7, and 10. The median level was full only for criterion 8, monitoring student progress.

Table 2
Median Value and Level of Implementation of the
CAP Problem-solving Process by Criterion (*N*=112)

Criteria	Median value[1]	Level of implementation
1. Problem identification	4.0	Partial
2. Baseline data	4.0	Partial
3. Factors analyzed	3.0	Low
4. Specific goals set	2.5	Low
5. Intervention alignment	4.0	Partial
6. Intervention specified	4.0	Partial
7. Intervention monitored	1.5	Low
8. Progress monitored	4.5	Full
9. Pre- and postcomparison	4.0	Partial
10. Decision on intervention based on data	2.0	Low

[1]Median=level at which half the values are above it and half below it.

Consistency of implementation. For most criteria, the level of implementation varied across teams (Table 3). Criteria 1, 2, 5, and 9 had the most variation; at least 20% of cases were at each of the three levels of implementation. Criteria 6, 8, and 10 had a moderate amount of variation; the level of implementation was in one of two levels, full or low, for almost all teams.

The level of implementation was consistent only for criteria 3, 4, and 7. At least 70% of teams had the same level of implementation, which was low, for each of these three criteria (Table 3).

Table 3
Levels of Implementation of the CAP Problem-solving
Process by Criterion (*N*=112)

Criterion	Full (4.5–5) %	Partial (3.5–4) %	Low (1–3) %
1. Problem identification	23.2	55.4	21.4
2. Baseline data	33.9	40.2	25.9
3. Factors analyzed	15.2	15.2	69.6
4. Specific goals set	8.0	2.7	89.3
5. Intervention alignment	36.6	36.6	26.8
6. Intervention specified	41.1	11.6	47.3
7. Intervention monitored	8.9	5.4	85.7
8. Progress monitored	50.0	5.4	44.6
9. Pre- and postcomparison	22.3	31.3	46.4
10. Decision on intervention based on data	37.5	2.7	59.8

Problem-solving Procedures

The level and consistency of implementation for problem-solving procedures were based on self-reports from the administrator interviews and online staff surveys. The level of implementation was classified as full, partial, or low (including no implementation).

Accessing the problem-solving process. The level of implementation of a clearly articulated, schoolwide procedure for accessing CAP at the grade or team level was full for two thirds of the sample; 19 administrators (66%) reported that their school had such a procedure. This full implementation was supported by written documentation at 13 schools (45% of total sample) or by verbal descriptions at 6 schools (21% of total sample). Implementation was partial in six schools (21%), where the administrators described a procedure that was not clearly articulated or was still in development. Finally, implementation was low at the remaining four schools (14%) where administrators reported that the procedure did not exist. Because the level of implementation was the same (i.e., full) at two thirds of the schools, implementation of this procedure was considered consistent across schools.

However, even though CAP was introduced to replace the EMT process, the EMT process was still used in about a quarter of the schools. Administrators at seven schools (24%) indicated that the EMT process was used for new cases and at one school (3%) to finish existing cases.

Referring cases to the building-level team. Both the administrator and coaches were asked to report on the level of implementation of a schoolwide procedure for determining when to move a CAP case to the building-level team. Because they lead grade- or subject-level teams, coaches were expected to be familiar with this procedure. However, about a fifth of the coaches (22%) replied with "don't know" or did not respond. Further, for about half of the sample (14 schools, 48%), there was no clear agreement within the school among all staff members that did respond. For these schools, the level of implementation was judged as partial and inconsistent across schools. In 15 schools, all or a majority of staff who responded did agree on the level of implementation. It was full at 11 schools (38% of the entire sample) and partial (i.e., in development) at 4 schools (14%). Overall, the level of implementation for this procedure was not consistent across schools.

Referring cases to additional services. Both the facilitators and coaches were asked to report on their school's level of implementation with respect to criteria for determining when a case's needs exceed the resources of CAP and the student(s) should be referred to screening for special education services. However, about a quarter of the coaches (28%) and a tenth of the facilitators (10%) replied with "don't know" or did not respond. Further, in eight schools (28%), there was no

agreement among staff who did respond; therefore, the level of implementation was classified as partial. At one school, all staff members replied with "don't know." In the remaining 20 schools, all or a majority of staff who did respond did agree on the level of implementation. There was full implementation in nine schools (31% of the entire sample) where criteria for referring cases for special education screening existed. The level of implementation was partial at seven schools (24%), where the criteria for the procedure were in development, and low at four schools (14%), where criteria did not exist. Overall, the level of implementation for this procedure was not consistent across schools.

Both the facilitators and coaches also were asked to report the level of implementation at their school with respect to criteria for determining when a case's needs exceed the resources of CAP and a student should be referred to screening for other services such as crisis services, other mental health services, or Linkages to Learning. About a third of the coaches (34%) and a tenth of the facilitators (10%) replied with "don't know" or did not respond. At one school, all staff members replied with "don't know." Among staff who did respond, all or a majority agreed on the level of implementation in 20 schools. The level of implementation was full in 10 schools (34% of the entire sample), partial at four schools (14%), and low at six schools (21%), where criteria did not exist. For the remaining eight schools (28%), there was no clear agreement among respondents; therefore, the level of implementation was classified as partial. Overall, the level of implementation for this procedure was not consistent across schools.

Challenges and Suggestions for Improvement

Relatively few respondents provided information on challenges, best practices, or improvements related to the problem-solving process. Although half of the administrators (15 or 52%) made such comments, response rates were lower for the other groups: 7 facilitators (18%), 30 coaches (28%), and 41 teachers (10%).

Challenges. Across all respondents who did provide comments, the most commonly mentioned challenge to implementing the problem-solving process was the amount of time needed to make it work. Out of the 93 staff members who commented, two-thirds (62 staff, 67%) mentioned time and problems such as too much discussion, too much time between meetings, too much paperwork, and too many other demands. For instance, one teacher noted: "I think the CAP process does not work fast enough for children that need a quick intervention. It seems to me the process is too slow and the demands for using strategies are left up to the teacher as opposed to the specialists."

CAP coaches and CAP facilitators also agreed that time is a major issue, as per the following quote from a facilitator: "It takes at least 2 or 3 times meeting with teachers to go through all the steps well, unless the problem is easily and quickly identifiable and measurable." According to several respondents, the burdens of time and paperwork discourage teachers from using CAP and result in students not getting help.

Some administrators noted the challenge of getting all team members, especially the psychologist and pupil personnel worker (PPW), together for meetings. Several respondents asked for criteria on when to stop using CAP and move on to another process.

Suggestions for improvement. The most common suggestion was the need for more training or support, as expressed by about a third (34%) of those who made comments. There were several statements related to the need for *everyone* to have training (i.e., staff who are new to the school, all staff in the school, schools that are new to CAP). Given the complexity of CAP, several respondents suggested regular refreshment of skills. As one CAP coach said: "The first meeting of the year with the team [should be] going over what the four step process is and involves." A couple of staff members suggested going through all the steps using a real case. There was a request that coaches be allowed to attend the facilitators' meetings.

Some respondents lacked basic information, such as the purpose of CAP and the steps involved. Others were confused about what were the latest revisions to CAP, whether CAP replaced the need for functional behavioral assessment or behavior intervention plan (BIP), and why their school had a requirement for a minimum number of cases. Other requests for training on the problem-solving process related to specific challenges, as follows:

- How to reflect on teaching practices
- How to choose one specific problem
- How to move from factors to interventions
- How to move through the steps

Not surprisingly, many suggestions matched the concerns about the time demands of the problem-solving process. As one principal put it, at a school with a large number of CAP cases, "consider that highly impacted schools may need to move more quickly past CAP to a more urgent process."

One way to control the timing of the process, according to one principal, is to address issues before a case escalates: "We try to have ESOL [English for Speakers of Other Languages teachers], PPW, the psychologist, and others provide insight long before we get to a meeting." One teacher stressed that keeping very careful records helped to keep the process moving. A facilitator stressed sticking to the

monitoring window of four to six weeks to get data to show progress or lack thereof.

One principal talked about the strength of the CAP process in helping multiple students as a best practice. "An example is second grade reading comprehension. We devised an intervention we call The Power of Three—three teachers working in the room together."

Other suggestions and best practices for the problem solving process were very specific, as follows:
- Focus on problem analysis
- Use a calendar when doing a BIP
- Focus more on monitoring and evaluation

Conclusions

This brief focused on implementation of the CAP problem-solving process and related procedures. The first evaluation question addressed the current level of implementation, in terms of agreement between the proposed components and the implemented components. Overall, the most frequent level of implementation was partial (Table 4).

Table 4
Summary of Level of Implementation for Problem-solving Process Criteria and Procedures

	Full	Partial	Low
Problem-solving process criteria			
1, 2, 5, 6, 9		X	
3, 4, 7, 10			X
8	X		
Problem-solving procedures			
Accessing grade/subject-level team	X		
Referrals to building-level team		X	
Referrals to special education screening		X	
Referrals to screening for other services		X	

The second evaluation question focused on the consistency of the level of implementation across CAP teams or schools. Overall, the level of implementation of the CAP problem-solving process and procedures was not consistent. For 7 of 10 criteria for the problem-solving procedure, the level of implementation was not consistent across CAP teams. For the three procedures related to referrals, the level of implementation was typically partial. However, respondents disagreed about the level of implementation in at least a quarter of the schools and at least a quarter of the respondents did not describe the level of implementation. Therefore, it was concluded that the level of implementation was not consistent across schools.

The third evaluation question focused on the implementation challenges for school staff. The most commonly mentioned challenge was the amount of time needed to make the problem-solving process work.

The final question addressed staff members' suggestions for improvements or best practices for implementation. The most common suggestions for improvement were more support and training.

Strengths and Limitations

In interpreting the results, it is important to understand the methodology's strengths and limitations. The CAP cases used to evaluate implementation were not representative. These cases may be better than average because each team selected its best case. Nonetheless, the cases may not reflect the true process, because teams did not create the documents for the purpose of the DSA evaluation. For that reason, when coding the cases, evaluators gave the best interpretation possible to the information. However, using actual work products is a more reliable method than self-reports and more feasible than observations for a large-scale evaluation.

The use of multiple staff members to report on implementation is a strength of the methodology because convergence between informants increases the reliability of the results. With respect to the level of implementation of problem-solving procedures, the online surveys did not distinguish between procedures with or without written documentation. It is possible that some respondents described those without documentation as in development, but others did not.

Recommendations

Recommendations for improving the implementation of the CAP problem-solving process are to:
- Share the best practices identified above by respondents.
- Develop training modules to refresh skills and knowledge of staff at veteran schools implementing CAP. Develop material that uses a true case to go through all the steps in the problem-solving process.
- Develop documentation, training modules, practice materials, or all three to raise implementation of criteria 3 (factor analysis), 4 (goal setting), 7 (intervention monitoring), and 10 (intervention decision based on data). At least 60% of teams had low implementation for each of these criteria, which clearly demonstrates the need for more supports.
- In the monthly coaching support meetings, address the more specific requests for clarification and training identified above. Encourage coaches and facilitators to attend.
- Develop and share clear criteria for referring grade/team level cases to the building-level team, referring students to special education screening,

and referring students to screening for other services such as crisis or mental health resources.

Next Step

The problem-solving process is the heart of CAP and skilled implementation of the process is the key to meaningful interventions that promote student success. The findings of less than full implementation and inconsistent implementation of this process are of concern and warrant further analysis of evaluation data, as follows. Future evaluation briefs will focus on the implementation of two other components of CAP (i.e., infrastructure/management and professional development) and the analysis of factors (e.g., district support, perceptions of CAP) that may explain variations in the level of implementation.

References

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Weast, J. D. (2005). *Update on the Collaborative Action Process (CAP).* Memorandum to the Board of Education, July 27, 2005. Montgomery County Public Schools, Rockville, MD.

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Appendixes

Appendix A

Sample Schools for CAP Evaluation 2006–2007

A. Mario Loiederman Middle School
Bel Pre Elementary School
Benjamin Banneker Middle School
Burnt Mills Elementary School
Cashell Elementary School
Diamond Elementary School
Dr. Charles R. Drew Elementary School
Forest Oak Middle School
Gaithersburg High School
Germantown Elementary School
Goshen Elementary School
Harmony Hills Elementary School
Lakewood Elementary School
Laytonsville Elementary School
Col. Zadok Magruder High School
Maryvale Elementary School
Spark M. Matsunaga Elementary School
Meadow Hall Elementary School
Oakland Terrace Elementary School
Poolesville Elementary School
Redland Middle School
Judith A. Resnik Elementary School
Rosemont Elementary School
Shady Grove Middle School
Strathmore Elementary School
Strawberry Knoll Elementary School
Takoma Park Elementary School
Weller Road Elementary School
Wheaton High School
Woodlin Elementary School

Appendix B

CAP Case Review Rubric

Case Review Item	5	4	3	2	1
1. Evidence of problem identification (prioritization of concern and observable/measurable terms)	Definition is a) **measurable –** frequency, duration given b) **observable/clear** – unambiguous, specific, could be read and repeated by observers c) problems **prioritized,** if multiple problems	Definition is between 3 and 5, in terms of specificity.	Problem is stated in general terms as identified area of concern (e.g., reading, attention, aggressive behavior)	Problem written but unclear what concern is	Problem; behavioral definition not written
2. Baseline data: Student's current performance (academic or behavioral) specified and data used to justify concern	**Three or more direct** measures of student behavior/academic performance reported in the setting where it is perceived to be problematic (e.g., three baseline probes in reading)	**One or two direct** measure of student behavior/ academic performance reported in the setting where it is perceived to be problematic (e.g., one or two baseline probes in reading)	Data collected doesn't justify concern or align with problem identified. (e.g., used CBA or error analysis but doesn't lead to specific problem identify).	Indirect measures of student's behavior/ academic performance are provided (standardized tests – CTBS, MAP-R, etc.)	Estimates or general descriptive info about student's baseline data (teacher may say below level)
3. Evidence that team considered factors that influence student progress (See specific factors from list)	A thorough analysis of **all five** factors related to the problem: • Curricular, instructional • Teacher, teaching • Environment, classroom, peers • Home, community • Student	Analysis of four factors OR analysis of five factors but not in depth.	Analysis of student, plus one or two other factors.	Limited to analysis of student characteristics (learner) only.	Interventions are designed without consideration of factors related to the concern; no factors given as reason for concern

Case Review Item	5	4	3	2	1
4. Specific goals set (time frame, condition, behavior, criteria)	Goal stated **narratively and represented graphically** on chart specifying time frame, condition, behavior, criterion on intervention sheet.	Goal represented **graphically** specifying time frame, behavior, condition, criterion-**not stated narratively**.	Goal stated **narratively** with all of the following: time frame, behavior, criterion and condition. But Goal **not graphically** represented	Goal stated **narratively** but missing at least one of the following: time frame, condition, behavior, criterion.	No specific goal or objective is identified
5. Evidence of direct LINK between analysis and intervention **(Hint: Start with #3)**	Intervention aligned with all of the following: • Baseline data • Hypothesis • Goal	Intervention aligned with two of the following: • Baseline data • Hypothesis • Goal	Intervention aligned with one of the following: • Baseline data • Hypothesis • Goal	Evidence of analysis but did not link to intervention (e.g., homework club but issue is reading).	No evidence
6. Evidence the intervention clearly specified (observable, measurable)	Plan described with specific procedures/ strategies and all of the following are present: • materials • when • where • how often • persons responsible	Plan described with specific procedures/ strategies, but one of the following are missing: • materials • when • where • how often • persons responsible	Plan described with specific procedures/ strategies, but two of the following are missing: • materials • when • where • how often • persons responsible	Generic description of intervention strategy (e.g. behavior contract) stated. Plus at least one of the following: • materials • when • where • how often • persons responsible	Intervention plan NOT written. OR Generic descriptions of intervention (e.g., behavior contract) only.

Case Review Item	5	4	3	2	1
7. Evidence the *intervention plan* was monitored (graphs, frequency chart, other documents).	Data on implementation of intervention are collected and charted/graphed consistently (e.g., 1 time per week).	Data on implementation of intervention are collected and charted/graphed irregularly and inconsistently.	Some quantifiable data on implementation of intervention but not charted or graphed	Appears to be a response to the intervention but no evidence of data.	Not monitored
8. *Student progress* was monitored consistently over time.	Four or more data points, after the baseline, used.	Three data points, after the baseline, used	Two data points, after the baseline, used.	One data point, after the baseline, used.	No progress on monitoring.
9. Direct comparison of the student's post intervention performance with baseline data.	Direct comparison of the student's performance at the end of the intervention period with baseline data.	Baseline data and data at the end of the intervention period available. Analysis not explicit.	Some intervention data available, but either baseline data or data at the end of the intervention period are missing.	Baseline data. No data after the intervention.	No evidence.
10. Decision to continue, modify, or terminate the intervention made based on data?	Decision to continue, modify, or terminate the intervention made. Based on analysis of data.	Decision to continue, modify, or terminate the intervention made. Had data but didn't inform the decision.	Decision to continue, modify, or terminate the intervention made. Decision based on subjective report.	Decision to continue, modify, or terminate the intervention made. No indication of what data used.	No decision to continue, modify, or terminate the intervention made.