

DEPARTMENT OF HEALTH CARE POLICY &
FINANCING AND DEPARTMENT OF HUMAN SERVICES
Office Of The COLORADO BENEFITS MANAGEMENT SYSTEM

Report on Controls Placed in Operation and Tests of Operating Effectiveness

Period from January 1, 2005 through June 30, 2005



**STATE OF COLORADO
LEGISLATIVE AUDIT COMMITTEE
2006 MEMBERS**

Senator Jack Taylor
Chair

Senator Stephanie Takis
Vice-Chair

Representative Fran Coleman
Senator Jim Isgar
Representative David Schultheis
Senator Nancy Spence
Representative Val Vigil
Representative Al White

OFFICE OF THE COLORADO STATE AUDITOR

Joanne Hill
State Auditor

Sally Symanski
Deputy State Auditor

Kerri Hunter
Mike Henthorn
Legislative Auditors

BKD, LLP

Rob MaCoy
Wendy Henry
Rodney Walsh

**COLORADO DEPARTMENT OF HEALTH CARE POLICY &
FINANCING AND DEPARTMENT OF HUMAN SERVICES
Office of the COLORADO BENEFITS MANAGEMENT SYSTEM**

Report on Controls Placed in Operation and
Tests of Operating Effectiveness

Table of Contents

Section	Page
I. Independent Service Auditor’s Report.....	1
II. Report Summary	2
Authority, Standards, and Purpose/Scope of Audit	3
Summary of Audit Comments	4
III. Recommendation Locator	6
IV. Information Provided by Colorado Benefits Management System	8
V. Information Provided by the Service Auditor	43
Findings and Recommendations.....	44
Control Objectives, Control Activities, Tests of Operating Effectiveness and Results of Tests	60
Figure 1 – CBMS Strategic Plan.....	61
Figure 2 - CBMS Organization and Relationships	63
Figure 3 – Manage Human Resources	67
Figure 4 – Define the Information Architecture	68
Figure 5 – Communicate Management Plan, Goals and Direction.....	69
Figure 6 – Assess Risks	70
Figure 7 – Manage Facilities	72
Figure 8 – Ensure Compliance with External Requirements.....	74
Figure 9 – Manage Quality	76
Figure 10 – Acquire or Develop Application Software	78
Figure 11 – Acquire Technology Infrastructure	80

Figure 12 – Develop and Maintain Policies and Procedures	81
Figure 13 – Install and Test Application Software and Technology Infrastructure.....	82
Figure 14 – Manage Changes	86
Figure 15 – Define and Manage Service Levels.....	89
Figure 16 – Manage Third-party Services	90
Figure 17 – Enhance System Security	92
Figure 18 – Manage the Configuration.....	100
Figure 19 – Manage Problems and Incidents.....	103
Figure 20 – Manage Data.....	105
Figure 21 – Manage Operations.....	107
Figure 22 – Help Desk Operations	111
Figure 23 – CBMS Training Operation	114
Figure 24 – CBMS Reports	116
VI. User Control Considerations	118
Distribution Page.....	122

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Section I
Independent Service Auditor's Report**

Independent Service Auditor's Report

To Members of the State of Colorado State Legislative Audit Committee

We have examined the accompanying description of controls provided by the Office of CBMS, the Department of Health Care Policy and Financing (HCPF) and the Department of Human Services (DHS) relative to the Colorado Benefits Management System (CBMS). Our examination included procedures to obtain reasonable assurance about whether (1) the accompanying description presents fairly, in all material respects, the aspects of CBMS's controls that may be relevant to a user organization's internal control structure; (2) the controls included in the description were suitably designed to achieve the control objectives specified in the description, if those controls were complied with satisfactorily and user organizations applied the controls contemplated in the design of CBMS's controls; and (3) such controls had been placed in operation as of June 30, 2005. The control objectives were specified by the management of the Office of CBMS, HCPF and DHS. Our examination was performed in accordance with the standards established by the American Institute of Certified Public Accountants and included those procedures we considered necessary in the circumstances to obtain a reasonable basis for rendering our opinion.

In our opinion, the accompanying description of the CBMS controls presents fairly, in all material respects, the relevant aspects of CBMS's controls that had been placed in operation as of June 30, 2005. Also, in our opinion, the controls, as described, are suitably designed to provide reasonable assurance that the specified control objectives would be achieved if the described controls were complied with satisfactorily and user organizations applied the controls contemplated in the design of CBMS's controls.

In addition to the procedures we considered necessary to render our opinion as expressed in the previous paragraph, we applied tests to specific controls listed in Section V of this report, to obtain evidence about their effectiveness in meeting the related control objectives, described in the Control Objectives Matrices of Section V, during the period from January 1, 2005 to June 30, 2005. The specific controls and the nature, timing, extent and results of the tests are listed in the Control Objective Matrices of Section V. This information has been provided to user organizations of CBMS and to their auditors to be taken into consideration, along with the information about the internal control of user organizations, when making assessments of control risk for user organizations. In our opinion the controls that were tested, as described in the Control Objective Matrices of Section V, were operating with sufficient effectiveness to provide reasonable, but not absolute, assurance that the control objectives specified in the Control Objective Matrices of Section V were achieved during the period from January 1, 2005 to June 30, 2005. However, the scope of our engagement did not include tests to determine whether control objectives not listed in the Control Objective Matrices of Section V were achieved; accordingly, we express no opinion on the achievement of control objectives not included in the Control Objective Matrices of Section V.

The relative effectiveness and significance of specific controls at CBMS and their effect on assessments of control risk at user organizations are dependent upon their interaction with the controls and other factors present at individual user organizations. We have performed no procedures to evaluate the effectiveness of controls at individual user organizations.

The description of controls at CBMS is as of June 30, 2005, and information about tests of the operating effectiveness of specific controls covers the period from January 1, 2005 to June 30, 2005. Any projection of such information to the future is subject to the risk that, because of changes, the description may no longer portray the system in existence. The potential effectiveness of specified controls at CBMS is subject to inherent limitations and, accordingly, errors or fraud may occur and not be detected. Furthermore, the projection of any conclusions, based on our findings, to future periods is subject to the risk that (1) changes made to the system or controls, (2) changes in processing requirements, or (3) changes required because of the passage of time may alter the validity of such conclusions.

This report is intended solely for use by the Members of the State of Colorado State Legislative Audit Committee and management of the Office of CBMS, HCPF and DHS, the user organizations, and the independent auditors of the user organizations.

February 16, 2006

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Section II
Report Summary**

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Authority, Standards, and Purpose/Scope of Examination

This examination of the general controls over the Colorado Benefits Management System (CBMS) was conducted under the authority of Section 2-3-103, C.R.S., which authorizes the Office of the State Auditor to conduct audits of all departments, institutions and agencies of state government. This examination was conducted in accordance with standards established by the American Institute of Certified Public Accountants (AICPA). The period under review was January 1, 2005 through June 30, 2005.

SAS 70 Overview

The SAS 70 (Statement on Auditing Standards No. 70, *Service Organizations*) is an auditing standard developed by the American Institute of Certified Public Accountants (AICPA). The SAS 70 provides guidance that allows a service organization to disclose its control activities and processes to its customers (user organization) and its customer's auditors (user auditor). The service organization employs an independent accounting and auditing firm (service auditor) to examine its control objectives and control activities. The service auditor issues a Service Auditor's Report to the service organization at the end of the examination that includes the auditor's opinion. There are two types of Service Auditor's Reports: Type 1 and Type 2. A Type 1 report describes the service organization's description of controls at a specific point in time, while a Type 2 report includes the service organization's description of controls. For a Type 2 report, the service auditor tests the service organization's controls on a sample basis over a minimum six-month period.

In this case, the Office of the State Auditor engaged **BKD, LLP** to conduct a SAS 70 Type 2 examination of CBMS, which is a service organization from the perspective of county departments of social services and Medical Assistance (MA) sites, or user organizations.

Objectives of the Examination

This report on examination of controls placed in operation is intended to provide interested parties with information sufficient to understand the basic structure of controls within CBMS. This report, when coupled with an understanding of controls in place at user locations, is intended to permit evaluation of the total system of internal control surrounding transactions processed through the reviewed systems.

Our examination was restricted to selected services provided to system users by CBMS including users of the CBMS application and, accordingly, did not extend to controls in effect at user locations. It is each interested party's responsibility to evaluate this information in relation to controls in place at each user location in order to assess the total system of internal control. The user and CBMS portions of the system must be evaluated together. If effective user controls are not in place, CBMS controls may not compensate for such weakness.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Auditors using this report as part of their review of a user's system of internal controls may conclude that CBMS' description of controls provides a basis for reliance thereon and for restricting the extent of their substantive tests. Alternatively, user auditors may elect not to rely on controls within CBMS' system. In that event, they should accomplish their audit objectives by other means.

The objectives of data processing controls are to provide reasonable, but not absolute, assurance about such things as:

- Protection of data files, programs and equipment against loss or destruction.
- Prevention of unauthorized use of data records, programs and equipment.
- Proper handling of input and output data records.
- Reliable processing of data records.

The concept of reasonable assurance recognizes that the cost of a system of internal control should not exceed the benefits derived and, additionally, that evaluation of internal control necessarily requires estimates and judgments by management.

Summary of Audit Comments

A complete listing of our recommendations from this year's examination and management's responses may be found in Section III – Recommendation Locator. Additional detail regarding the following recommendations may be found in Section V – Information Provided by the Service Auditor.

It should be noted that in many instances, the recommendations are the logical result of exceptions noted during the examination. However, a recommendation may refer to control objectives and activities that did not exhibit an exception during the examination. In these instances, we found through our testing that CBMS successfully met the objective but we are making a recommendation to offer improvements to current established controls.

The following summarizes the findings contained in this report:

- Adequately trained staff is a critical component of an effective system of internal control. A failure to respond to user training requests and the absence of monitoring the effectiveness of current training efforts can result in improper system usage, inaccurate user data input and incorrect benefit payments. OCBMS, DHS and HCPF should ensure that user training requests are met in a timely fashion.
- We found the DHS help desk lacks effective communication with users, particularly relating to standards on how to follow up on open tickets. It was also noted that a goal to monitor error trends among counties was not completed. OCBMS and DHS should improve the DHS help desk function by following up on help desk tickets in a timely manner and monitoring error trends at the counties.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- The ability to restore a previous version is critical in the event a software update encounters a critical or fatal flaw. Maintaining clear documentation of the status of production and previous versions of software is critical to achieve this goal. OCBMS, DHS, and HCPF should take steps to monitor EDS' source code back up version documentation.
- The Office of CBMS (OCBMS), Department of Human Services (DHS) and Department of Health Care Policy and Financing (HCPF) are responsible for ensuring that controls over CBMS are adequate so that benefit payments are appropriate. Therefore, OCBMS, DHS and HCPF should assume the responsibility of contracting for future SAS 70 Type 2 examinations.
- As a primary service provider for CBMS, controls in place at EDS can have a significant impact on the controls in place at CBMS. OCBMS, DHS and HCPF should expand the scope of future SAS 70 Type 2 examinations to include Electronic Data Services (EDS) services provided to the state.
- An effective risk assessment process provides important guidance when reviewing and implementing controls to ensure the confidentiality, integrity and availability of information. Risk assessment activities should occur at the entity (organizational) and activity (specific project) levels. OCBMS, DHS, and HCPF should create and implement an entity- and activity-based risk assessment framework.
- Best practices and federal requirements dictate annual updates to strategic plans. Current planning documents date back to 2003. OCBMS, DHS, and HCPF should implement a process to update strategic planning and align business objectives with the strategic plan on an annual basis.
- Current and accurate internal policies and procedures help to ensure appropriate actions are taken by management and staff, and help to maintain continuity of business activity. OCBMS, DHS, and HCPF should periodically perform and document a review and update of internal policies, procedures and standards to reflect changing business standards.
- Documentation of employee review of key responsibilities is fundamental to the concepts of audit, human resource management and sanction requirements. This helps to verify that employees understand job responsibilities. OCBMS, DHS, and HCPF should implement a process to ensure that employees understand their roles and responsibilities.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Section III
Recommendation Locator**

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Recommendation Locator

No.	Figure Reference(s)	Recommendation	Agency Response	Implementation Date
1	23.2 and 23.7	Take steps to prioritize and meet training needs requested by CBMS system users.	Agree	December 2006 and Ongoing
2	22.5, 22.8 and 24.6	Implement standards and processes regarding DHS help desk ticket follow up and monitoring of county error trends.	Agree	December 2006
3	14.5 and 14.8	Implement a backup and production version control status report with EDS.	Agree	August 2006
4	10.1, 21.1 and similar	Assume the responsibility of contracting for SAS 70 Type 2 examinations.	Agree	February 2007
5	10.1, 21.1 and similar	Expand future SAS 70 Type 2 examinations of CBMS to include EDS services provided to the State.	Agree	February 2007
6	6.1 – 6.8	Implement an entity and activity risk assessment framework.	Agree	September 2006
7	1.1	Institute a process to align business objectives with the strategic plan and update annually.	Agree	September 2006
8	5.3 and 22.10	Document the periodic review and update of internal policies, procedures and standards to reflect changing business conditions.	Agree	August 2006
9	2.2	Implement a process to ensure roles and responsibilities documented in Position Description Questionnaires (PDQs) are reviewed and signed off by employees.	Agree	July 2006

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Section IV
Information Provided by the Colorado Benefits
Management System**

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Description of Colorado Benefits Management System Controls

A. Background

This report describes the controls surrounding administration and eligibility, tracking and processing functions of the Colorado Benefits Management System (CBMS). CBMS is defined as a system that supports a single-purpose application in a one stop environment and integrates client-based automated systems to improve worker productivity and client services. Additionally, CBMS is intended to speed access to all welfare and medical programs through automated eligibility determination, improve continuity of care through coordinated eligibility processes, maximize coordination of benefits through use of a single client identifier, and improve efficiency of application and eligibility processing by sharing common processes.

The CBMS initiative focused on consolidating and eliminating existing antiquated legacy systems in an effort to streamline and standardize eligibility determinations. On September 1, 2004, CBMS replaced the following six data collection and eligibility systems:

- Client Oriented Information Network (COIN)
- Colorado Automated Food Stamp System (CAFSS)
- Colorado Automated Client Tracking Information System (CACTIS)
- Food Stamps Job System (FSJS)
- Colorado Adult Protection Service (CAPS)
- Child Health Plan Plus (CHP+)

CBMS was jointly developed by the Department of Human Services (DHS) and Department of Health Care Policy and Financing (HCPF). A significant planning effort went into the development of an integrated automated system to support programs and clients of both Departments.

Colorado Department of Human Services

The Department of Human Services (DHS) is solely responsible, by statute, for administering, managing and overseeing the delivery of the State's public assistance and welfare programs throughout the State of Colorado. Services such as cash assistance, food stamps and job training and education are delivered through local county departments of social services, as well as through contracts with public and private human services providers. The State's role in delivering these programs is to provide technical assistance to the county departments of social services, interpret state and federal law, promulgate rules, write federal plans, allocate funds based on established guidelines, request appropriations from the General Assembly to administer the programs, and develop statewide training.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

The Office of Information Technology Services (ITS) within DHS develops, maintains and operates software applications and provides customer service, strategic ITS planning, and data administration for DHS's administrative and program functions. ITS oversees the CBMS technical infrastructure within DHS.

Colorado Department of Health Care Policy and Financing

The Department of Health Care Policy and Financing (HCPF) is the single state agency responsible for Medicaid and Children's Health Plan Plus (CHP+) medical programs. These publicly funded programs are administered by HCPF for which Medicaid provides health care services to eligible needy or disabled persons and the CHP+ program provides health care for children 18 years or younger in low income families for which the child is not eligible for Medicaid. Medical benefits are paid through the Medical Management Information System (MMIS) based upon client eligibility information passed to the MMIS from CBMS.

HCPF is responsible for creating a system to collect and maintain client information, monitor user performance with eligibility determination, and assure proper program eligibility policy is utilized by the 64 county departments of social services and medical assistance (MA) sites. Currently, HCPF contracts with two MA sites.

Within HCPF, there are three sections that are directly related to the CBMS project. The Eligibility Section provides clear policy for the variety of programs and sub-programs that make up the Medicaid, CHP+, and state only programs. The Eligibility Operations Section provides detailed support to CBMS users to facilitate accurate and timely data entry and case handling. Within the Information Technology Division, the Eligibility Systems Section is responsible for all eligibility systems that support the medical programs and oversees the CBMS project and vendors.

CBMS Project History

The difficulties in maintaining and constantly modifying the previous legacy eligibility systems to implement numerous federal policy changes had not only affected the performance of these systems, but also the productivity of staff making eligibility determinations. System users had decreased levels of confidence and satisfaction with the performance of these stand-alone systems.

The initial Advanced Planning Document for CBMS was prepared and approved in May 1995 and a CBMS Request for Proposal (RFP) was developed and released at that time. Eligibility Management Systems, Inc. (EMS) was selected as the successful vendor in August 1995 to conduct a Feasibility Study, IT Study, Business Process Reengineering and Conceptual Design. With finalization of the contract on September 1, 1996, the CBMS Reengineering/Feasibility Study project was initiated.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

The state's management team established eight project objectives for the CBMS project: flexibility, integration, simplification, timeliness, communication, accountability, fairness and efficiency.

In December 1998, the Department of Human Services and the Department of Health Care Policy and Financing outsourced the development of CBMS and a Development Request for Proposal (RFP) was put out for bid. On July 14, 2000, DHS awarded Electronic Data Systems Corporation (EDS) with the contract to develop and maintain the base application of CBMS. The CBMS development contract was signed by the State, thus approving EDS's development tool suite, project development methodology, the managing of the hardware and its technical architecture. The contract required EDS to provide eight years of service, including three years of development and five years of maintenance. The State also contracts with Dynamic Resource Corporation to provide the CBMS pre-implementation training.

Between January 2005 and May 2005, The CBMS Management Team was made up of CBMS Directors from both DHS and HCPF. Effective June 1, 2005, the Governor issued an Executive Order to establish the *Governor's Office of the Colorado Benefits Management System*. According to the Executive Order, the Office of CBMS (OCBMS) is to be accountable for the overall control of CBMS from a direction, planning, management, and delivery perspective. The Office is to provide common oversight and coordination of the state management of CBMS. From June 2005 forward, directors from both DHS and HCPF, along with the Office of CBMS shared the responsibility for managing CBMS.

B. Purpose of CBMS Description of Controls

This description of CBMS controls is intended to provide county users of CBMS and independent auditors of such users with information about the control features of functions provided by CBMS for the purpose of enabling the county users' independent auditors to plan their audits. This report has been prepared taking into consideration the guidance provided by the American Institute of Certified Public Accountants Statement on Auditing Standards No. 70 "*Reports on the Processing of Transaction by Service Organizations*," the requirements of Statement on Auditing Standards No. 78, and other information provided by CBMS staff.

There are two types of SAS 70 examinations: Type 1 and Type 2. A Type 1 examination describes the service organization's description of controls at a specific point in time, while a Type 2 examination includes the service organization's description of controls. For a Type 2 report, the service auditor tests the service organization's controls on a sample basis over a minimum six-month period.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

C. Relevant Aspects of the Control Environment

Control Environment

The control environment creates the foundation for effective internal control, establishes the attitude and character at the executive level, and stands for the summit of the CBMS governance structure. An essential part of the CBMS management methodology to manage risk is the control environment, which is the collective effect of various factors on establishing, enhancing and maintaining the effectiveness of specific controls. The control environment reflects the overall attitude, awareness and actions of directors, management and employees concerning the importance of controls over CBMS. These factors are replicated in the CBMS personnel policies and procedures, and management control formation.

The CBMS control environment includes the CBMS governance process, monitoring and reporting. The governance process includes the CBMS strategic plan, the CBMS risk management process, compliance and regulatory management, policies, procedures and standards. Monitoring and reporting are required to ensure that CBMS is aligned with business requirements.

CBMS management is designed to help assure that CBMS adds value to the business and CBMS risks are mitigated. This also includes a CBMS organization configuration that supports adequate segregation of duties and promotes the accomplishment of the organization's objectives.

Strategic Planning

A strategic plan helps to provide direction and focus for all employees. It points to specific results that are to be achieved and establishes a course of action for achieving them. Also, a strategic plan helps various work units within an organization align themselves with common goals.

The State contracted with Eligibility Management System (EMS) in September 1996 to design a strategic plan for the development of CBMS. The plan included nine deliverables:

- Colorado Department of Human Services and Colorado Department of Health Care Policy and Financing business objectives and needs
- Business Process Reengineering Study
- Information Technology Study
- CBMS Feasibility Study
- CBMS Conceptual Design
- CBMS Detailed Design (Requirements and Change management included) Document
- Implementation Advanced Planning Document
- Implementation Request for Proposal
- Project Management

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

In January 2002, the project underwent major re-planning efforts and the original strategic plan was revised. EDS/State Contract Amendment numbers 7, 8 and 9 were completed during the period of January 2005 through June 2005.

CBMS Organization and Relationships

These controls are intended to provide reasonable assurance that the CBMS organization is responsible for managing all aspects of the CBMS environment. From January 2001 through December 2004, CBMS was supervised by a management team made up of CBMS directors from both DHS and HCPF, as well as a manager and deputy contracted through American Management System (AMS), a consulting firm that specializes in project management. In addition to the upper level management, more specialized managers were in place including an application manager, test manager, change management manager, an implementation manager and a training manager.

The CBMS management team's approach to CBMS is to deliver quality services and products to the State's user community. To accomplish this, the management team focuses on team integration, organizational structure, management methods and tools as well as involving stakeholders in CBMS activities. The CBMS management team has experience managing projects of all sizes.

On December 31, 2004, the contract with AMS expired and was not renewed as the effort was funded for development and the system was in production. Between January 2005 and May 2005, the CBMS Management Team remained as discussed above. As discussed earlier, on May 27, 2005, the governor issued an Executive Order to establish the *Governor's Office of the Colorado Benefits Management System (OCBMS) effective June 1, 2005*. According to the Executive Order, the Office of CBMS is to be accountable for the overall control of CBMS from a direction, planning, management, and delivery perspective. The governor appointed the OCBMS Director, who functions in the role of manager. Additional specialized managers were placed under the OCBMS Director, including a deputy director, an application manager, test manager, a project management officer, business manager and a user-end support manager. From May 2005 onward, CBMS was managed by directors and staff from DHS, HCPF and OCBMS.

The new management team within the Office of CBMS is supported by three functional groups, including the Department of Human Services, Department of Health Care Policy and Financing and the Governor's Office.

OCBMS Internal Policies and Procedures

The Office of CBMS has implemented various methods of communication to ensure all employees understand their individual roles and responsibilities. Additionally, controls have been put in place to ensure significant events are communicated to all employees in a timely manner. These methods include orientation sessions with managers, training classes for current and new em-

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

ployees, organization newsletters which summarize significant events and changes, and the use of electronic mail messages to communicate time sensitive information. Managers also hold regular weekly and/or monthly staff meetings to give updates to staff and to identify and resolve any problems. Each CBMS staff person is responsible for communicating significant issues to their manager in a timely manner.

Management Controls

CBMS Management designed control objectives that are intended to maintain an effective and efficient operation, provide accurate reporting and ensure compliance with applicable laws and regulations

Manage CBMS Staff

CBMS is a high profile system in the State of Colorado and it is critical that the necessary resources are on site to do the job. CBMS management defines accountability and provides each team member with a clear understanding of CBMS objectives and his or her own assignments. Team members adhere to pre-defined quality standards and the schedule for task completion. Tracking tasks and individuals at a detailed level and adhering to a set of review and quality assurance mechanisms allows for early detection and correction.

Code of Conduct

It is mandatory that CBMS employees attend an orientation class that is managed and overseen by personnel from DHS, HCPF and the Governor's Office. The orientation covers topics such as employee code of conduct, benefits, use of e-mail, ownership of State assets and workplace violence. DHS, HCPF and the Governor's Office have specific guidelines for employee conduct which prohibit employees from divulging confidential information concerning client affairs or taking any other action that would adversely affect clients of CBMS.

Hiring New Staff

The Governor's Office has implemented formal hiring practices that are designed to ensure that new employees are qualified for their job responsibilities. References are sought and background and security checks are conducted for all potential new hires. Newly hired employees are required to sign a confidentiality agreement to ensure that sensitive information regarding CBMS business, customers, services, and methods is not divulged.

Two types of employees are hired to fill CBMS job positions: full time equivalents (FTE) and contractors. CBMS follows the policy and procedures set forth in the DHS/HCPF Human Resources and Personnel units when hiring an FTE. The job descriptions are documented in the Position Description Questionnaire (PDQ), which describes duties and job qualifications such as education, experience, skills and expertise. Each newly hired employee is required to sign the PDQ to ensure that roles and responsibilities are understood. Staff from DHS's and HCPF's

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Human Resources and Personnel units review applications and set up interviews, while the appropriate CBMS manager and staff conducts the interviews and makes the final hiring decisions.

CBMS positions are also filled by hiring contractors to perform specific work for a period of time. A Statement of Work document is completed by the appropriate CBMS manager and is sent to approximately five Colorado approved vendors. The vendors submit resumes of qualified employees to the appropriate CBMS manager who in turn schedules interviews. Once a qualified person is selected, the DHS Executive Director and Budget Manager approve the dollar amount of the contract. A Purchase Order is created and sent to the appropriate vendor. The newly hired contractor cannot start the job until all of the above steps have been completed.

CBMS Manager Qualifications

Managers of CBMS have a strong background in project management as well as experience in large-scale welfare and medical eligibility systems development, system design, modification, transfer, implementation and operations.

Performance Evaluations

The Governor's Office has established performance evaluation policies and procedures that CBMS managers must follow. CBMS employee performance is reviewed annually through a performance appraisal process called Performance Management and Pay (PMAP). The PMAP process is designed to assess every employee's performance in comparison to mutually agreed upon objectives and plans. Between reviews, managers meet with staff to discuss the employee's progress towards meeting stated objectives and plans. This meeting provides both the manager and employee an opportunity to discuss and resolve problems to assure that the employee is in compliance with stated objectives by the time the actual evaluation is completed.

Segregation of Functions and Duties

Control policies and operating procedures are intended to provide adequate segregation of functions and duties. CBMS is structured to define responsibilities in a manner that reinforces segregation of the following functions:

- CBMS Managers
- CBMS Directors
- Development and production information technology environment
- CBMS Test Manager and Test Team
- Subject Matter Experts oversee the documentation of changes to the CBMS Application
- Change Management
- Technical Experts
- Quality Reviews
- Training
- Compliance Monitoring

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- Communications
- End User Support

Released/Resigned Employees

Employees who are released or resign must return their employee picture ID badge and access cardkey. Managers are responsible for collecting the cardkeys and submitting them to EDS for deactivation.

D. Information and Communication

CBMS Information Architecture

Information is needed at all levels of the organization to run the business and achieve CBMS control objectives. The information architecture controls provide reasonable assurance that the information is identified, captured, and communicated in a form and time frame that enables the business to carry out its responsibilities effectively and on a timely basis.

Organization

CBMS Management and staff reside and perform their tasks at 455 Sherman Street, Denver, Colorado 80203. According to the State/EDS contract, primary day-to-day business operations are conducted in Denver, Colorado. EDS does the software development work according to the CBMS requirements documents, change controls and meetings. Software development sites include: Lakewood, Colorado; Arkansas; Michigan; and New Jersey.

CBMS Communications

Communication of significant events and or information may be internal, external, formal or informal. Communication methods have been created and implemented to ensure information is communicated appropriately, timely and accurately.

Communicate Management Plan, Goals and Direction

In October 2002, the CBMS project team released a Communication Plan that detailed communication avenues and how often each communication would occur. The plan also gave direction and set the goals for the project.

The CBMS management team manages all formal communications regarding CBMS. There is a CBMS Communication Manager who reviews procedures and contents of messages that go out to CBMS users. All CBMS topic communications must go through the Communications Manager who sends the information through the CBMS Communications.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

CBMS Methods of Communication

CBMS has implemented the following communication methods to ensure that pertinent information is communicated to all CBMS users:

- **CBMS Communication E-mails.** This is the main communication method for information related to CBMS. This method prevents duplication and also provides consistent and accurate information to users. These communications are intended to distribute information regarding decision table release notes, system outages and problems, new procedures and high-level program area information.
- **CBMS Website.** This is a communication tool for CBMS users to find information such as procedures, plans, decision table notes, business object information and ad hoc reporting. Additionally, the website contains a question and answer forum that can be viewed by all CBMS users. Questions are sent to Askcbms@state.co.us and are uploaded to the CBMS website along with the answers.
- **CBMS Knowledge Transfer Call.** This tool utilizes conference calls to present new procedures or enhancements related to CBMS. County and MA site users and staff from DHS, HCPF and OCBMS participate in the conference calls. Currently, these conference calls occur only when special circumstances arise.
- **CBMS Policy Meetings.** These weekly meetings serve the purpose of addressing CBMS changes that have an impact on specific program areas, including Colorado Works, Food Stamps and Medicaid. Representatives from each of these program areas, as well as subject matter experts attend the meetings. These meetings serve the purpose of addressing CBMS changes, client correspondence and problems that need to be discussed and resolved.
- **DHS Portal.** CBMS county and DHS users can access procedures, policies, messages and user manuals through the DHS Portal.
- **HCPF Portal.** CBMS MA site and HCPF users can access procedures, policies, messages, and user manuals through the HCPF portal.
- **County Expert.** Each county has assigned one employee to be their CBMS expert to be accessible to their workers for CBMS questions, problem solving and serving as a single point of contact for the county staff as well as the CBMS staff.
- **Advance Planning Document (APD).** The purpose of the APD is to obtain approval for federal participating funds for CBMS for the next fiscal year. This is prepared annually and located in the CBMS Communications Repository.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- **Colorado Social Services Directors Association (CSSDA).** DHS, HCPF and OCBMS meet monthly with the CSSDA Information Technology Task Force to provide updates and address issues. Periodically, DHS, HCPF and OCBMS attend the CSSDA Executive meeting to address specific CBMS topics.
- **Information Management Commission (IMC).** A status report is provided monthly to the IMC along with periodic presentations. In addition to the regular IMC monthly meetings, the IMC Risk Management Committee reviews CBMS activities in depth as warranted.

External CBMS stakeholders such as the State Legislature, County Commissioners and Directors Associations are informed about CBMS via e-mails, meetings, telephone calls and power point presentations.

CBMS Standard and Emergency User Notification Procedures

CBMS Standard User Notification

The CBMS Standard User Notification Procedure was written and implemented in January 2005. These procedures define four types of standard user notifications that must be communicated to CBMS user groups, including DHS and HCPF portal users, CBMS Help Desk, CBMS Change Management and the EDS team. These notifications include:

- **New CBMS Release.** A new CBMS release is a new build of the CBMS Application. The impact to users and build release notes must be attached to each new release.
- **Application Issue.** An application issue is a problem within a defined program area of which users must be aware, but for which there is no workaround available.
- **Workaround.** A workaround is a document that details how to address a problem within a defined program area until a permanent fix to CBMS can be applied.
- **Scheduled Maintenance.** A scheduled maintenance is a fix to be applied to CBMS to enhance system performance.

The Emergency User Notification Procedure

This procedure describes the process to be followed when an unplanned CBMS outage occurs or when emergency maintenance on the CBMS application is necessary. An emergency user notification communicates a CBMS outage or emergency maintenance to all CBMS users.

Service Providers

CBMS contracts with one third-party vendor, Electronic Data Systems (EDS), for the development and maintenance of the software and application servers. The State also contracts with Dynamic Research Corporation (DRC) for the CBMS infrastructure. The CBMS development and

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

maintenance contract expires July 2008. CBMS management ensures that staff from these vendors receive pertinent information through meetings, e-mails and meeting minutes.

E. Risk Assessment

Risk management is the process of identifying, analyzing, mitigating and tracking risk in order to minimize the impact of risk on CBMS. DHS, HCPF and OCBMS staff consider two approaches to risk management – reactive and proactive. Reactive risk management is the act of mitigating risks as they are identified. This piece focuses on mitigating rather than identifying and preventing risk. The proactive approach focuses on identifying and preventing risk rather than on mitigation.

CBMS management has placed into operation controls to identify, assess and manage risks that could affect CBMS' ability to provide accurate and efficient processing of eligibility determinations and benefit issuance for the clients of both DHS and HCPF. Risk identification throughout the development and post implementation of CBMS enables CBMS management to understand how events can derail the success of business objectives.

During the CBMS development and post implementation, tasks have been to look for and identify risks keeping in mind two outcomes – impact and probability. CBMS staff reviews and rationalizes the risks, some of which are identified below:

Impact

- Security functioning improperly
- A change not approved causing other errors to occur in the application
- Making sure the system was available to all users
- Incorrect calculation of benefits/services
- Timely issuance of benefits
- Loss of data

Probable

- CBMS complexity both technology and the application
- Number of transactions using CBMS
- Number of concurrent users using CBMS at the same time
- Volume and complication of changes that are made to CBMS

Throughout the development and post implementation activities, CBMS has utilized risk-rating criteria to assign a risk level to the different activities and tasks. CBMS is using an assignment of high, medium and low to set priorities according to a subjective ranking of their importance, impact, and probability.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Risk Management Committee

A CBMS Dashboard Committee was created during the development of CBMS. During weekly “CBMS Dashboard Meetings,” key risk categories and mitigating activities were discussed to identify best practices for managing risks. The Committee designed a strategic operations risk framework to manage operation risk, which was utilized throughout the development of the system. However, after CBMS implementation in September 2004, the Dashboard Committee was dismantled and risks were documented in other formats as described below.

Weekly CBMS Team Lead Meetings

The weekly CBMS team lead meetings are a forum used to discuss status reports, issues, and risks (meeting minutes are recorded during these meetings). When risks are identified, the development of a mitigation plan is assigned to the proper staff. Future meetings are held to determine if the risk no longer exists, the risk has decreased or the risk is being monitored and the risk mitigation plan needs to be put into place.

Weekly CBMS Executive Meetings

CBMS executives from DHS, HCPF and OCBMS are responsible for establishing and maintaining a sound control environment that is in compliance with all applicable laws, regulations and internal policies. To be successful at controlling risks related to CBMS, operational risks must be recognized, understood and periodic evaluations of the adequacy and effectiveness of the control environment must be made. Additionally, actions must be taken to correct control gaps. This group of individuals serves as an avenue to accomplish control objectives and communicate risks.

Change Control Process

The CBMS Change Control Process describes how changes are accomplished to the CBMS application, decision tables, valid values, client correspondence or training materials that are outside the scope of the currently approved design. Rule changes within DHS and HCPF may be initiated through mandatory federal or state legislation or through requests by CBMS users such as counties and Medical Assistance sites

Risks are identified with each CBMS change control document that is written. The change request author assigns a risk rating of high, medium or low by utilizing the risk level drop down box contained on the change request form. The documentation relating to the risk and the mitigation plans is also documented on the change request form.

The Detailed Design Assessment (DDA) document written by EDS also addresses risks related to changes. The DDA is written from the change request document. Meetings with the appropriate CBMS managers are held to clarify and understand all aspects of the change request.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Once the appropriate CBMS Manager reviews the DDA, a conformance review is held to discuss any issues or risks that exist and final approval is given to proceed with the change development.

Weekly Status Reports to the Program Management Office (PMO)

Change requests are tracked by two CBMS management teams. The first team is made up of business managers and subject matter experts, while the second team consists of an application manager, interface experts and reports experts. The first team's area of responsibility is high-level program area changes relating to the CBMS application, client correspondence, benefit recovery and issuance, and interfaces such as BENDEX, SDX and the Automated Child Support Enforcement System (ACSES). The second team is responsible for interfaces with the Department of Labor and Employment, Department of Corrections, Medicare Part D, all ad hoc reports and other high-level program reports. Both teams are responsible for ensuring that all tasks associated with the change request are completed and that all problems are resolved.

The CBMS management teams submit weekly status reports to the PMO. These reports are intended to provide updates related to change requests, including risks, milestones and if the development is going to be completed on time. The PMO tracks this information and distributes it to the CBMS Management team during weekly meetings.

F. Facility Management (Manage the CBMS Facility)

The EDS team's overall facilities management and operations strategy supports, manages and operates CBMS. State staff and EDS are committed to a partnership and doing what it takes to successfully operate CBMS within the scope and agreed-upon Service Level Agreements.

The EDS team provides facility management services, including necessary staff and computing resources to support the ongoing operation and maintenance of CBMS. Facility management services includes application software maintenance and management of the CBMS Help Desk to support state, county and non-county MA sites.

Access to Facilities

As part of the State and EDS contract, EDS provides the project site and manages the building site along with the building landlord. EDS has an internal process they follow that gives CBMS Staff access to the EDS offices. The 455 Sherman Street Building landlord provides parking and building access with a card key that they provide to EDS who in turn assigns and documents the card distribution.

Facility Management and Operation

Electronic Data Systems (EDS) is the primary service provider for CBMS. EDS was awarded the contract to develop software and maintain the CBMS system, while the Office of CBMS,

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

DHS and HCPF provide key management services. According to the State/EDS contract, EDS is responsible for completing a variety of facility management tasks, which include:

- Performing systems operation and maintenance, including base server services, server administration services, system security administration, database management, logical and physical management, configuration management services, performance and tuning management, backup and recovery procedures and capacity planning.
- Performing hardware maintenance.
- Performing Operating System maintenance and upgrades. Additionally, EDS Systems programming staff will provide installation, maintenance and tuning services with respect to the state-system level software and system components.
- Performing configuration design and management, which involves documenting and maintaining a system configuration that includes the hardware, software, peripherals and network components.
- Performing media storage management. EDS provides comprehensive data storage management services. Part of the task will be the allocation of application and user owned data, which is controlled by utilizing automated toolsets. Application databases are allocated specific volumes of storage capacity. Additional media storage management activities include:
 - Migration and archiving
 - Space management
 - Data restoration
 - Performing computer performance management
 - Preparing for system turnover (at the end of the maintenance contract)
 - Preparing monthly reports on system availability, transaction response time, tape mounts, print lines and maximum storage requirements metrics
 - Maintaining application software
 - Developing procedures to ensure that only users with privileged administrative authority can set, modify or disable the functions of the access control system
 - Performing benchmark, performance and capacity planning
 - Performing computer system internal auditing
 - Performing hardware and software evaluation
 - System backup and recovery
 - Disaster recovery
 - Batch cycles

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

EDS is required to provide and update the CBMS Facility Management Document suite throughout the development and maintenance of CBMS. As the suite of books is updated, the State Management Team along with the DHS Technology Officer provides comments and final approval.

Capacity Planning/Performance Management – the State/EDS contract specifies that EDS is responsible for activities related to capacity planning, performance testing and stress testing on the CBMS System.

Transaction Process Monitoring – EDS uses transaction processing software to handle transaction process monitoring activities.

G. Monitoring

CBMS management has placed into operation controls to identify, assess and manage the assessment activity.

Ensure Compliance with External Requirements

CBMS management is responsible for establishing and maintaining a sound control environment that is in compliance with all applicable laws, regulations and internal policies. To achieve this goal, periodic evaluations of the adequacy and effectiveness of the control environment must be made, and actions must be taken to correct control gaps. CBMS has a forum for accomplishing this objective and to facilitate effective communication around risk issues.

CBMS has two weekly management meetings that serve as an ongoing reevaluation of the CBMS control environment. First, CBMS management and other staff meet to discuss urgent problems, as well as system development, external changes, decision tables, interfaces, testing and training.

The second meeting involves CBMS management and executives from both DHS and HCPF. Staff from EDS also attend these meetings when appropriate. The purpose of the meeting is to discuss and resolve any problems that have been escalated and to give CBMS status updates.

Internal Review

DHS and HCPF contracted with MTG - Management Consultants, LLC for the development and execution of a Quality Assurance Plan. This plan was used through the implementation of CBMS in September 2004. The Governor's Office of Innovation and Technology (OIT) contracted with Maximus to provide Independent Validation and Verification (IV&V) of the processes and development of the system. IV&V was provided through December 2004 when OIT decided oversight was no longer warranted. The CBMS Manager/team assumed responsibility for the Quality Assurance role.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Quality Assurance Tasks

Currently, the CBMS Subject Matter Experts, as well as the Reports/Interface Team take part in the creation of the Change Control Document. They guide the program areas, who are the change control sponsor, in writing the change request. The assigned change request manager along with the appropriate policy staff review and perform quality assurance tasks on the Detailed Design Document, which is provided by EDS. If errors are found or changes need to be made they are communicated to EDS through a State PMO letter. EDS then responds with its PMO letter stating it agrees and will fix or change the document or recommend an alternative solution.

Other quality assurance tasks such as review of EDS technical/business deliverables are assigned to the CBMS technical/business staff and CBMS Application Manager. Further, the technical and business staff performs a review of all CBMS policies and procedures.

Legal Action

On August 30, 2004, the Colorado Center for Law and Policy filed a lawsuit (Valerie Imani Hawthorne-Boy, et al v. Karen Reinertson, et al) in Denver District Court representing clients they claimed were being harmed by CBMS. The lawsuit was filed against DHS and HCPF. While the initial ruling by the presiding judge was generally in the State's favor, a subsequent hearing placed mandates on the State. Those mandates include, among others, an Emergency Call Center with the requirement to resolve all emergency calls within five days, a benchmark in reducing backlogged, or pending cases and to keep in place the benefit conversion freeze flag which was put in place by the Departments.

Subsequently, other motions and/or attachments have been made. On December 21, 2004, a ruling by the court mandated that certain reporting areas and timeframes be met. Specifically, DHS and HCPF were required to report the number of new applications not processed within federal and state timeframes, number of cases the Emergency Call Center has received and resolved, the number of re-certifications that are not in compliance with federal or state timeframes and the steps taken to publicize the Emergency Call Center. The Department was required to report this information on January 31 and February 28, 2005.

Additionally, the Departments are required to report the number of new applications and re-certifications that are not in compliance with state and federal timeframes every 60 days following February 28, 2005.

In response to the cases that were not filed timely, the Departments each created data entry facilities to focus on their specific program cases. A centralized emergency call center was also created. Failure to comply with the court's order would risk the Departments being found in contempt. In addition, if the Federal funding agencies determine that claims are not being processed according to regulations, sanctions can be imposed.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

H. Program Development and Program Change

Acquire and/or Develop Application Software

Acquire Technology Infrastructure

Given the multiple deployment strategies used by DHS to support the counties (Option 1, Option 2 and Option 3) and understanding the complexities inherent within a multi-deployment architecture, a number of proven architectures and product sets have been chosen for the CBMS application.

Develop CBMS Application Software

CBMS was implemented on September 1, 2004. The State/EDS contract specifically states that EDS is responsible for timely and systematic software development of CBMS and modifications to CBMS, appropriate levels of CBMS testing, maintenance of CBMS systems documentation and the smooth migration of accepted software modifications into operations. Such tasks are described in the following bullets:

- All changes to the application software, database and rules engine
- All changes as a result of new or proposed Federal or State Legislation
- All changes as a result of new or proposed Federal or State policy
- CBMS bug fixes
- Application upgrades
- Minor revisions
- Trouble shooting/problem resolution

For systems development enhancements and modification projects, EDS uses its own System Development Life Cycle (SDLC) methodology. This methodology is a highly comprehensive toolset that systematically addresses every step needed for successful systems development. The methodology offers information regarding major work to be done, work products to be produced and participants involved in a programming engagement. The SDLC methodology is intended to ensure that information systems are designed to include application controls that support complete, accurate, authorized and valid transaction processing. By signing the contract, the State has approved EDS to use their own SDLC methodology.

CBMS follows the Change Control Process and the Defect/Change Control Approval (DACR) process. EDS delivers a CBMS Monthly Status Report that documents monthly modifications and enhancements that account for maintenance activities for the previous month. The report also identifies outstanding maintenance work, work in progress, completed work and plans for completion.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Development of Decision Tables by the State Decision Team

CBMS contains numerous Decision Tables that are used to determine eligibility and to calculate benefits for the programs that CBMS supports. Decision tables are a series of IF-THEN statements that are processed by the CBMS Rules Engine to determine eligibility and benefits. There is a distinct separation of production source code maintenance responsibilities between the State and EDS. EDS is responsible for application code modifications and the State CBMS Decision Group is responsible for the modification of the Decision Table Code.

The CBMS Decision Tables Maintenance Document was created in November 2004 and remains in effect today. The document includes the process for all decision table related changes, which are modifications to Set Operation Builders (SOBs) and the CBMS Rules Engine.

Before new decision tables are moved to production, Decision Table Build Notes are distributed to all CBMS users. These notes provide information about the latest version of an iteration Build or Production Release for the CBMS Eligibility Rules Engine. Content of the notes reflect enhancements or fixes made to the Rules Entry tables or set operation builders since the previous publication. This is intended to facilitate the testing process of said enhancements and fixes.

This CBMS Decision Table Process provides guidance for the initiation, analysis, responsibility and communication to stakeholders for each proposed CBMS Decision Table change. This process complements the CBMS Change Control Process.

CBMS Reports Created by CBMS and CBMS Reports Team

CBMS Reporting

CBMS provides a report module called Decision Support to administrators, program managers and fiscal units with the ability to review performance, costs, and forecast staffing needs. Data is available at program, technical and operational levels to allow managers to customize views and requests for information. Ad hoc reporting is also a feature of this tool that was not utilized for the period of January 2005 through June 2005.

The Decision Support Database is refreshed with new or changed data as it occurs in CBMS. Authorized users have access to program-specific, or across the board data, based on their specific needs at any time. In an effort to simplify information requests, CBMS included a user-friendly process to request needed data elements, designate report formats and compile data.

The CBMS Decision Support function uses data extract tools to create a dataset for each authorized county and agency site. It also allows access to or imports from external data sources. Data received as a result of predetermined external sources is read to a separate table and not intermingled with CBMS data.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

The Decision Support Database enables maintenance and management personnel to forecast caseloads and program costs, analyze trends and anticipate needs for additional staff and training for new or available staff.

Production and ad hoc reports may be viewed online or in hard copy, based on user preference. In addition, the format of reports may be modified to accommodate user preference.

The CBMS Decision Support Module is a powerful, useful tool available to aid in the evaluation and management of the programs and resources available to the Colorado Department of Human Services and Colorado Department of Health Care Policy and Financing. User-friendly access to pertinent, current program data allows for efficient, equitable use of funds and resources to enhance the state's ability to forecast trends and adequately plan for future program expansion and related fiscal impact.

CBMS Report Team

The CBMS Report Team consists of a Reports Manager and three staff solely dedicated to retrieving information from CBMS to create and code reports from Business Objects for stakeholders.

The CBMS Reports Team performs the following tasks:

- The Reports Manager serves as manager for Change Requests for new reports.
- The Reports Manager responds to requests for statistics from the CBMS management team.
- The Team works with users of the system to gather requirements and write designs for reports.
- Codes reports using Business Objects.
- Responds to Help Desk tickets regarding reports.
- Creates and maintains an ad hoc reporting universe to allow end users to create their own one-time reports (after June 30, 2005).
- Researches and troubleshoots problems relating to ad hoc reporting.
- Works with the reports subcommittee of the County Users Group and with the program areas to validate pre-existing reports delivered as part of the original system delivered by EDS.

EDS fixes defects found with pre-existing reports, modifies pre-existing reports per change requests and creates new reports the CBMS team does not have the manpower to complete in the timeframe requested.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Develop and Maintain Internal Policies and Procedures

CBMS management has developed internal operational policies and procedures to provide guidance in the development, enhancement and maintenance of CBMS. These procedures are also made available to external CBMS stakeholders.

The CBMS operational policy and procedures processes include:

- CBMS Change Control
- Interface Coordination Process
- Valid Values Maintenance Process
- Decision Tables Maintenance Process
- CBMS Configuration Management and Release Management Process
- Emergency User Notification Procedure
- Standard User Notification Procedure
- Release Planning Process
- Application Installation Process
- PMO Correspondence Process
- Online Help Maintenance Process
- PMO Project Planning and Management Process
- Document Coordination Process
- Issues and Action Items Maintenance Process
- CBMS Service Level Agreements Monitoring Process
- Communications and Website Maintenance Process
- CBMS Reporting Process
- Defect/Approved Change Request Process

Also, CBMS staff developed and made available tools to all CBMS users, including policy manuals, reports, and more than 600 procedures to help them use CBMS.

Install and Test Application Software and Technology Infrastructure

Installation of CBMS Builds that include Enhancements/Fixes to the CBMS Software

EDS and a third-party vendor, Dynamic Research Corporation (DRC) developed processes to follow for consistency in packaging and delivering application software, or “builds” to users. Before an enhancement or fix is moved into CBMS production, the State must follow the Defect/Approved Change Request Process (DACR) and the CBMS Configuration Management Process. The DACR document defines the inputs, outputs and tasks for each step in the development process. Several types of changes are tracked through this process, including defects, change requests, documentation enhancement and code rework.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

State CBMS staff and EDS have weekly meetings to discuss and make joint decisions relating to which changes will move forward. Once the decision is made to move forward, the installation is completed by EDS and DRC deploys the new build to the county departments of social services and MA sites. The Department of Human Services has a contract with DRC and the Office of CBMS has no control over this organization. Office of CBMS staff attends meetings and voice concerns and requests at these meetings.

There are two types of builds delivered by EDS to DRC for distribution to users: a Citrix installation package and installations directly on a user desktop. Citrix is a method of connecting users to CBMS using what is called a “thin client.” A user uses the browser to connect to a Citrix server in the data center, DoIT. The Citrix servers run the client software and present the results to the user’s browser. This means there is much less data transfer over the network. The bulk of the data transfer takes place within the data center between Citrix and the host services. Citrix is used for all users except seven counties (El Paso, Denver, Jefferson, Larimer, Mesa, Adams and Boulder). Future plans call for additional Citrix services to accommodate these seven counties also. This means all county users will connect over Citrix eventually. For desktop installations, desktop users run the application “locally” and all the transactions and data are sent to and from the desktop over the network and UNIX servers at DoIT.

Option 1, 2 and 3 counties, discussed later in the report are based on the level of support and infrastructure DRC provides. Option 1, DRC provides network and support to all users desktops. Option 2, DRC provides the network and LAN infrastructure but the counties do their own desktop support. Option 3, counties take care of their own IT activities; DRC does not support their needs.

Testing CBMS Application Software

The CBMS controls are intended to provide reasonable assurance that the system is appropriately tested and validated prior to being placed into production and that associated controls operate as intended and support CBMS reporting requirements.

EDS is responsible for maintaining the CBMS training environment to ensure coordination with the production environment. Additionally, EDS is responsible for unit testing, on-going component testing and system integration testing. EDS develops and executes unit test cases, records the results, and corrects any defects. This documentation is then reviewed during the conformance review process for completeness and accuracy. EDS must certify that all unit testing has been completed as agreed upon with successful results.

Unit testing occurs in the development environment. It includes validation of all CBMS field lengths, field edits, radio buttons, check boxes, window buttons or icons and drop down values (Valid Values). It includes field level navigation as well as window level and application navigation. The design is validated and coding standards have been followed to ensure that the application has consistent, meaningful appearance functionality.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Each new build of the application is tested to ensure that it functions properly prior to releasing it to the next environment. Each new build includes a new version number and release notes detailing the functionality that was added or changed. The Test Manager for that environment has the authority to approve new builds, as well as the authority to reject a build based on the impact of current testing activities.

Unit Testing Acceptance

EDS completes unit testing before the new development or fix is given to the State Test Team who in turn perform their own testing to complete the testing cycle.

System Integration Testing

System Integration Testing of application code (that includes Decision Table code) corroborate that the application components integrate and function together as intended. The CBMS Testing Team is responsible for system integration testing.

Technology Operations

The CBMS production operations function is independently structured and divided into distinct responsibilities between the DRC infrastructure team, EDS and the Department of Information Technology. Each agency is responsible for specific, contractually obligated technical and production operation functions. DRC is responsible for the portal, Citrix farm infrastructure and the deployment of the CBMS applications, EDS is responsible for the Tuxedo cluster and the database server platform and DoIT is responsible for the maintenance of the infrastructure platform.

The CBMS architecture includes HP9000 N-Class servers, HP-UX operating system software, Oracle relational database management system, vendor-neutral transaction processing and application services, CA Unicenter TNG, web services, Internet connectivity and security.

System Linked Technology

CBMS links to systems external to the eligibility function, which is integral to efficient business processes. These external systems provide essential support functions, such as security to maintain the confidentiality of privileged data, efficiency in reducing paper, and reporting in order to forecast and analyze welfare trends in the state.

Technology Infrastructure

CBMS is a shared infrastructure environment and must be managed by Computer Associates UniCenter TNG systems administration products. Access to and from legacy ADABAS applications and data will be provided using the Software AG Entire Database Server product. This environment consists of the following components:

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- Host Processing Site
- Colorado Information Network (CIN) WAN
- County LAN/MAN
- County Server Systems
- Client Workstation Environment
- Non-county MA Environment
- Remote Access Services
- Computer Associates UniCenter Products

The State provides workstations, Internet access, networks and local (county) servers.

Manage Changes

These controls are intended to provide reasonable assurance that system changes of non-financial and financial reporting significance are authorized and appropriately tested before being moved into production. As discussed earlier in the report, CBMS Management has developed a CBMS Change Control process, and a CBMS Defect/Approved Change Request (DACR) process to manage CBMS changes.

CBMS Change Control Process

The Change Control Document describes the process to be followed for reviewing, estimating, prioritizing, approving and implementing CBMS change requests. Additionally, it describes how changes are accomplished to the CBMS application, decision tables, valid values, client correspondence or training materials that are outside the scope of the currently approved design. Rule changes within DHS and HCPF may be initiated through mandatory federal or state legislation or through requests by CBMS users such as counties and Medical Assistance sites.

Management Documentation

Part of managing change includes the management of documentation as a natural part of system modification. As application modifications are identified, documentation captures the necessary information such as identity of work products and deliverable elements that are impacted.

I. Computer Operations and Access to Programs and Data

This domain considers procedures for the actual delivery of required services, which range from traditional operations to security and access management. To deliver services, the necessary support processes must be set up.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Define and Manage Service Levels

CBMS Service Level Agreements (SLA) is an aspect of EDS's performance for which an acceptable service level is explicitly defined. SLAs define performance criteria expected to be achieved and maintained for the ongoing operations of CBMS. Each SLA details the documentation that is required to validate compliance.

These SLAs have been revisited since the original contract signing through meetings and discussions that both parties have agreed upon (the last update took place in August 2004). The parties that have been involved in the development of the service level agreements have been the DHS Chief Technology Officer (CTO) and Chief Information Officer (CIO), the HCPF CIO, and other DHS and HCPF technical staff.

EDS must perform all listed services in accordance with the State/EDS contract and the requirements outlined in the Service Level Agreement. EDS is required to submit monthly status reports that provide details around the Service Level Agreements. Management from OCBMS, DHS, and HCPF review the status reports to ensure that all requirements detailed in the SLA are being met. Liquidated damages may be applied due to noncompliance.

Manage Third-Party Services

CBMS management staff monitors EDS's performance to ensure all contract obligations are being met. Weekly meetings between CBMS management and EDS management are held to discuss CBMS activities, such as CBMS build schedules, staffing, problems and maintenance processes. Again, EDS is required to submit monthly status reports to the DHS CTO for the State's review. These status reports are intended to provide CBMS management with the information regarding the contractor's achievements and service level performance.

Resources Available

CBMS management has ongoing discussions with EDS regarding staff resources to ensure that quality and timely work is being completed.

Ensure Systems Security

These controls are intended to provide reasonable assurance that CBMS is appropriately secured to prevent unauthorized use, modification, damage or loss of data. Security linked technologies, available through CBMS, will address a number of areas, including the Security Module and user-security profiles. A security profile determines user access to information and the user's ability to manipulate data elements within CBMS. This component will ensure the integrity of the information included within CBMS, because only authorized individuals are given permission to enter or otherwise manipulate client or system data.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

The CBMS Security Module includes safeguards to protect the integrity of the programs administered and to prevent unauthorized access to the system or its information.

Additionally, CBMS security includes the following components:

Physical security. At the mainframe level, perimeter access is restricted through a coded access card system that is capable of recording unauthorized access attempts and deactivating unauthorized cards. Other physical security features include a fire suppression system, smoke detectors and electrical alarms.

Program integrity. CBMS safeguards exist to deter potential program abuse. The system identifies the source of any changes to a case file. This feature, combined with expanded reporting capabilities at the local, office, district and program level, provides supervisory and management personnel with a mechanism for analyzing case actions at the individual financial worker level.

Access control. This includes password protection to restrict user access to varying hierarchical levels of systems, applications, data and/or functions based on user functional responsibility. CBMS does restrict case access under certain conditions. Passwords restrict access to data on a need to know basis as well as govern access to functional capability, including inquiry only capabilities. Password protection includes safeguarding the Departments from unauthorized modifications to CBMS.

Access control extends to the operating systems and management structures of the various platforms and network systems. Only authorized technical/supervisory personnel will be able to access the operating systems, administrative utilities, and management information of these systems.

Back up and recovery. Adequate backup and recovery features ensure the service delivery function can continue in cases of system unavailability due to a disaster. Further, adequate back up and recovery allows for system reconstruction if a disaster should occur.

Security Administration

Security features are only effective if used in tandem with a prescribed security plan. CBMS has a Security Officer to ensure the features built into the system are effective. This security function includes periodic audits of processor site(s), either on site or by a remote administrator, as well as periodic changes in user Ids and passwords for the system and supporting networks. User/ID password management is supported by security software that ages passwords and requires a user to obtain a new password at regular intervals.

Each agency has a Security Administrator and is responsible for assigning security to agency employees. HCPF takes responsibility for providing security to MA sites and county security administrators take on this role for county staff.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Manage the Configuration

These controls are intended to provide reasonable assurance that all CBMS components are well protected from unauthorized changes. Additionally, they assist in the verification and recording of the current configuration. Version management involves managing specific versions of configuration items (hardware and software) on devices that are required to support CBMS. Version management varies by device. CBMS items to be placed under configuration are categorized as software, hardware and knowledge.

CBMS management have established methods that are intended to ensure that properly coordinated and tested CBMS changes are put into production. Changes to CBMS are communicated through various methods, including CBMS communications and regular meetings. The CBMS Test Team prepares their test plans for each change or fix and documents their findings.

EDS is responsible for ensuring the system infrastructure, including firewalls, routers, switches, servers and other related devices are properly configured to prevent unauthorized access. EDS provides status updates to CBMS management via regular meetings or e-mail. These status updates provide management with information regarding EDS's progress towards meeting their responsibilities.

Manage Problems and Incidents

These controls are intended to provide reasonable assurance that problems are properly addressed, documented, and investigated for proper resolution. CBMS management has defined and implemented a problem management process which is intended to ensure that operational events that are not part of standard operation are recorded, analyzed and resolved in a timely manner.

If a problem has been raised, it must be managed to closure. CBMS management's primary objectives for managing problems are:

- Problems are reported and recorded correctly.
- Problems are assigned an appropriate severity level based on customer impact.
- Problems are managed to resolution within resolution criteria.
- Closed problems are validated.
- Duplicate and recurring problems are recognized and handled.
- Problems that impact the delivery of applications or system service are reported to management.
- Problems are escalated when not resolved within criteria.

Since implementation of CBMS on September 1, 2004, issues and problems were addressed by utilizing the following methods:

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- Priority one tickets come across on a pager to the CBMS Director and the Application Manager. The Subject Matter Experts are also notified of a CBMS priority one ticket through the Unicenter ServicePlus Service Desk software on their desktop. The Subject Matter Experts review the priority one help desk ticket and complete a number of steps to resolve the issue.
- In May 2005, the Help Desk Level 3 Unit was established to handle all CBMS Level 3 Help Desk tickets. This unit now receives and reviews all Level 3 tickets and contacts the user for more information, reviews data entry of the case into CBMS, contacts user for resolution and documents the resolution.
- CBMS communication e-mails are written and delivered to all CBMS users relating to CBMS updates such as problems, fixes, issues, workarounds, new procedures, reports, system down time and clarification of CBMS topics.
- Change Request documents contain documentation relating to problems and concerns that arise with the gathering of requirements, development, test and putting the change into production. The documentation is discussed at the appropriate manager meetings with follow up assignments made and mitigation plans developed. The Change Request Board meets every two weeks and problems are discussed (Committee members on this board include program area staff and county staff who have voting rights on change request prioritization).
- When a problem arises and the problem meets the criteria of topic and urgency, a “tiger” team is pulled together with the appropriate members consisting of specific program policy staff, CBMS staff and technical staff. This team is assigned the task to quickly analyze the problem, look at solutions and recommend a solution that best fits the problem.
- Problems are discussed at the weekly CBMS management meetings held on Monday mornings and at the CBMS Executive Management meetings held on Wednesday mornings and emergency meetings when appropriate.
- Change Control Author’s and Manager’s documents are updated with any problems and issues that develop during the approval process and during the development stage of the change control.
- Specific CBMS managers are assigned to analyze the problem and seek a potential resolution. Resolved problems are tracked and updated by each assigned CBMS staff member on the status reports and communicated back to the appropriate CBMS manager and other teams. They follow up with the appropriate person, who includes state policy staff and propose a resolution. Lists of open and closed problems are available from each Subject Matter Expert and Interface and Report team members.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- CBMS managers track issues and problems on their weekly status report to the PMO and every Tuesday afternoon the OCBMS management staff review the global schedule which reflects the weekly status report updates. Managers are responsible for identifying problems and working on a resolution with a timeframe.

EDS is responsible for operating the host-site servers and managing problem resolution as a normal part of this activity. Referrals of county/state Level 3 help desk problem calls and all levels of help desk problem tickets may require resolution by operators, system administrators, or database administrators.

Periodic reviews of problem reporting may indicate a trend of problem occurrences, which require resolution in partnership with the state's infrastructure vendor or the CITS data center organization. Likewise, remedial actions may require researching, installing, and testing corrective fixes from the various hardware vendors. These in turn will require proper scheduling to minimize the impact on all the stakeholders in the performance and availability of CBMS.

Manage Data/Operations

Audit and control considerations are especially important in large, decentralized departments that are implementing on-line, user interactive systems where a large number of geographically dispersed staff with diverse skill levels and responsibilities interface directly with the system. Audit and control features apply to all areas of the system and must be taken into account as an integral part of the overall system architecture.

The CBMS audit and control requirements are described in the next paragraphs. These are data control, error correction, and audit trails.

Data Control

CBMS contains a sufficient number of controls to maintain the integrity of the data and information involved. There are three types of controls:

- **Preventive Controls.** Controls designed to prevent errors and unauthorized events from occurring.
- **Detective Controls.** Controls designed to identify errors and unauthorized transactions that have occurred in the system.
- **Corrective Controls.** Control designed to ensure the problems identified by the detective control are corrected.

These controls are in place at all the appropriate points of CBMS processing.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Error Correction

The CBMS on-line editing is intended to provide immediate correction of data entry errors in cases where data entry controls have been established. Error correction procedures in an interactive environment primarily relate to manual procedures, which are outside the control of CBMS. Automated on-line policy enforcement edits require immediate correction, which prevents many input errors.

Audit Trail

Audit trails are incorporated into CBMS to allow information on source input and/or documents to be traced through the processing stages to the point where the information is finally recorded. CBMS has the ability to trace data from the final place of recording back to the source of input. The audit trails consist of listings, transaction reports, update reports, transaction logs, and error logs. Access to audit trails requires CBMS involvement and is not typically directly available to end users.

Backup

Backup, Recovery and Archive

The EDS strategy for backing up the servers and storing backups is performed using HP OpenView Data Protector Software and the HP SureStore tape Library 6/60 attached to HSGCCU13.

All directories on the servers are backed up, including OS files, applications and utilities, and data. A full backup is performed each Friday evening and incremental backups are performed on all other days. In addition, full backups are performed on the last Sunday of each month, each quarter, and each year.

Retention of Backups

Retention of backups is based on guidelines established between the State of Colorado and EDS.

Backup Frequency	Retention Period
• Daily	18 days
• Weekly	8 weeks
• Monthly	13 months
• Quarterly	5 quarters
• Annually	2 years

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Storage of Backups

The tape libraries automatically store backup tapes and manage the tape rotation. Each tape library holds 60 tapes. The retention period for each backup is stored in the Data Protector Database.

Tapes are moved off site from the DoIT Data Center to Sherman Street.

These controls provide reasonable assurance that data recorded, processed and reported remain complete, accurate and valid throughout the update and storage process.

The procedures for creating backups and restoration are the responsibility of EDS with review and approval from the State.

J. Help Desk

The CBMS Help Desk is a critical function of CBMS that is intended to provide reliable, quality support for all users of the CBMS application. The CBMS Help Desk provides three levels of support to meet user needs efficiently and cost effectively. These levels are:

Level 1. The Level 1 technician is responsible for taking calls, determining the scope of the problem and creating a help desk ticket. If possible, the technician will attempt to resolve the problem. However, if the technician is unable to resolve the problem the ticket must be forwarded to a Level 2 technician.

The Level 1 technician also reviews the ticket database for resolved tickets and contacts the user to verify that the problem was resolved. After verification, the Level 1 technician closes the ticket.

Level 2. The Level 2 technician is responsible for resolving more detailed problems. Upon resolution, the Level 2 technician records the solution in the ticket database and sets the ticket status to Resolved. If the Level 2 technician is unable to resolve the ticket, it must be forwarded to a Level 3 technician.

Level 3. The Level 3 technician has the most knowledge and experience available within the Help Desk. The Level 3 technician contacts the user and resolves the ticket or obtains more information, as required. Upon resolution, the Level 3 technician records the solution in the ticket database, and sets the ticket status to Resolved.

The following table describes the responsibilities for the three levels of Help Desk technicians:

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Help Desk Level	Responsibilities
Level 1 – Customer Interface Technician (DHS Help Desk Located at 1575 Sherman Street) All help desk tickets whether they are a Level 1, 2, or 3 have to go through the DHS Help Desk	<ul style="list-style-type: none"> ▪ Answer calls ▪ Determine scope of problem ▪ Log tickets ▪ Assign priority ▪ Maintain history database ▪ Work problems that can be resolved quickly ▪ Forward tickets to Level 2, if unresolved ▪ Contact users after tickets are resolved to verify a satisfactory solution and close ticket
Level 2 – Experienced CBMS Technician (EDS Help Desk Located at 455 Sherman Street)	<ul style="list-style-type: none"> ▪ Resolve lengthy and more difficult problems ▪ Resolve most problems at this level ▪ Provide feedback to Level 1 through documentation in ticket ▪ Manage CBMS functional issues ▪ Forward tickets to Level 3, if unresolved
Level 3 – Most Experienced CBMS Technician & Production Support Team Located at the CBMS Site – 455 Sherman Street	<ul style="list-style-type: none"> ▪ Resolve the most difficult problems ▪ Provide feedback to Levels 1 and 2 through documentation in ticket ▪ Work with the State and other agencies on issues not resolvable by CBMS staff

The three-level approach is tailored into two support modes to leverage existing procedures and facilities that are in use by the State. The first support mode mirrors the Department of Human Services customer support process. The second support mode is designed to provide support to users at Medical Assistance (MA) sites.

State and County User Support

State users and some county users report problems and support needs directly to the DHS Help Desk while the remaining county users have a county Help Desk where they make first contact with the support process. If the county Help Desk is unable to satisfy the user’s needs, the problems are escalated to the DHS Help Desk. The state and county Help Desks provide Level 1 and Level 2 support for users. Level 3 support will be provided by the CBMS help desk.

Medical Assistance Site User Support

The EDS help desk is designed to provide a thorough level 1-3 support for all HCPF and MA site users. This efficient approach allows timely and complete follow through of issues raised by users.

Problem Prioritization

Problems are managed based on the priority level assigned. Problem priority is critical to identifying the magnitude and scope of the problem being experienced by the user. It also defines the urgency and level of resources that must be applied to the problem to affect an appropriate resolution. The following table describes the priorities currently in use by the DHS and CBMS Help Desk:

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Office of the Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Priority	Type of Problem	Response
1	A critical application or service is totally unusable or unavailable for multiple users. Impact on the customer is disabling.	<ul style="list-style-type: none"> ▪ Notification – 15 minutes ▪ Assignment – 15 minutes ▪ Resolution or plan for resolution – 4 business hours
2	Ability to use a critical system, application, or service is severely limited. Impact on customer is severe.	<ul style="list-style-type: none"> ▪ Notification – 2 hours ▪ Assignment – 2 hours ▪ Resolution or workaround – 3 business days
3	Ability to use a production system, application, or service with some degradation of features or services normally provided is possible. Impact on customer is apparent but not disabling or severe.	<ul style="list-style-type: none"> ▪ Notification – 2 hours ▪ Assignment – 4 hours ▪ Resolution or workaround – 14 calendar days
4	Problem is apparent, but circumvention or alternative is available. Impact on customer is minimal.	<ul style="list-style-type: none"> ▪ Notification – 2 hours ▪ Assignment – 4 hours ▪ Resolution or workaround – 30 calendar days
5	This priority is reserved for problems that do not fit into the above priorities.	<ul style="list-style-type: none"> ▪ Notification – 2 hours ▪ Assignment – 4 hours ▪ Resolution or workaround – 60 calendar days

According to their county department infrastructure support option, counties may commit to providing first line and other support to their network users. The options and associated support are set forth in the chart below:

Support Option	Support Provided
Option 1	County support staff will meet Helpdesk and Desktop Support/Server Services needs for their users, and in some cases, infrastructure/connectivity. The counties will support all network files and print services as well as all county applications. If an unresolved problem relates to core applications and equipment, then county support staff will place a call to the DHS State Helpdesk. However, if the problem is caused by the county's misuse of the equipment, the repair and/or replacement of such equipment will be at that county's expense and replaced only after a county purchase order is presented to the provider of the equipment. The DHS Helpdesk will either resolve the problem or generate a ticket and direct the call to DRCs support staff. No problems from end users will be accepted from Option 1 sites.
Option 2	Option 2 network users will contact the DHS State Helpdesk as their first line of support. The DHS Helpdesk will either resolve the problem or generate a ticket and direct the call to DRCs support staff. Problems relating to non-State-standard applications will be directed back to county support personnel for resolution. If the problem is caused by the county's misuse of the equipment, the repair and/or replacement of such equipment will be at that county's expense and replaced only after a county purchase order is presented to the provider of the equipment.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Support Option	Support Provided
Option 3	Option 3 counties have elected to provide all support to their users except issues relating to network hardware repair or network infrastructure hardware operations. In such cases, the county support staff will place a call to the DHS State Helpdesk staff, which will either resolve the problem or place a ticket to transfer the call to DRCs support staff. No problems from end users will be accepted from Option 3 sites. If the problem is caused by the county's misuse of the equipment, the repair and/or replacement of such equipment will be at that county's expense and replaced only after a county purchase order is presented to the provider of the equipment.
State Users	Infrastructure at the State Child Welfare and Division of Youth Correction facilities is totally supported by the State. This includes administration, troubleshooting, upgrades and fixes. Problems and questions with Trails, CBMS, and CFMS applications will be reported through the DHS State Helpdesk and forwarded to the appropriate application helpdesk through the CA Advanced Helpdesk tool.
Children Youth and Families/ CBMS Training Sites	Infrastructure at the 3 training sites are supported by DRC support staff as Option 1 sites. Training sites are: Pinnacle (Denver), Grand Junction, and Colorado Springs.

K. CBMS Training

Background on CBMS Development/Training Timeframe

The key to a successful training program is the completion of a thorough analysis of training needs. As stated earlier in the report, the State contracted with Dynamic Research Corporation (DRC) to develop the CBMS Training Plan, the training curriculum, scheduling, as well as the design of training materials and tools. State CBMS staff reviewed and approved the training plan, all training materials and other pertinent documents.

DRC also developed Computer-Based Training (CBT) modules to supplement the content used in the classroom setting.

CBMS Training after Implementation

After CBMS implementation, the CBMS Training Team prepared training sessions, curriculum and power point presentations for CBMS users across the state. These sessions focused on critical areas that give users the most difficulty. Additionally, data from the help desk identifies trends or areas with significant problems. This data is reviewed to determine areas for specific training focus.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Online Help Screens

The online help screens are available for each CBMS screen and maintained by the CBMS Training Team. The online help screen function is context sensitive and provides help at the field level. It provides instruction to the user on how to use the field and explains the drop down options that are available to the user. A help index is available and can be used to access specific subjects.

Summary

The information presented above is designed to provide the reader a brief description of the activities performed by CBMS. CBMS' management believes the activities are appropriate for the services provided.

CBMS' specific control objectives and related control activities are included in Section V of this report, "Information Provided by the Service Auditor," and captioned as "Provided by CBMS." Although the specific control objectives and control activities are included in Section V, they are nonetheless an integral part of CBMS' description of controls.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Section V
Information Provided by the Service Auditor**

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Findings and Recommendations

Introduction

Our responsibility was to express an opinion about whether:

- The description of controls presents fairly, in all material respects, the relevant aspects of the Colorado Benefits Management System (CBMS) controls that had been placed in operation from January 1, 2005 through June 30, 2005.
- The controls, as provided in the CBMS description of controls, are suitably designed to provide reasonable assurance that the specified control objectives would be achieved if the described controls were complied with satisfactorily and the client organizations applied the internal control structure controls contemplated in the CBMS controls.
- The controls were operating with sufficient effectiveness to provide reasonable, but not absolute, assurance that the control objectives, specified by CBMS management, were achieved during the period covered by our report.

We identified opportunities for improving the controls associated with the Colorado Benefits Management System. This section contains recommendations regarding the effectiveness of controls specified by CBMS' management.

It should be noted that in most instances, the recommendations are the logical result of an exception noted during the examination. However, a recommendation may refer to control objectives and activities that did not exhibit an exception during the examination. In these instances, we found through our testing that CBMS successfully met the objective but we are making a recommendation to offer improvements to current established controls.

User Training

Prior to the implementation of CBMS, the State contracted with Dynamic Research Corporation (DRC) to develop and manage CBMS training. Prior to the system going live, DRC was responsible for developing a training plan, training classes, curriculum, and training materials and tools. Subsequent to CBMS implementation, additional training functions and enhancements to on line help screens have been implemented by the CBMS training team. Users can submit training requests through various sources, including the County Users Group (CUG) and the Director's Association.

CBMS management reports that controls in place are intended to ensure that CBMS users have an avenue to voice their training needs and that these needs are addressed in a timely fashion. Additionally, the controls provide assurance that training methodologies and approaches are consistently monitored to ensure that staff receive effective training. During our examination, we found that during the January 2005 through June 30, 2005 period, training requests were accom-

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

modated to the degree possible (see Figure 23.2 later in this section). However, we noted that many user training requests were not met. Additionally, there was minimal monitoring of training activities and methodologies to ensure that adequate training was being provided to end users.

OCBMS, DHS and HCPF needs to place more emphasis on end user support training. A critical component of an effective system of internal control is adequately trained staff, and a key component of supporting stated user controls is to ensure timely response to user training needs. Failure to respond to user training requests and the absence of monitoring the effectiveness of current training efforts can result in improper system usage, inaccurate user data input and incorrect benefit payments.

Recommendation 1

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should ensure that adequate training is developed and offered to end users by:

- a) Evaluating the sufficiency of Colorado Benefits Management System resources and the staff organization responsible for identifying, prioritizing, developing, implementing, and monitoring requested training.
- b) Consulting with end users to identify critical training needs and immediately develop training classes to meet those needs.
- c) Considering implementing a requirement that all county, Medical Assistance site, and Department employees with a need to utilize the Colorado Benefits Management System (CBMS) attend core training courses. Users' continued access to CBMS should be contingent upon completion of the core training courses within a specified period of time, and in the case of new users, should be completed prior to obtaining security access to CBMS.
- d) Taking steps to remediate identified weaknesses and evaluate contracting with a third party to mitigate key training needs and implement an effective long term training solution.

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: Ongoing.

Since the audit time frame, the Office of CBMS has developed a large number of training courses and has been offering them to all end-users. The courses include: (1) CBMS 101,

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

102, and 103; (2) CBMS Business Objects 101, 102, and 103; (3) CBMS Security 101 and 102; (4) CBMS Basic Training 101; and (5) Adult Protection Services Training. The Office of the Colorado Benefits Management System has always made CBMS training available and will continue to do so. OCBMS has a fully staffed training unit now and user requests are prioritized through the Training Advisory Group (TAG) which is also comprised of the County User Group (CUG) and training classes and/or procedures are developed. OCBMS will continue to offer end-users adequate training.

Department of Health Care Policy and Financing Response:

a) Agree. Implementation Date: August 2006.

The Department of Health Care Policy and Financing (HCPF) defers this response to the Office of CBMS since it involves the evaluation of Office of CBMS resources. HCPF does agree to continue to contribute programmatic resources to training.

b) Agree. Implementation Date: August 2006 and Ongoing.

The Departments and the Office of CBMS (OCBMS) have formed a Training Advisory Group comprised of staff from OCBMS, the Department of Health Care Policy and Financing (HCPF) and the Department of Human Services as well as representatives from the counties and medical assistance (MA) sites. The Training Advisory Group was formed in response to the varied policy and technical training needs of the counties and MA site staff. Training plans will be developed and implemented based on assessments and Training Advisory Group recommendations by August 2006. HCPF also assesses training needs and supports end users through Medicaid Eligibility Quality Control on-site visits and Eligibility Policy trainings. Training plans will be developed and implemented based on assessments and Training Advisory Group recommendations.

c) Agree. Implementation Date: December 2006.

The Department of Health Care Policy and Financing's response is the same as for Recommendation 3 in the *Eligibility Determinations for Federal Benefit Programs Performance Audit (Report No. 1735, dated April 2006)*. "The Office of CBMS is responsible for providing core training. HCPF defers to the Office of CBMS to respond to the recommendation about core training and requiring training prior to system access."

d) Agree. Implementation Date: August 2006 and Ongoing.

The Department of Health Care Policy and Financing's approach to the remediation of weaknesses is detailed in the response to Recommendation No. 1b. HCPF will leave the evaluation of contracting with a third party to the Office of CBMS.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Department of Human Services Response:

Agree. Implementation Date: Ongoing.

Since the audit time frame, the Department of Human Services has formed the Training Advisory Group (TAG). This group is comprised of staff from the Office of CBMS, Department of Health Care Policy and Financing and the CBMS County User Group. This group has supported the development and implementation of the following courses: (1) CBMS 101, 102, and 103; (2) CBMS Business Objects 101, 102, and 103; (3) CBMS Security 101 and 102; (4) CBMS Basic Training 101; and (5) Adult Protection Services Training. This group will continue to improve the training program.

Help Desk Operations

The DHS help desk was designed to provide reliable, responsive, and effective support for all users of the CBMS application. CBMS users report problems to help desk technicians who create tickets and assign priority levels based on the urgency and level of resources necessary to resolve the problem. Upon resolution of a ticket, a help desk technician must contact the user to verify that the problem was resolved.

The Office of CBMS and DHS have established goals and control objectives that are intended to provide reasonable assurance that help desk tickets will be handled in an expedited manner with quick resolution that is communicated to the user. However, during our examination, we found that the DHS help desk lacked effective communication with users during the January 2005 through June 30, 2005 period, particularly relating to standards on how to follow up on open tickets. It was also noted that a goal to monitor error trends among counties was not completed.

The DHS help desk is a critical point of support to users of the CBMS system. It is imperative that communication between the DHS Help Desk and CBMS users is improved so that problems are resolved in a timely manner. Further, monitoring error trends is an effective tool to identify which counties are continuing to experience the same problems and ensures that these problems will be addressed timely.

Recommendation 2

The Office of the Colorado Benefits Management System and the Department of Human Services should improve the DHS help desk function by:

- a) Implementing policies and procedures that establish specific time periods relating to follow up on open tickets.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- b) Implementing a monitoring and reporting function so that error trends among the counties are identified and addressed in a timely manner.

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: September 2006.

The Office of the Colorado Benefits Management System with support from the Department of Human Services and the Department of Health Care Policy and Financing has improved the CBMS help desk function since the audit timeframe by: (1) decreasing the outstanding active Help Desk tickets from over 4500 in March 2005 to under 2000 now; (2) reinforcing policies and procedures that establish specific time periods relating to follow up on open tickets; (3) participating with DHS in their ongoing feasibility study and their new business model which includes the Help Desk process; (4) posting of a DHS weekly ticket report on the portal. This allows users to view the status of their help desk ticket(s); and (5) reviewing old help desk tickets before January 2006; and (6) called the counties and closed a large number of old help desk tickets pre November 2005.

The Office of CBMS will work with the Department of Human Services Help Desk to implement a monitoring and reporting function so that error trends among the counties are identified and addressed in a timely manner. OCBMS will utilize the CDHS CA Service Center to accomplish the monitoring of error trends.

Department of Human Services Response:

a) Agree. Implementation Date: Implemented.

To the extent this recommendation relates to the DHS Help Desk (tier 1 &2), procedures regarding specific time periods related to follow-up on open tickets have been documented. An example of this procedure can be found in this audit report in Section J located in the table that describes priority levels and response time to open tickets.

b) Agree. Implementation Date: December 2006.

The DHS agrees with this recommendation. During the time period of this audit some initial steps were taken to address error trends. Some of these are: a “knowledge base” (documents and outlines known problems and possible solutions) was established for reference by CBMS users and Help Desk technicians; data mining of help desk tickets occurred to search for common problems; the email process for closing tickets was modified to notify the requestor and notify another county selected key individual; a process was in place to aid in the identification of the root-cause of a problem that had been resolved, etc. Since July 2005 additional actions have been taken, examples are: all

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

help desk tickets were analyzed to ensure they were being addressed by the appropriate group (tier 3); all tickets were reviewed to ensure that all tickets with related problems were grouped together (parent/child tickets); help desk tickets are being categorized on a weekly basis to indicate priority level, volume, and program areas (including counties) that need to be addressed; a task force was formed as part of the Departments New Business Model project to review all outstanding complaints regarding the help desk process and propose and implement solutions. This is an ongoing effort that is constantly looking for ways to improve. The next planned step by DHS is to procure a more robust reporting tool to further improve the department's ability to research and report data to the users and search for problem trends.

Source Code Version Control

The CBMS development contract outsourced the development tool suite, project development methodology, and management of the hardware and technical architecture to EDS. As stated earlier in the report, EDS is contractually obligated to provide all changes to the application software, database, and rules engine. As such, EDS has control over any changes that are made to CBMS source codes.

CBMS management reports that controls in place are intended to ensure that old source codes can be retrieved and put back into production, and that the methodology for controlling changes to application software and different versions of that software is monitored. However, during our examination we noted that CBMS did not maintain version control documentation to ensure that all software versions and software changes were appropriately monitored.

The ability to restore to a previous version of software is critical in the event a software update encounters a critical or fatal flaw. Maintaining clear documentation of the status of production and previous versions of software is vital to achieve this goal.

Recommendation 3

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should take steps to monitor EDS source code back up version documentation by implementing a backup and production version control status report with EDS.

Office of Colorado Benefits Management System Response:

Agree. Implementation Date: August 2006.

The Office of CBMS has hired a Technical Manager to perform the technical tasks such as issues/problems/solutions that might arise. This person will be working closely with

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

EDS. The Office of CBMS will take the necessary steps to monitor EDS source code backup version documentation by implementing a backup and production version control status tracking report with EDS.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: Ongoing.

The Department of Health Care Policy and Financing (HCPF) defers to the Office of CBMS on this recommendation. The Office of CBMS is responsible for working with the vendor that maintains the source code. HCPF will recommend to the OCBMS to implement a Source Code Version Control process and to report on it regularly to the Department. HCPF will actively participate in the review of the Source Code Version Control report.

Department of Human Services Response:

Agree. Implementation Date: August 2006.

The Department of Human Services assisted the OCBMS in the hiring of a Technical Manager to perform the technical tasks such as issues/problems/solutions. The Department works closely with the Technical Manager and will provide support/assistance to the OCBMS in the development of the steps to monitor EDS source code backup version documentation by implementing a backup and production version control status tracking report with EDS.

Internal Controls over CBMS

CBMS is defined as a system that supports a single-purpose application in a one stop environment and integrates client-based automated systems to improve worker productivity and client services. The CBMS initiative focused on consolidating and eliminating existing antiquated legacy systems in an effort to streamline and standardize eligibility determinations.

Due to the complexity and volume of benefit eligibility information that CBMS processes on a daily basis, strong internal controls over the system are vital. Ultimately, it is DHS's, HCPF's and OCBMS's joint responsibility to ensure that controls over CBMS are adequate and that benefit eligibility information is accurate. In order to determine whether the internal controls in place over the system are adequate, periodic reviews must be conducted of the system's internal controls. Such reviews are required under the American Institute of Certified Public Accountants Statement on Auditing Standards (SAS) No. 70, Reports on the Processing of Transactions by Service Organizations. Under the Standard, there are two types of SAS 70 audits, Type 1 and Type 2. A Type 1 report describes the service organization's controls at a specific point in time,

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

while a Type 2 report includes the service organization's description of controls, as well as detailed testing of the service organization's controls over a minimum six month period. OCBMS, DHS, and HCPF jointly are considered the service organizations for CBMS; as such, they maintain responsibility for CBMS controls.

We performed this SAS 70 Type 2 examination under contract with the Office of the State Auditor (OSA) in order to assist the OSA in obtaining assurance regarding CBMS controls in place during the period of January 1 through June 30, 2005. However, from the counties' perspective, CBMS is a service organization for the purposes of processing eligibility determinations for twelve high-level program groups. As the service organization, it is the responsibility of CBMS management to plan for the provision of future SAS 70 Type 2 examinations.

Additionally, Electronic Data Systems (EDS) is the primary service provider for CBMS. While OCBMS, DHS and HCPF provide key management services, the State/EDS contract requires that EDS provide timely and systematic software development and modifications to CBMS, appropriate levels of CBMS testing, maintenance of CBMS systems documentation, and the smooth migration of accepted software modifications into operations. EDS is responsible for all changes to the application software, database and rules engine, as well as providing "bug" fixes and trouble shooting. Thus, EDS is acting as a key service provider to CBMS on behalf of the state agencies.

The CBMS controls contained in this SAS 70 report include both EDS controls and State controls. The State's activities that are designed to monitor EDS controls are also included. Many of the controls referenced in Sections 10 and 21 of the testing matrix are under the purview of EDS. Since EDS can be defined as a service organization to the State, it is critical that OCBMS, the Department of Human Services, and the Department of Health Care Policy and Financing jointly obtain a SAS 70 Type 2 examination of EDS in order to provide assurance that EDS has implemented effective controls over activities and processes affecting services provided to CBMS and the State. The Office and Departments should consider accomplishing this objective by including a review and testing of EDS controls in the next SAS 70 engagement of CBMS.

Recommendation 4

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should ensure that SAS 70 Type 2 examinations of the controls in place within the Colorado Benefits Management System are conducted on a regular basis.

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: February 2007.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

The Office of the Colorado Benefits Management System will work with the Department of Health Care Policy and Financing and the Department of Human Services to jointly ensure that a SAS 70 Type 2 examination of the controls in place with CBMS are conducted on a regular basis.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: July 2006 and Ongoing.

The Department of Health Care Policy and Financing agrees to jointly request ongoing funding for an independent SAS 70 auditor for CBMS with the Department of Human Services and the Office of CBMS.

Department of Human Services Response:

Agree. Implementation Date: February 2007.

The Department of Human Services will work with the Department of Health Care Policy and Financing and the Office of the Colorado Benefits Management System to jointly ensure that a SAS 70 Type 2 examination of the controls in place with CBMS are conducted on a regular basis.

Recommendation 5

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should expand the scope of future Colorado Benefits Management System SAS 70 Type 2 examinations to include a direct examination of EDS services provided to the state.

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: February 2007.

The Office of the Colorado Benefits Management System will work with the Department of Health Care Policy and Financing and the Department of Human Services to expand the scope of future Colorado Benefits Management System SAS 70 Type 2 examination to include a direct examination of EDS services provided to the State.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: July 2006 (contingent on funding).

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

The Department of Health Care Policy and Financing agrees to jointly request, with the Department of Human Services and the Office of CBMS, the inclusion of EDS in future SAS 70 audits for CBMS.

Department of Human Services Response:

Agree. Implementation Date: February 2007.

The Department of Human Services will work with the Department of Health Care Policy and Financing and the Office of the Colorado Benefits Management System to expand the scope of future Colorado Benefits Management System SAS 70 Type 2 examination to include a direct examination of EDS services provided to the State.

Implement a Risk Assessment Framework

Risk management is the process of identifying, analyzing, mitigating and tracking risk in order to minimize the impact of risk on the project. An effective risk assessment process provides important guidance when reviewing and implementing controls to ensure the confidentiality, integrity and availability of information. Risk assessment activities should occur at the entity (organizational) and activity (specific project) levels.

The Office of CBMS reports that a risk assessment framework has been implemented at the entity and activity levels. This framework is intended to provide reasonable assurance that risks are identified and that a mitigation plan is developed and implemented. During our examination, we found that a risk management committee was created prior to the implementation of CBMS and a risk assessment framework was designed. However, this committee was dismantled in September 2004 and there is no evidence that a risk assessment framework was maintained subsequent to the implementation of CBMS. Further, CBMS Control Objective No. 6 on pages 70 through 71 of this report indicates a commitment to continuous and active risk assessments. However, we found that while periodic meetings are held to discuss risks, there were no formal risk assessments performed after the implementation of CBMS.

The lack of controls to identify, assess and manage risks could limit CBMS' ability to provide accurate and efficient processing of eligibility determinations and benefit issuance for welfare and medical assistance programs administered by HCPF and DHS.

Recommendation 6

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should create and implement an entity and activity based risk assessment framework that includes:

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

- a) Implementing an ongoing risk assessment calendar at the entity level. The risk assessment should consider threats and vulnerabilities, the potential frequency of identified threats occurring, the impact and types of potential losses resulting from threats to CBMS information related assets and the potential safeguards that could mitigate the impact of identified vulnerabilities and threats.

- b) Incorporating appropriate formal risk assessment processes at the activity level.

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: September 2006.

During the audit period of January 2005 through June 30, 2005, OCBMS had limited resources to complete all of the tasks required. Since this period, the project hired a Technical Manager and a Quality Assurance Manager and these two people will lead the effort to address this recommendation. During the audit period of January 2005 through June 30, 2005 risk assessment was addressed daily through the following meetings activities: (1) CBMS team lead meetings every Monday morning; (2) CBMS Executive meetings every Wednesday and Thursday mornings (3) CBMS project management review of projects meetings every Tuesday afternoon (4) CBMS Project Managers document risks for their individual projects on their weekly Status Reports (5) CBMS decision table meetings; (6) Change Control Board; (7) ad hoc meetings related to specific issues/problems; (8) Tiger Teams; and (9) Quick Response Teams to address specific issues.

The Office of the Colorado Benefits Management System will work with the Department of Human Services and the Department of Health Care Policy and Financing to create and implement a more formal entity and activity based risk assessment framework through a formal process and have documentation that includes: (1) implementing an ongoing risk assessment calendar at the entity level and including items mentioned in the SAS 70 Audit Report; and (2) incorporating appropriate formal risk assessment processes at the activity level.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: June 2006.

By June 2006, the Department of Health Care Policy and Financing (HCPF) will request the Office of CBMS to re-implement the risk assessment process at the entity and activity levels. HCPF will actively participate in any risk assessment committee established by the Office of CBMS.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Department of Human Services Response:

Agree. Implementation Date: September 2006.

During the audit period of January 2005 through June 30, 2005, DHS had limited resources to complete all of the tasks required. Since this period, open positions have been nearly filled and additional resources have been requested. During the audit period of January 2005 through June 30, 2005 risk assessment was addressed through the following meetings activities: (1) CBMS Executive meetings every Wednesday; (2) CBMS/DHS program specific meetings; (3) CBMS decision table meetings (4) CBMS Change Control Board; (5) ad hoc meetings related to specific issues/problems; (6) Tiger Teams; and (7) Quick Response Teams to address specific issues.

The Department of Human Services will work with the Office of the CBMS and the Department of Health Care Policy and Financing to create and implement a more formal entity and activity based risk assessment framework through a formal process and have documentation that includes: (1) implementing an ongoing risk assessment calendar at the entity level and including items mentioned in the SAS 70 Audit Report; and (2) incorporating appropriate formal risk assessment processes at the activity level.

Align Business Objectives with Strategic Plans

Strategic planning provides direction and focus to help meet business objectives. It points to specific results that are to be achieved and establishes a course of action for achieving them. Federal regulations require that the CBMS Strategic Plan be revised annually. During our examination, we found that an initial Advanced Planning Document was created in 2002 and was revised in calendar year 2003. The Office of CBMS was unable to provide an updated plan for the time period between the revision in calendar year 2003 and June 30, 2005, the end of the audit period. Further, there was also no regular documentation of the alignment between business objectives and the strategic plan. Without an annually updated strategic plan for CBMS, the Office and Departments cannot ensure that procedures and policies are in line with future goals for CBMS; further, the Office and Departments are out of compliance with federal regulations requiring annual revisions to the plan.

Recommendation 7

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should institute a process to regularly align business objectives with strategic plans and update these plans annually as required by federal regulations.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: September 2006.

The Office of the Colorado Benefits Management System will work with the Department of Human Services and the Department of Health Care Policy and Financing to develop and implement a process to regularly align business objectives with strategic plans and update these plans annually.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: Ongoing.

The Department of Health Care Policy and Financing (HCPF) defers to the Office of CBMS in instituting a process to align strategic plans with business objectives. HCPF agrees to actively participate in the strategic plan review process and ensure that such plan meets federal regulations.

Department of Human Services Response:

Agree. Implementation Date: September 2006.

The Department of Human Services will work with the Office of the Colorado Benefits Management System and the Department of Health Care Policy and Financing to develop and implement a process to regularly align business objectives with strategic plans and update these plans annually.

Management Review of Internal Policies and Procedures

OCBMS, DHS and HCPF management report that CBMS internal policies and procedures are reviewed periodically to reflect changing business conditions. The Office and Departments have implemented several communication methods such as weekly meetings that are intended to facilitate discussions regarding changes. During our examination of meeting minutes from the State Policy Group meetings, Unit Meetings and Change Control Board meetings we found that many issues are discussed but are not tied directly to revisions of internal policies and procedures. Further, we found that there is no formal process to periodically document the updating of internal policies and procedures.

Current and accurate internal policies and procedures help to ensure appropriate actions are taken by management and staff and help to maintain continuity of activity in the face of change.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Recommendation 8

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should periodically perform a documented review and update of internal policies, procedures, and standards to reflect changing business conditions.

Office of the Colorado Benefits Management System Response:

Agree. Implementation Date: August 2006.

Since the audit time frame, the Office of CBMS is in the process of developing operational procedures such as the CBMS User Acceptance Test Procedure, CBMS Requirements Development and Status Reporting Procedure, and updating the Decision Table Procedure and Change Control Procedure. CBMS had limited resources during the SAS 70 audit timeframe, January 2005 through June 2005. Since then CBMS has been able to hire more staff to perform the tasks. We now have hired a Technical Manager and a Quality Assurance Manager. The Office of the Colorado Benefits Management System will periodically perform a documented review and update of policies, procedures, and standards to reflect changing business conditions. These documented reviews and updates will take place quarterly.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: Ongoing.

The Department of Health Care Policy and Financing defers to the Office of CBMS regarding setting up a timeline and a process for procedure review. HCPF will actively participate in the review of internal procedures.

Department of Human Services Response:

Agree. Implementation Date: August 2006.

The Department of Human Services will work with the Office of the Colorado Benefits Management System and the Department of Health Care Policy and Financing to support the process of developing operational procedures such as the CBMS User Acceptance Test Procedure, CBMS Requirements Development and Status Reporting Procedure, and update the Decision Table Procedure and Change Control Procedure.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Documentation of Employee Review

OCBMS, DHS, and HCPF have implemented formal hiring practices that are designed to ensure that new employees are qualified for the position. Job descriptions, including duties and job qualifications such as education, experience, skills, and expertise, are documented in the Position Description Questionnaire (PDQ). Each PDQ contains a signature line for the employee to sign indicating that he or she has read and understands the job roles and responsibilities.

Prior to the establishment of the Office of CBMS on June 1, 2005, all staff working on CBMS were employees of either DHS or HCPF. During our examination for the January 2005 through June 30, 2005 period, we reviewed a total of four PDQs for DHS and HCPF employees working on CBMS to determine if the employee's roles and responsibilities were clearly defined. While it appears that roles and responsibilities were documented on the PDQs, we found that only one of the four PDQs was signed by the employee. Documentation of employee review of roles and responsibilities is fundamental to the concepts of audit, human resource management, and sanction requirements. This helps to verify that employees understand job responsibilities.

Recommendation 9

The Office of the Colorado Benefits Management System, the Department of Health Care Policy and Financing, and the Department of Human Services should implement a process to ensure roles and responsibilities documented in the Position Description Questionnaires for CBMS positions are reviewed and signed by employees.

Office of Colorado Benefits Management System Response:

Agree. Implementation Date: July 2006.

The Office of the Colorado Benefits Management System will implement a process to ensure roles and responsibilities documented in the Position Description Questionnaire for CBMS positions are reviewed and signed by employees.

Department of Health Care Policy and Financing Response:

Agree. Implementation Date: No Longer Applicable.

The Department of Health Care Policy and Financing has delegated appointing authority for reassigned staff to the Office of CBMS in a letter dated July 7, 2005. The Office of CBMS must respond to findings regarding the personnel procedures affecting those employees.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Department of Human Services Response:

Agree. Implementation Date: July 2006.

The Department of Human Services will implement a process to ensure roles and responsibilities documented in the Position Description Questionnaire for CBMS positions are reviewed and signed by employees.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

***Control Objectives, Control Activities, Tests of Operating
Effectiveness and Results of Tests***

Our examination was restricted to selected services provided to system users by the Office of CBMS, Department of Health Care Policy and Financing, and Department of Human Services including users of the CBMS application and, accordingly, did not extend to controls in effect at user locations (i.e., county departments of social services and medical assistance sites). It is each interested party's responsibility to evaluate this information in relation to controls in place at each user location in order to assess the total system of internal control. The user and CBMS portions of the system must be evaluated together. If effective user controls are not in place, CBMS controls may not compensate for such weaknesses.

Our examination included interviews with key personnel, review of available documentation and security procedures, and observation and inspection of certain controls surrounding and provided by the CBMS systems. Our examinations were performed as of June 30, 2005, and were designed only to clarify your understanding of the information contained in the attached description. In addition, we applied tests to specific controls to obtain evidence about their effectiveness in meeting the related control objectives, described in Section V of this report, during the period of January 1, 2005 to June 30, 2005.

The objectives of data processing controls are to provide reasonable, but not absolute, assurance about such things as:

- Protection of data files, programs and equipment against loss or destruction.
- Prevention of unauthorized use of data records, programs and equipment.
- Proper handling of input and output data records.
- Reliable processing of data records.

The concept of reasonable assurance recognizes that the cost of a system of internal control should not exceed the benefits derived and, additionally, that evaluation of internal control necessarily requires estimates and judgments by management.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 1 – CBMS Strategic Plan

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that the strategic planning process is in place to provide the direction and mandate for helping the business achieve its objectives.	1) CBMS Management staff prepared strategic plans for CBMS that aligns business objectives with the CBMS strategies. The planning approach includes mechanisms to solicit input from relevant internal and external stakeholders impacted by the CBMS strategic plans.	Through inquiry, noted that the federal government requires the Strategic Plan to be updated annually. Reviewed the Advanced Planning Document (ADP) and Re-Planning Document.	Documents reviewed had dates from 2002 and 2003. No current documents provided. Could find no alignment between business objectives and strategic plan. Exception noted.
	2) Management obtains feedback from business process owners and users regarding the quality and usefulness of the CBMS plan for use in the ongoing changes to the system and the risk assessment process.	Through inquiry it was verified that there are many sources used to provide feedback to CBMS. A list of top county issues was provided and reviewed along with meeting minutes from the State Policy Group, Unit Meetings and Change Control Board Meeting. In addition, Denver County CBMS Tips was reviewed	No exceptions noted.
	3) A Governor’s Task Force group was established to help with CBMS planning and identify priorities. Committee membership includes representatives from senior management, user management and input from the CBMS management staff.	Through inquiry, it was verified that a Governor’s Task Force did exist during the audit period and has since been disbanded. The purpose of the task force was to gather issues from counties and CBMS and prioritize those issues for resolution.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 1 – CBMS Strategic Plan

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	4) The CBMS organization ensures that CBMS plans are communicated to business process owners and other relevant parties across the Organization.	Through observation, it was verified that CBMS communications are posted and stored on the intranet (portal) for access across the organization. Samples of Application Release Notes, Decision Table Release Notes, CBMS Presentations and HIPAA information were reviewed. In addition, CBMS Communication emails were reviewed.	No exceptions noted.
	5) CBMS management communicates its activities, challenges and risks on a regular basis with the CEO and DHS/HCPF executive management.	Through inquiry and review of minutes, it was verified that management does communicate activities on a regular basis.	No exceptions noted.
	6) The CBMS organization monitors its progress against the strategic plan and reacts accordingly to meet established objectives.	Weekly meetings are held and minutes are logged. Agendas and minutes from six Team Lead meetings were reviewed. During the meetings they may touch on strategic plan items, but they don't actually use the ADP (1.1) to monitor against strategic plan. The re-planning document (1.1a) was created to re-scope the project based on monetary concerns. Both of these documents have dates of 2002 and 2003 and are not current.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 2 – CBMS Organization and Relationships

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that the CBMS organization is responsible for managing all aspects of the CBMS environment.	1) CBMS managers (both IT and Business) have adequate knowledge and experience to fulfill their responsibilities.	Through inquiry, it was reported that only personnel who are knowledgeable with CBMS are hired for management positions. PDQs do contain documented job requirements. Candidates must go through the state classified job selection process.	No exceptions noted.
	2) Roles and responsibilities of the CBMS organization are defined, documented and understood.	Through review of the Organizational Chart and PDQs for several employees, it was confirmed that roles and responsibilities are documented. The PDQ does have a signature line for employees to indicate that they have read and understand the assignment.	Of the four PDQs reviewed, we found only one was signed by the employee. Exception noted.
	3) CBMS personnel have sufficient authority to exercise the role and responsibility assigned to them.	Through inquiry, it was verified that roles and responsibilities are documented for each position with implied authority.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 2 – CBMS Organization and Relationships

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	4) The CBMS organizational structure is sufficient to provide necessary information flow to manage its activities.	Reviewed communication plan, which includes detailed information regarding documentation and distribution responsibilities. Through observation, it was verified that CBMS communications are posted and stored on the intranet (portal) for access across the organization. A Sample of Application Release Notes, Decision Table Release Notes, CBMS Presentations and HIPAA information were viewed. CBMS Communication emails were inspected.	No exceptions noted.
	5) CBMS management has implemented a division of roles and responsibilities (segregation of duties) that reasonably prevents a single individual from subverting a critical process.	Through inquiry, it was confirmed that there is division of responsibilities that would mitigate risk of subverting a critical process. Review of organizational chart delineates this separation.	No exceptions noted.
	6) CBMS management has ensured that personnel are performing only those duties stipulated in their respective jobs and position descriptions.	Through inquiry and review, it was verified that annual evaluations are conducted that would include evaluation of performance of appropriate duties. Weekly unit meetings are held where managers communicate projects and tasks to be done.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 2 – CBMS Organization and Relationships

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	7) CBMS staff evaluations are performed regularly to ensure that the IT function has a sufficient number of competent IT staff necessary to achieve their objectives.	Selected a sampling of seven (20 percent) CBMS employees and verified that reviews were performed for each of the seven employees during the audit period.	No exceptions noted.
	8) Contracted staff and other contract personnel are subject to policies and procedures, created to control their activities by the CBMS function, to assure the protection of the organization's information assets.	Once hired, contract employees use the same forms and follow the same security access process as state employees. The key difference is in the position approval and hiring process. Reviewed procurement rules and two purchase orders for contract employees and Statements of Work. This represents 20 percent of contractors hired during audit period.	No exceptions noted.
	9) CBMS staff understands and accept their responsibility regarding internal control.	Through inquiry, it was confirmed that weekly unit meetings are held to review projects and clarify responsibilities.	No exceptions noted.
	10) CBMS strategies and ongoing operations are formally defined and communicated to DHS, HCPF and legislators through periodic meetings (e.g., the Colorado Social Services Director's Association (CSSDA)).	Reviewed Directors Association Meeting presentation to verify communication of operations through periodic meetings.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 2 – CBMS Organization and Relationships

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	11) Significant CBMS events or failures, such as security breaches, major system failures or regulatory failures are reported to CBMS Managers.	Through email, it was confirmed that there was no formal on call schedule during the audit period. The CBMS Application Manager took all calls because they were in an emergency mode. Reviewed Service Level Agreement (SLA) reports for two months and confirmed key service level measurements are documented and communicated to CBMS.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 3 – Manage Human Resources

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that education and training of CBMS staff address how an organization supports its people to perform their job responsibilities in a reliable and controlled manner.	1) Controls are in place to support appropriate and timely responses to job changes and job terminations so that internal controls and security are not impaired by such occurrences.	It was reported that there were no terminations during the audit period so testing could not be conducted. Reviewed one CBMS Site Security Request Form to update rights and add email access from the audit period.	No exceptions noted.
	2) The CBMS organization subscribes to a philosophy of continuous information and learning, providing necessary training and skill development communication to employees.	Obtained and reviewed schedule of training meetings, agendas, web-based training center, HIPAA training participants, sign in sheets and presentation.	No exceptions noted.
	3) The CBMS organization adopts and promotes the entity’s culture of integrity management, including ethics, business practices and human resource evaluations, to ensure compliance.	Reviewed Employee Orientation Handbook, including the Employee Code of Conduct to confirm the culture of integrity and ethics	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 4 – Define the Information Architecture

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that the information should be identified, captured and communicated in a form and time frame that enables the business to carry out its responsibilities effectively and on a timely basis.	1) The CBMS management has defined information capture, processing and reporting controls—including completeness, accuracy, communication validity and authorization—to support the quality and integrity of information used for disclosure purposes.	Obtained and inspected the CBMS <i>Communication Plan, Document Coordination Process, Emergency User Notification Procedure, Standard User Notification Procedure and Change Control Process</i> documents. Ascertained that controls are defined as stated.	No exceptions noted.
	2) CBMS management has defined information classification standards in accordance with Department of Human Services and Health Care Policy and Financing security and privacy policies.	Obtained and inspected DHS Employee Workbook and State of Colorado Employee Handbook for policies and sanctions for non-compliance with the control objective. Ascertained that controls are defined as stated.	No exceptions noted.
	3) CBMS management has defined, implemented and maintained security levels for each of the data classifications. These security levels represent the appropriate (minimum) set of security and control measures for each of the classifications and are reevaluated periodically and modified accordingly.	Obtained and inspected a copy of CBMS Security Workbook. Ascertained that controls are defined as stated.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 5 - Communicate Management Plan, Goals and Direction			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that the established reliable system requires participation from all members of the CBMS organization.	1) CBMS management has developed and documented policies and procedures governing the CBMS organization's activities.	Reviewed Operational Processes and Communication Plan and verified existence and that content contains policies and procedures governing the CBMS organization's activities.	No exceptions noted.
	2) CBMS management has communicated policies and procedures governing the CBMS organization's activities.	Through observation, it was verified that CBMS communications are posted and stored on the intranet (portal) for access across the organization. Samples of Application Release Notes, Decision Table Release Notes, CBMS Presentations and HIPAA information were viewed. In addition, CBMS Communication emails and postings were reviewed.	No exceptions noted.
	3) CBMS management periodically reviews its policies, procedures and standards to reflect changing business conditions.	Through review of meeting minutes from the State Policy Group, Unit Meetings and Change Control Board Meeting, it was verified that many issues are discussed but are not tied directly to revision of policies and procedures.	No exceptions noted.
	4) CBMS management has processes in place to investigate compliance deviations and introduce remedial action.	Through inquiry, it was conveyed that any compliance action would be taken by the deputy director and the DHS Remedial Action Process would be followed. There was no action taken during the audit period.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 6 – Assess Risks

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that a risk assessment is defined as “the identification and analysis of relevant risks to achievement of the objectives.”	1) The CBMS organization has an entity- and activity-level risk assessment framework, which is used periodically to assess information risk to achieving business objectives.	Through inquiry and review of documentation, it was confirmed that periodic meetings are conducted where issues and statuses are reviewed. A framework of risk assessment activities was not noted.	Exception noted.
	2) Management’s risk assessment framework focuses on the examination of the essential elements of risk and the cause/effect relationship among them, including risks related to achieving business objectives, regulatory compliance, legal compliance, technology reliability, information integrity and human resources.	Through inquiry, it was confirmed that a more formal process was in place during the implementation process but none existed after the September 2004 live date.	Exception noted.
	3) A risk assessment framework exists and considers the probability and likelihood of threats.	Through inquiry, it was confirmed that a more formal process was in place during the implementation process but none existed after the September 2004 live date.	Exception noted.
	4) The CBMS organization’s risk assessment framework measures the impact of risks according to qualitative and quantitative criteria, using inputs from different areas including, but not limited to, management brainstorming, strategic planning, past audits and other assessments.	Through inquiry, it was confirmed that a more formal process was in place during the implementation process but none existed after the September 2004 live date.	Exception noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 6 – Assess Risks

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) The CBMS organization’s risk assessment framework is designed to support cost-effective controls to mitigate exposure to risks on a continuing basis, including risk avoidance, mitigation or acceptance.	Through inquiry, it was confirmed that a more formal process was in place during the implementation process but none existed after the September 2004 live date.	Exception noted.
	6) A comprehensive security assessment is performed for critical systems and locations based on their relative priority and importance to the organization.	Through inquiry, it was confirmed that a more formal process was in place during the implementation process but none existed after the September 2004 live date.	Exception noted.
	7) Where risks are considered acceptable, there is formal documentation/contractual negotiated liabilities.	Through inquiry and inspection, it was ascertained that SLAs do document thresholds for system downtime, response time, etc.	No exceptions noted.
	8) The CBMS organization is committed to active and continuous risk assessment processes as an important tool in providing information on the design and implementation of internal controls, in the definition of the IT strategic plan, and in the monitoring and evaluation mechanisms.	Through inquiry, it was confirmed that a more formal process was in place during the implementation process but none existed after the September 2004 live date.	Exception noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 7 – Manage Facilities			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that security and related controls help the service organization maintain the security and availability of their systems.	1) Access to facilities is restricted to authorized personnel and requires appropriate identification and authentication (card keys and special codes that have to be entered after hours).	Through inspection of facilities accompanied by EDS Service Delivery Executive, observed that access to facilities is controlled by card key access. Observed that an additional authenticator is required for access outside of business hours. Inspected three typical access request forms from within the test period.	No exceptions noted.
	2) Physical facilities are equipped with adequate environmental controls to maintain systems and data, including fire suppression, uninterrupted power service (UPS) power backup, air conditioning and elevated floors.	Through inquiry of Property Manager, requested copies of contracts and maintenance logs for HVAC and fire alarm testing. Received and inspected requested contracts and maintenance logs for exceptions. Through inquiry of EDS personnel on the maintenance of UPS systems, ascertained that the physical facilities meet the stated activity.	No exceptions noted.
	3) A documented policy and procedure manual exists that addresses physical environmental controls, i.e., fire detection, water and temperature monitors and sensors within the data center computer rooms.	Inspected EDS Physical Office Facilities Management Plan (FM) version 4.0 06/2005. Ascertained that documentation exists to support the control activity.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 7 – Manage Facilities			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	4) Existence of heat and smoke detection equipment, environmental control equipment in the appropriate areas.	Through inspection of facilities accompanied by EDS Service Delivery Executive, observed the existence of smoke detectors through out the facility. Observed that equipment in the server spaces is protected by uninterrupted power service (UPS). Observed that CBMS and EDS spaces are protected by smoke detection equipment and HVAC equipment.	No exceptions noted.
	5) Management periodically reviews all results from fire drills, maintenance of fire suppression equipment and UPS.	Through inquiry of property manager requested copies of contracts and maintenance logs. Received and inspected requested contracts, inspected maintenance logs for exceptions. By inquiry with building management, ascertained that the Denver Fire Marshal has accepted management testing of the fire alarm system.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 8 – Ensure Compliance with External Requirements			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that the organization establishes and maintains procedures to ensure compliance external regulatory requirements. The IT organization establishes a framework of control to ensure that external requirements are understood and managed.	1) The organization monitors changes in external requirements for legal, regulatory or other external requirements related to IT practices and controls.	Through inquiry and document review, it was confirmed that a process is in place to review documentation of changes to legal regulatory or other external requirements. Copies of fiscal notes and court ordered statistical reports were reviewed.	No exceptions noted.
	2) Control activities are in place and followed to ensure compliance with external requirements, such as regulatory and legal rules.	Through inquiry and document review, it was confirmed that the Colorado Legislative staff does communicate control activities for compliance.	No exceptions noted.
	3) Internal events are considered in a timely manner to support continuous compliance with legal and regulatory requirements.	Through inquiry, it was verified that weekly status meetings are held where issues and resolutions, including noted compliance issues are reviewed.	No exceptions noted.
	4) Provide the Courts with appropriate and requested CBMS statistical Reports relative to the lawsuit.	Review of statistical reports confirmed that reports are produced to comply with the lawsuit.	No exceptions noted.
	5) The Call Center creation with Supervision and staff that is knowledgeable about CBMS. To provide resolution to all emergency calls within five days.	Reviewed CBMS narrative verifying process of problem prioritization and response goals. Met with Customer Service Manager to confirm process is followed.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 8 – Ensure Compliance with External Requirements			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	6) Monitoring all aspects of lawsuit. Meeting with Attorney General office, executive directors, reviewing statistical reports.	Review of statistical reports confirmed that reports are produced to comply with the lawsuit.	No exceptions noted.
	7) Monitoring and participating in state and federal audits.	Through inquiry, ascertained participation in state and federal audits.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 9 – Manage Quality

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that quality programs address both general and project-specific quality assurance activities and should prescribe the type(s) of quality assurance activities (such as reviews, audits, inspections, etc.) to be performed to achieve the objectives of the general quality plan.	1) Documentation is created and maintained for all significant processes and activities.	Inspected CBMS Operational Processes documents. Inspected a sample of CBMS procedures.	No exceptions noted.
	2) A plan exists to maintain the overall quality assurance of CBMS activities based on the organizational and CBMS plans.	Inspected CBMS Quality Assurance Plan dated February 15, 2000.	No exceptions noted.
	3) Documentation standards are in place, have been communicated to all CBMS staff and are supported with training.	By corroborative inquiry and inspection of CBMS documentation process, planning documentation and communication plan ascertained that documentation standards are in place.	No exceptions noted.
	4) A quality plan exists for significant CBMS functions (e.g., system development and deployment) and provides a consistent approach to address both general and project-specific quality assurance activities.	By inspection of the CBMS Quality Assurance Plan. By inspection of supporting documentation. Ascertained that CBMS has implemented a quality plan for the activities specified.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 9 – Manage Quality

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) The quality plan prescribes the type(s) of quality assurance activities (such as reviews, audits, inspections, etc.) to be performed to achieve the objectives of the quality plan.	By inspection of the CBMS Quality Assurance Plan. By inquiry of EDS personnel. By inspection of selected EDS <i>Facilities Management Documents</i> . By inspection of supporting documentation. Ascertained that EDS and CBMS participate in a quality plan and that activities are in place for quality assurance.	No exceptions noted.
	6) Data integrity ownership and responsibilities have been communicated to the appropriate data owners and they have accepted these responsibilities.	Obtained and inspected State of Colorado/ EDS contract. Obtained and inspected Children, Youth and Families (CYF) Automation Project Options I, II and III. Ascertained that responsibilities are communicated to the data owners.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 10 – Acquire or Develop Application Software

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that application and system software is acquired or developed that effectively supports CBMS reporting requirements.	1) The EDS/State contract authorized EDS to use their organization’s system development life cycle methodology (SDLC) including security, availability and processing integrity requirements.	By corroborative inquiry of EDS personnel and inspection of the CBMS/EDS state contract, ascertained that EDS is authorized to utilize the proprietary EDS SDLC methodology.	No exceptions noted.
	2) EDS’ SDLC methodology ensures that information systems are designed to include application controls that support complete, accurate, authorized and valid transaction processing.	By inquiry of EDS personnel. By inspection of EDS proprietary Facilities Management documents, ascertained that EDS has implemented an SDLC methodology that supports the stated control.	No exceptions noted.
	3) The CBMS organization has an acquisition and planning process that aligns with its overall strategic direction.	By inquiry and observation. By inspection of EDS facility management documents. By inspection of the CBMS Planning and Re-planning documents, ascertained that CBMS has implemented an acquisition and planning process that meets the state control objectives.	No exceptions noted.
	4) CBMS management ensures that users are appropriately involved in the design of applications, and the testing thereof, to ensure a reliable environment.	By corroborative inquiry of EDS personnel and inspection of EDS policies and procedures. By inspection of CBMS documented procedures for program change, design and defect change. By inspection of CBMS meeting minutes, ascertained that CBMS management ensures user involvement.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 10 – Acquire or Develop Application Software

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) Post-implementation reviews are performed to verify controls are operating effectively.	Inspected notes of post implementation reviews with EDS after changes have been moved to production. Inspection of CBMS application release notes. Inspection of SLA reports. Inspection of PMO correspondence. Ascertained that post implementation reviews have been performed for selected processes from the test period.	No exceptions noted.
	6) The CBMS organization acquires/develops systems software in accordance with the EDS/State Contract.	By corroborative inquiry of EDS personnel and inspection of EDS policies and procedures. By inspection of the EDS/CBMS state contract. Ascertained that EDS is the sole source for CBMS software systems.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 11 – Acquire Technology Infrastructure

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
This control provides reasonable assurance that technology infrastructure is acquired so that it provides the appropriate platforms to support the CBMS reporting applications.	1) Monitor and follow the documented procedures that exist to ensure that infrastructure systems, including network devices and software, are acquired based on the requirements of the CBMS application they are intended to support.	Obtained and inspected the EDS/State contract. Validated the procedures documented to monitor the various aspects of the acquisition process. Acquired the weekly meeting minutes with EDS, which verify the monitoring process is ongoing. By inquiry with DHS IT personnel, ascertained that all infrastructure equipment is acquired with DHS approval and configured and installed by EDS to EDS and DHS standards.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 12 - Develop and Maintain Policies and Procedures			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that policies and procedures that define required acquisition and maintenance processes have been developed and are maintained, and that they define the documentation needed to support the proper use of the applications and the technological solutions put in place.	1) The organization's policies and procedures are regularly reviewed, updated and approved by management.	Obtained and inspected the policies and procedures applicable to CBMS. Team Lead meetings are designated as the review and modification method for policies and procedures. These meetings occur weekly. Through inspection of meeting minutes, it was noted that the approval process occurs through gathering of the modifications from the Team members via email and incorporating into the specific policy or procedure in question.	No exceptions noted.
	2) The organization ensures that its systems and applications are developed in accordance with its supported, documented policies and procedures.	Obtained and inspected the policies and procedures surrounding the application process. Determined through inquiry that application development is dictated through the contract with EDS. Inspected the Defect/Approved Change Request (DACR) Process. Validated the process through inspecting a selected number of DACR weekly open request listings.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Figure 13 – Install and Test Application Software and
Technology Infrastructure**

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that the development and implementation of new enhancements/changes (fixes) to CBMS are authorized, tested, approved, properly implemented and documented, and associated controls operate as intended and support CBMS reporting requirements.	1) A formal Change Management (Change Control Documents) Process is used to control and document changes to application software.	Obtained and inspected the Change Management Process outlined by CBMS. Through inquiry, determined the types of changes that occur with the EDS systems.	No exceptions noted.
	2) CBMS Subject Matter Expert receives a request from State Policy Staff (State Policy sponsor each change that goes into CBMS) and they identify, analyze and evaluate the functional specifications and user requirements by conducting internal and external meetings to elicit comments on proposed changes.	Obtained and inspected documentation from the subject matter expert. Determined the communication is documented through email. Inspected various samples of communication to validate that the changes are being evaluated on various levels as noted.	No exceptions noted.
	3) Proposed change requests to modify CBMS software/application are reviewed and approved prior to modification of source code.	Obtained and inspected various Change Control Board meeting minutes. Determined that the changes are following the outlined approval process.	No exceptions noted.
	4) Upon completion of software/application changes, software/applications modifications are tested and formal acceptance is granted.	Obtained and inspected various changes / modifications. Through inspection, validated the changes are being properly tested prior to formal acceptance.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Figure 13 – Install and Test Application Software and
Technology Infrastructure**

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) Complete application documentation and user manuals are maintained and updated, as appropriate, to reflect modifications made to the CBMS application.	Obtained and inspected the documentation and user manuals. Traced the latest revision to minutes of the Change Control Board.	No exceptions noted.
	6) CBMS Users are notified of changes to the CBMS application.	Through inquiry, communication to the users is completed through a communication specialist. The specialist will send an email notification to those involved in the change. Obtained a sampling of those communications that involve application changes and decision table changes.	No exceptions noted.
	7) A testing strategy is developed and followed for all significant changes in applications and infrastructure technology, which addresses unit-, system-, integration- and user acceptance-level testing to help ensure that deployed systems operate as intended.	Obtained and inspected the documented CBMS Test Plan for the examination period. Compared the CBMS Test Plan to various actual changes. Noted that the testers have end-user focus.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Figure 13 – Install and Test Application Software and
Technology Infrastructure**

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	8) Test Manager and test team approve test results based on the Change Request and requirements in the DDA and make the decision that the new enhancement/fix is ready to move into the production environment.	Obtained and reviewed various test results for the modifications implemented during the examination period. Validated through selected sampling of changes, that the testing results are reviewed by a primary and secondary expert prior to migration to the production environment.	No exceptions noted.
	9) Interfaces with other systems are tested to confirm that data transmissions are complete, accurate and valid.	Obtained and inspected various interface testing. Determined that testing of interfaces is confirmed by the Subject Matter Expert. The second approval is completed by the interface systems staff.	No exceptions noted.
	10) Development, testing and production environments are logically and physically segregated.	Noted the various staff involved in each area of the infrastructure. Verified through inspection of physical location that segregation of duties are occurring as stated.	No exceptions noted.
	11) User acceptance tests are performed and reviewed to ensure the change to the CBMS system is functioning properly. Acceptance tests are performed in a controlled test environment.	Obtained and inspected user acceptance tests that occurred during the examination period. Inspected the procedures in place to perform the testing.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Figure 13 – Install and Test Application Software and
Technology Infrastructure**

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	12) Emergency Changes are documented and reviewed by management.	Through inquiry with staff, it was noted that emergency changes will not follow the same procedures as standard changes.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 14 – Manage Changes

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that system changes of non-financial and financial reporting significance are authorized and appropriately tested before being moved to production.	1) Requests for program changes, system changes and maintenance (including changes to system software) are standardized, documented and subject to formal change management procedures.	Obtained and inspected the CBMS Change Control Procedures. Selected a sample of change requests and validated the steps in the documented procedures.	No exceptions noted.
	2) Emergency change requests are documented and subject to formal change management procedures.	Obtained and inspected the CBMS Change Control Procedures. Selected a sample of emergency change requests and traced through to approval. Validated that the process is following the documented procedures. Validating inquiry with management noted that emergency changes go through the Change Control Board approval process prior to being approved.	No exceptions noted.
	3) Controls are in place to restrict migration of programs to production only by authorized individuals.	Obtained and inspected the listing of authorized individuals who can approve migration of changes into production. It is noted that the test results must be validated by a primary and secondary tester prior to being approved by the Application management.	No exceptions noted.
	4) An implementation schedule is published/communicated to the users of CBMS.	Through inquiry of management, it was noted that the communication specialist disseminates the implementation schedule to the users of CBMS.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 14 – Manage Changes

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) The old source code is saved and can be retrieved and put back into production if the circumstance arises that requires this action.	Through inquiry of management, it was noted that the system is backed up prior to a system change being implemented into production. EDS maintains the source code back up versions per the signed contract.	It was noted that CBMS did not maintain version control documentation to ensure these procedures are occurring as contracted. Exception noted.
	6) Approach to planning, estimating, and accomplishing application software modification and enhancements.	Obtained and inspected the Change Control Process and Defect/Approved Change Request Process. Received and inspected various types of meetings where the change control process is planned and measured for accomplishing the requests of changes.	No exceptions noted.
	7) Monitor the relationship between contractor and state on application modification and enhancement activities.	Obtained and inspected management meeting minutes. Management meets weekly to discuss the processes with the EDS system. Monthly there is a management meeting between EDS and CBMS to discuss any shortcomings in the level of service.	No exceptions noted.
	8) Monitor the methodology for controlling changes to, and versions of, the application software.	Obtained and inspected the Change Control Process and Defect/Approved Change Request (DACR) Process.	It was noted that CBMS did not maintain version control documentation to ensure these procedures are occurring as contracted. Exception noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 14 – Manage Changes

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	9) Monitor the approach to documentation control and the methodology to be employed to ensure currency of documentation.	Obtained and inspected documentation control methodology. Ascertained that management uses a version control numbering system to control the currency of documentation.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 15 – Define and Manage Service Levels

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that service levels are defined and managed in a manner that satisfies financial reporting system requirements and provides a common understanding of performance levels with which the quality of services will be measured.	1) Service levels are defined and managed to support CBMS reporting system requirements.	Obtained and inspected the CBMS Service Level Agreements Monitoring Process. Through weekly management meetings the services provided by EDS are discussed and monitored. Inspected minutes to validate the occurrence of these meetings.	No exceptions noted.
	2) A framework is defined to establish key performance indicators to manage service level agreements, both internally and externally.	Obtained and inspected the CBMS Service Level Agreements Monitoring Process. The Agreement with EDS outlines various performance levels that must be met. Through weekly management meetings, the services provided by EDS are monitored. There is also a weekly meeting with EDS to discuss any areas where the objectives are not being met. Inspected minutes to validate the occurrence of these meetings.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 16 – Manage Third-party Services

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that third-party services are secure, accurate and available, support processing integrity and defined appropriately in performance contracts.	1) A designated individual is responsible for regular monitoring and reporting on the achievement of the third-party service level performance criteria.	By inquiry with the designated individual, determined that EDS prepares a Monthly Status Report. Obtained and inspected the Monthly Status Reports and ascertained that EDS provides support that shows objectives of the service level are being met.	No exceptions noted.
	2) Selection of vendors for outsourced services is performed in accordance with the organization's vendor management policy.	Obtained and inspected the Colorado Revised Statutes as they pertain to vendor selection. Inspected the State Fiscal Rules and Official Procurement Rules. Inspected a listing of prospective vendors for CBMS to apply to the State Statutes and Rules. There was no vendor selection during the examination period.	No exceptions noted.
	3) The CBMS organization makes the determination, before selection, that potential third parties are properly qualified through an assessment of their capability to deliver the required service and a review of their financial viability.	Through inquiry with management, noted that there were no vendor selections in process during the examination period.	No exceptions noted.
	4) Third-party service contracts address the risks, security controls and procedures for information systems and networks in the contract between the parties.	Obtained and compared the State Controller's Office Rules and Regulations with the EDS contract. Through observation it is noted that the EDS contract is in line with the rules and regulations set forth by the State.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 16 – Manage Third-party Services

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) State Controller’s Office Rules and Regulations, Attorney General Reviews. State Procurement policy is followed.	Obtained and inspected the State Controller’s Office Rules and Regulations. Obtained a copy of the State Procurement policy and applied it to the CBMS contract. There were no Attorney General Reviews performed during the examination period.	No exceptions noted.
	6) A regular review of security, availability and processing integrity is performed for service level agreements and related contracts with third-party service providers.	Obtained and inspected the EDS prepared Monthly Status Reports for the examination period. The CBMS Service Level Agreements Monitoring Process was compared to the EDS monthly reports to validate the criteria set by CBMS are being met.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that CBMS is appropriately secured to prevent unauthorized use, disclosure, modification, damage or loss of data.	1) An information security policy exists and has been approved by an appropriate level of executive management.	Obtained and inspected the <i>CBMS Security Plan</i> and <i>CBMS Security Procedure</i> . Ascertained that an information security policy exists and has been approved by CBMS management.	No exceptions noted.
	2) A framework of security standards has been developed that supports the objectives of the security policy.	Obtained and inspected the <i>CBMS Security Plan</i> and <i>CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. By corroborative inquiry with DHS and EDS personnel ascertained that a framework of security standards are in place for CBMS activities.	No exceptions noted.
	3) A CBMS security plan exists that is aligned with overall CBMS strategic plans.	Obtained and inspected the <i>CBMS Security Plan</i> , <i>CBMS Security Procedure</i> and <i>CBMS Advance Planning Document</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that CBMS security policies and procedures align with CBMS strategic plans.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	4) The CBMS security plan is updated to reflect changes in the CBMS environment as well as security requirements of specific systems.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Ascertained that the documents are updated as the CBMS environment changes to meet regulatory, legislative and operational requirements.	No exceptions noted.
	5) Procedures exist and are followed to authenticate all users to the system to support the validity of transactions.	Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that users are required to authenticate for access to CBMS systems and that transactions are tracked within EDS managed systems.	No exceptions noted.
	6) Security policies provide for overall direction and implementation of security, and that policies are effectively communicated and monitored.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> and <i>CBMS Advance Planning Document</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the controls meet the objectives of the stated activity.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	7) Procedures exist and are followed to maintain the effectiveness of authentication and access mechanisms (e.g. regular password changes).	Carried out corroborative inquiry with DHS and EDS personnel. Obtained and inspected screen prints of domain password policy settings. Ascertained that procedures are in place to maintain the effectiveness of access mechanisms.	No exceptions noted.
	8) Procedures exist and are followed to ensure timely action relating to requesting, establishing, issuing, suspending and closing user accounts.	Carried out corroborative inquiries with DHS, human resources, and EDS personnel. Inspected human resource records for user account processing. Ascertained that the objectives of the control activity are met.	No exceptions noted.
	9) Standard Operating Policies require that the users have access to only those resources necessary and appropriate to user's job duties.	Obtained and inspected the <i>CBMS Security Plan</i> , <i>CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the policies meet the objectives of the control activity.	No exceptions noted.
	10) CBMS Employees are given paperwork to sign, which gives them proper access to CBMS.	Carried out corroborative inquiry with DHS and HR personnel. Ascertained that employees are required to acknowledge their responsibility for the proper use of CBMS resources.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	11) The CBMS security policies are established and periodically inspected and approved by a designated individual or group.	Obtained and inspected the <i>CBMS Security Plan</i> , <i>CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that policies are periodically reviewed and updated as required with management approval.	No exceptions noted.
	12) The system automatically disconnects a login session if inactive for fifteen minutes.	Carried out corroborative inquiry with EDS and DHS personnel. By inspection of selected workstations, ascertained that a user's login is deactivated after fifteen minutes of no activity.	No exceptions noted.
	13) Controls relating to appropriate segregation of duties over requesting and granting access to systems and data exist and are followed.	Carried out corroborative inquiry with EDS and DHS personnel on the process and staffing of personnel with the ability to grant user access. Obtained and inspected forms and processes required for granting user access. Ascertained that controls to restrict the granting of user access are operating as described.	No exceptions noted.
	14) The CBMS Security policies include the following matters:		

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	14a) Identification and documentation of the security requirements of authorized users.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.
	14b) Allowing access, the nature of that access, and who authorized such access.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.
	14c) Preventing unauthorized access.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	14d) The procedures to add new users, modify the access levels of existing user, and remove users who no longer need access.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.
	14e) Testing, evaluating, and authorizing system components before and after implementation.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.
	14f) Addressing how complaints and requests relating to security issues are resolved.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	14g) The procedures to handle security breaches and other incidents.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.
	14h) Provisions for allocation for training and other resources to support its system security policies.	Obtained and inspected the <i>CBMS Security Plan, CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the objectives of the control activity are achieved.	No exceptions noted.
	14i) Provisions for the handling of exceptions and situations not specifically addressed in its system security policies.	By inspection of <i>CBMS Emergency User Notification Procedure</i> , carried out corroborative inquiry with CBMS, DHS and EDS personnel and ascertained that the objectives of the control activity are achieved.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 17 – Enhance System Security

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	15) Responsibility and accountability for CBMS security policies, and changes and updates to those policies, are assigned.	Obtained and inspected the <i>CBMS Security Plan</i> , <i>CBMS Security Procedure</i> . Obtained and inspected the <i>CBMS Security Policy Workbook</i> for the handling of CBMS user accounts. Carried out corroborative inquiry with DHS and EDS personnel. Ascertained that the responsibility for policies, changes and updates are the responsibility of, and assigned to personnel within each organization.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 18 – Manage the Configuration

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that all CBMS components, as they relate to security, processing and availability, are well protected, would prevent any unauthorized changes, and assist in the verification and recording of the current configuration.	1) Only authorized software is permitted for use by employees using company CBMS assets.	By inquiry of EDS personnel on the process for configuring end user computers using DHS supplied disk images. By inquiry of EDS personnel and inspection of EDS Facilities Management Documentation. By inquiry of DHS IT personnel. CBMS personnel are restricted from using unauthorized software.	No exceptions noted.
	1a) CBMS ensures that only properly coordinated and tested components of CBMS for which the State has primary responsibility such as Decision Tables and Online Help changes are put into production. CBMS Staff ensures that Decision Table and Online Help changes include the distribution of release notes and any required modifications to documents such as user guides and training materials.	Obtained and inspected the contract between CBMS and EDS. Verified the responsibilities by each party. Validated through inquiry of staff the responsibilities of changes by CBMS. Obtained copies of decision table changes made by CBMS as outlined in the contract.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 18 – Manage the Configuration

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	1b) CBMS staff ensures that only properly coordinated and tested components of CBMS for which EDS has the primary responsibility of developing, such as changes to the CBMS application, defined reports, client correspondence is put into production. CBMS ensures that communication to users relating to changes/enhancements to CBMS is made timely and accurately.	Obtained and inspected various changes/modifications. Through inspection, validated the changes are being properly tested prior to formal acceptance. Through inquiry, communication to the users is completed through a communication specialist. The specialist will send an email notification to those involved in the change. Obtained a sampling of those communications that involve application changes by EDS.	No exceptions noted.
	1c) Preparing, testing and implementing changes.	Obtained and inspected the procedures/process for handling a change by CBMS.	No exceptions noted.
	1d) Users are notified of changes to Decision Tables and CBMS procedures.	The communication specialist notifies the users affected by any change through email communication. There are specific groups set up for email communication. Samples of communication were obtained and inspected to determine that the users were in fact informed of the change.	No exceptions noted.
	2) System infrastructure, including firewalls, routers, switches, network operating systems, servers and other related devices, is properly configured to prevent unauthorized access.	Obtained and inspected Department of Human Services (DHS) LAN/WAN documents. Obtained and inspected EDS State Contract. Conducted inquiry with DHS staff.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 18 – Manage the Configuration

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	3) Application software and data storage systems are properly configured to provide access based on the individual's demonstrated need to view, add, change or delete data.	By inquiry of EDS personnel. By Inquiry of CBMS personnel. By Inquiry of DHS IT personnel. By inspection of CBMS supplied listing of CBMS defined User Groups. Ascertained that access to applications and systems is based on user's job requirements.	No exceptions noted.
	4) CBMS management has established procedures across the organization to protect information systems and technology from computer viruses.	By inquiry of EDS personnel on the process for configuring end user computers using DHS supplied disk images. By inquiry of EDS personnel and inspection of <i>EDS Facilities Management Documentation</i> . By inspection of selected end user desktops. By inquiry of DHS IT personnel. Ascertained that anti-virus technology is installed, functioning and maintained for end user systems used by CBMS and for servers maintained under contract by EDS.	No exceptions noted.
	5) Periodic testing and assessment is performed to confirm that the software and network infrastructure is appropriately configured.	Obtained and inspected EDS/State Contract. Obtained and inspected meeting minutes, and CA eTrust Forensics.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 19 – Manage Problems and Incidents

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that any problems and/or incidents are properly responded to, recorded, resolved or investigated for proper resolution.	1) CBMS management has defined and implemented a problem management process to ensure that operational events that are not part of standard operation (escalation of resolution of issues/incidents, problems and errors) are recorded, analyzed and resolved in a timely manner.	Obtained and inspected DACR reports used to track issues. Obtained and inspected <i>CBMS Defect/Approved Change Request Process</i> . Obtained and inspected <i>CBMS Communication Plan</i> and ascertained that CBMS has defined and implemented processes to meet the control activity.	No exceptions noted.
	2) The problem management process provides for adequate audit trail facilities, which allow tracing from incident to underlying cause.	Obtained and inspected EDS monthly reports. Obtained and inspected CBMS/EDS monthly status reports. Obtained and inspected DACR reports. Ascertained that an audit trail is available to meet the control activity.	No exceptions noted.
	3) CBMS Management monitors the security incident response process to support timely response and investigation of unauthorized activities.	Obtained and inspected EDS state contract. By corroborative interview with EDS personnel on Facilities Management Books. Ascertained that processes are in place to respond to unauthorized activities.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 19 – Manage Problems and Incidents

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	4) Incident response procedures are documented, including recovery restart procedures, and are made available to the appropriate personnel.	Obtained and reviewed copy of EDS/State contract. Obtained and reviewed SLA reports delivered to DHS. By corroborative interview with EDS personnel. Ascertained that incident response and recovery procedures are documented within the proprietary <i>EDS Facilities Management</i> documents and are allowed under the terms of the EDS/CBMS State contract.	No exceptions noted.
	5) A documented escalation process exists and is followed in the event processing problems occur. A list of on-call supervisory personnel is maintained and available to the Operations staff.	By corroborative inquiry with EDS personnel. By inspection of EDS/CBMS State contract. By inquiry with CBMS personnel. By Inspection of the defined Level 1, 2 and 3 Help Desk definitions. By inspection of the Priority 1, 2, 3, 4 and 5 problem prioritization definitions, ascertained that a documented escalation procedure exists that meets the control activity.	No exceptions noted.
	6) Incidents are logged online, tracked and monitored by management.	Obtained and inspected DACR reports used to track issues. Obtained and reviewed EDS State contract. Ascertained that incidents are logged and tracked.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 20 – Manage Data

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that data recorded, processed and reported remain complete, accurate and valid throughout the update and storage process.	1) Policies and procedures exist for the handling, distribution and retention of data and reporting output.	Obtained and inspected change request details (DACR). By corroborative inquiry with EDS personnel for data backup and retention. By inquiry of CBMS personnel on the process for granting user access to output, ascertained that policies, procedures and processes exist to meet the control activity.	No exceptions noted.
	2) Management protects sensitive information, logically and physically, in storage and during transmission against unauthorized access or modification.	Obtained and inspected network diagrams and network topology, obtained and inspected EDS State contract. By corroborative inquiry with EDS personnel. Ascertained that the control activity is being achieved.	No exceptions noted.
	3) Retention periods and storage terms are defined for documents, data, programs, reports and messages (incoming and outgoing), as well as the data (keys, certificates) used for their encryption and authentication.	By inquiry of EDS personnel. By inquiry of DHS personnel. By inspection of CBMS control activities. Ascertained that data retention periods are defined.	No exceptions noted.
	4) Policies and procedures regarding retention and storage of backup tapes to onsite/offsite locations are documented.	Inspection of proprietary EDS facilities Management documents. By inquiry of EDS personnel. Ascertained that retention and storage procedures are documented.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 20 – Manage Data

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) Backups are monitored to ensure that they are effectively completed and take place at the appropriate time.	By inspection of EDS maintained backup logs. By inquiry of EDS personnel. Ascertained that backups are monitored and logged.	No exceptions noted.
	6) An offsite rotation storage schedule for operating system and server backup tapes is maintained. The documentation lists all backup tapes, their location and the rotation schedule.	Inspection of EDS facilities Management documents. Inspected EDS/State Contract. By inquiry of EDS personnel. Ascertained that the control activity is being performed.	No exceptions noted.
	7) Management has implemented a strategy for cyclical backup of data and programs.	By inspection of EDS <i>Facilities Management</i> documents. By corroborative inquiry with EDS personnel. Ascertained that a strategy for cyclical backups exists.	No exceptions noted.
	8) Procedures exist and are followed to periodically test the effectiveness of the restoration process and the quality of backup media.	Inspection of EDS <i>Facilities Management</i> documents. By corroborative inquiry with EDS personnel. Ascertained that backups are periodically tested and that tape/backup quality is monitored.	No exceptions noted.
	9) Changes to data structures are authorized, made in accordance with design specifications and implemented in a timely manner.	Inspection of EDS <i>Facilities Management</i> documents. By inquiry with EDS personnel. By inspection of <i>CBMS Change Request Detail Document</i> . By inspection of <i>Change Request Details Reports (DACR)</i> . Ascertained that the control activity is being met.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 21 – Manage Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that data recorded, processed and reported remain complete, accurate and valid throughout the update and storage process.	1) CBMS Management reviews the established and documented EDS standard procedures for CBMS operations, including scheduling, managing, monitoring and responding to security, availability and processing integrity events.	Obtained and inspected meeting schedules from test period. Inspected <i>EDS Facilities Management</i> documents. By inquiry of CBMS and EDS personnel. Ascertained that the control activity is in effect.	No exceptions noted.
	2) Requests for changes to job schedules are documented and approved prior to changes being made to the job schedule (includes batch schedules).	Obtained and inspected meeting agendas from test period. Obtained and inspected DACR reports. Noted that any request for changes to be implemented by EDS must be requested and documented through these approved procedures.	No exceptions noted.
	3) System event data are sufficiently retained to provide chronological information and logs to enable the review, examination and reconstruction of system and data processing.	By corroborative inquiry with EDS personnel. By inquiry with DHS IT personnel. We observed that system event data is retained for Netware Server networks, Citrix servers and the HP9000 class servers to permit examination of system events.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 21 – Manage Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	4) System event data are designed to provide reasonable assurance as to the completeness and timeliness of system and data processing. A daily report which contains information regarding the prior day's scheduled processing activity is available upon request and provides managers with the status of resolved or outstanding processing issues.	By inquiry and observation with EDS staff. By inspection of a sample of daily reports. Ascertained that processing activity and outstanding issue reports are available to managers. Ascertained that this information is also utilized by EDS in compiling the monthly Service Level Agreement (SLA) report for the State Auditor's office.	No exceptions noted.
	5) End-user computing policies and procedures concerning security, availability and processing integrity exist and are followed.	By inquiry with EDS personnel. By inquiry of DHS IT personnel. Ascertained that the State defines and enforces end user computing policies and procedures.	No exceptions noted.
	6) End-user computing, including spreadsheets and other user-developed programs are documented and regularly reviewed for processing integrity, including their ability to sort, summarize and report accurately. Transmission history logs are retained for each transmission and are periodically monitored by management.	By inspection of <i>EDS Facilities Management Documentation</i> . By inquiry of EDS personnel. By inquiry of DHS personnel. By inquiry of CBMS personnel. Observed that CBMS personnel do not develop end user programs or tools. All program development is controlled through the CBMS/EDS/DHS processes.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 21 – Manage Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	7) User-developed systems and data are regularly backed up and stored in a secured area.	Inspected <i>EDS Facilities Management Documentation</i> . By inquiry with EDS personnel. By inquiry with CBMS and DHS personnel. Ascertained that systems developed within CBMS/DHS/EDS processes and procedures are stored on the appropriate servers and subject to logical controls and cyclical backup.	No exceptions noted.
	8) User-developed systems, such as spreadsheets and other end-user programs, are secured from unauthorized use.	Inspected <i>EDS Facilities Management Documentation</i> . By inquiry with EDS personnel. By inquiry of DHS personnel. Ascertained that systems developed within CBMS/DHS/EDS processes and procedures are stored on the appropriate servers and secured by appropriate logical controls.	No exceptions noted.
	9) Access to user-developed systems is restricted to a limited number of users.	Inspected <i>EDS Facilities Management Documentation</i> . By corroborative inquiry with EDS personnel. By inquiry of DHS personnel. Ascertained that systems developed within CBMS/DHS/EDS processes and procedures are stored on the appropriate servers and secured by appropriate logical controls.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 21 – Manage Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	10) Inputs, processing and outputs from user-developed systems are independently verified for completeness and accuracy.	Inspected <i>EDS Facilities Management Documentation</i> . By inquiry with EDS personnel. By inquiry with CBMS and DHS personnel. Ascertained that inputs and outputs of systems developed within CBMS/DHS/EDS processes and procedures independently verified during implementation and production.	No exceptions noted.
	11) Scheduling deviations are discussed with the State and/or reported by EDS and documented for management review.	By corroborative inquiry of EDS personnel. By inquiry of CBMS personnel. By inspection of monthly SLA reports from EDS to the State Auditors office. Ascertained that deviations are documented and reported.	No exceptions noted.
	12) Batch jobs are run on a pre-determined schedule and tracked automatically.	By corroborative interview with EDS personnel. By inspection of daily job logs. Ascertained that batch jobs are scheduled and tracked.	No exceptions noted.
	13) Monitor approach to interface with the other systems to ensure continued consistency in the administration of program policy.	By interview with EDS personnel. By interview with CBMS personnel. By inspection of <i>CBMS Standard User Notification Procedure</i> . By inspection of the <i>CBMS Valid Values Implementation Process</i> . Ascertained interfaces to other systems are considered and administered by implemented policies and procedures.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 22 – Help Desk Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that help desk tickets will be handled in an expedited manner with quick resolution that is communicated to the user. The goals of the CBMS Help Desk Level 3 are to provide reliable, quality support for all users of the CBMS application and to provide responsive and effective support.	1) Customer Service technicians are well trained in the use of CBMS and have knowledge of how CBMS works.	Reviewed CBMS narrative and Service Desk Training Manual. Through inquiry, it was verified that Customer Service Technicians had experience with the CBMS system from being part of the implementation team.	No exceptions noted.
	2) Help Desk Ticket process is documented and made available to all Customer Service Technicians.	Reviewed CBMS narrative verifying process of opening and documenting help desk tickets. Observed display of help desk ticket system and obtained hardcopy for more detailed review.	No exceptions noted.
	3) Help Desk staff meet users' needs efficiently and cost effectively.	Reviewed CBMS narrative verifying process of problem prioritization and response goals. Met with Customer Service Manager to confirm process is followed.	No exceptions noted.
	4) Help Desk ticket resolution is recorded, re-searched, resolved and documented as quickly as possible.	Reviewed CBMS narrative verifying help desk process. Met with Customer Service Manager and reviewed help desk tickets online to confirm documentation of resolutions.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 22 – Help Desk Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) Ensure efficient and effective methods of communication between all CBMS Users in regards to the Help Desk.	Customer Service Manager confirmed that communication was lacking during the audit period. Process is to close tickets if they leave three messages for users without a response. There was no time period criteria for the three attempted contacts.	Exception noted.
	6) Medical sites are provided with customer service technicians through the CBMS Help Desk.	Through inquiry, it was confirmed that Medical Assistance sites are provided help desk support by EDS. Weekly meetings are held with EDS to sync up issues. The same help desk issues tracking software is utilized by both CBMS and EDS.	No exceptions noted.
	7) The Help Desk Customer Technicians are knowledgeable in regards to Help Desk problem prioritization. Problem prioritization identifies the magnitude and scope of the problem and defines the urgency and level of resources that must be applied to the problem to affect an appropriate resolution.	Reviewed CBMS narrative verifying process of problem prioritization and response goals. Met with Customer Service Manager to confirm process is followed.	No exceptions noted.
	8) Monitor error trends among counties and refer to appropriate groups.	Through inquiry, it was confirmed that tracking by county was not done during the audit period.	Exception noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 22 – Help Desk Operations

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	9) Assist with a rapid response to a workaround strategy.	Through inquiry, it was verified that system work-arounds are communicated through the CBMS Portal and CBMS Communications.	No exceptions noted.
	10) Monitor the help desk methodologies and approaches.	Through inquiry, it was verified that Help Desk monitoring included an informal review process.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 23 – CBMS Training Operation

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These Controls provide reasonable assurance that training activities and classes are planned and made available to all CBMS users.	1) CBMS Trainers are well trained in the CBMS functionality and have knowledge of how CBMS works.	Reviewed CBMS narrative and Service Desk Training Manual. Through interviews, verified that Customer Service Technicians had experience with the CBMS system from being part of the implementation team.	No exceptions noted.
	2) Ensure that CBMS users have an avenue to voice their training needs and these needs are met.	Through inquiry, it was conveyed that requests for training were received through the County User Group (CUG), Director's association and Customer Service Manager and accommodated as much as possible. Due to the stated crisis mode they were operating in it was not possible to meet all requests.	Exception noted.
	3) Ensure efficient and effective methods of communication between all CBMS users in regards to CBMS Training.	Through observation, it was verified that CBMS communications are posted and stored on the intranet (portal) for access across the organization. Samples of CBMS Training schedules were reviewed. CBMS Communication emails were reviewed.	No exceptions noted.
	4) Monitor CBMS application use by CBMS users. Many CBMS users may be having a single problem that would warrant a training session to alleviate the problem.	Through inquiry, it was verified that CBMS application issues are monitored and knowledge transfer sessions are created to communicate workarounds, resolutions etc. Workarounds were incorporated into training.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 23 – CBMS Training Operation

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) Ensure efficient and effective methods of communication between all CBMS Users in regards to CBMS Training.	Through inquiry and review of CBMS communications, it was verified that effective methods of communication are employed.	No exceptions noted.
	6) Assist with workaround strategies.	Through inquiry, it was verified that CBMS application issues are monitored and knowledge transfer sessions are created to communicate workarounds, resolutions etc. Workarounds were incorporated into training.	No exceptions noted.
	7) Monitor the CBMS training methodologies and approaches.	Through inquiry, it was verified that there was minimal monitoring of training methodologies and approaches that occurred.	Exception noted.
	8) Provide CBMS users with tools to help them use CBMS.	Through inquiry and review, it was verified that tools are in place to assist with use of the CBMS application.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 24 – CBMS Reports

Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
These controls provide reasonable assurance that authorized reports change requests are prioritized and completed in an expatiated fashion to serve the State and county users.	1) Monitor the methodologies and approach to report/data requests for users and other agencies.	Obtained and inspected the Change Request Detail Document. Monitoring occurs at the Report Team meetings each week. Meeting minutes inspected detail the monitoring of outside requests.	No exceptions noted.
	2) Report Team is well trained in utilizing the Business Objects Tool.	Through inquiry with management, Report Team is continually trained on the latest releases for EDS.	No exceptions noted.
	3) CBMS Reports Team meets user needs efficiently and cost effectively.	Obtained and inspected various meeting minutes surrounding the effectiveness and efficiency of CBMS Reports Team. Through Change Control Review Board and County User Group meetings, CBMS Reports Team addresses user needs.	No exceptions noted.
	4) Ensure that the CBMS specific lawsuit reports are complete and accurate. Report data meets the court direction in the type of CBMS data they want displayed on the reports.	Obtained and inspected the Court Communication documents. Verified through Report Team meeting minutes that the court direction is being monitored.	No exceptions noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Figure 24 – CBMS Reports

Figure 24 – CBMS Reports			
Provided by CBMS		Provided by BKD	
Control Objective	Control Activity	Testing Procedures	Results
	5) Ensure efficient and effective methods of communication between all CBMS Users in regards to CBMS Reports.	Obtained and inspected meeting minutes from the County Users Group and various CBMS staff meetings. The meetings service as the primary communication method between CBMS and its users. The communication specialist is the secondary communication method in place to disseminate the information within CBMS and the users outside of CBMS.	No exceptions noted.
	6) Run reports that monitor error trends among counties.	Obtained and inspected the meeting minutes from the State Policy and County User Group. These meetings periodically contain discussion threads about error trends. There were no reports produced during the examination period to review for monitoring of error trends.	Exception noted.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

**Section VI
User Control Considerations**

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

CBMS User Control Considerations

This section of the CBMS SAS 70 Report is limited to services provided to CBMS users and does not extend to controls in effect at user locations. The Colorado County Department of Social / Human Services and Medical Assistance (MA) Sites staff interview applicants for welfare and medical assistance to gather information on the specific client application for the assistance program for which the clients are applying. This information is input into CBMS for processing for 14 total high-level programs that provide benefits and services based on certain eligibility criteria. All County / MA site staff are responsible for data entry of client information and authorization of client benefits, which could be approved, denied or placed on pending status. Therefore, all County / MA site staff have the primary responsibility concerning the validity of information entered and used in processing.

User Considerations

Objectives to be achieved by County Departments and Medical Assistance (MA) Sites

It is not feasible for all of the control objectives relating to CBMS functionality to be completely achieved through CBMS implemented controls. While CBMS fully achieves some objectives, procedures performed by County / MA site CBMS user groups contribute significantly to the overall achievement of control objectives. This section highlights procedures that should be considered by user organizations in order to fully achieve desired control objectives. Other control objectives may be defined by the users and must be achieved solely by the user.

User Considerations

CBMS Client Information

1. County / MA sites have procedures and policies in place (written) to assure that clients applying for assistance are processed according to the federal and state program rules and regulations, including the preparation of appropriate financial and non-financial statements and disclosures relevant to case files.
2. County / MA sites are responsible for ensuring that client application information is accurate, complete, and authorized before and after entering the client data into CBMS.
3. County / MA sites are responsible for developing and incorporating a new business model to efficiently and effectively utilize CBMS functionality.
4. County / MA sites are responsible for the cleansing of case data in order for CBMS to function properly and accurately for cases converted to CBMS from the legacy systems.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Training

1. County / MA sites are responsible for ensuring that their employees are adequately trained to use CBMS.
2. County / MA sites are expected to take advantage of the CBMS training classes on CBMS 101, 102, and 103, as well as training classes on Business Objects (101, 102 and 103) and other CBMS training classes.
3. County / MA sites are responsible for ensuring that all staff knows how to use the DHS portal to review current and new policy and procedures, messages, training class material, user manuals, up to date CBMS information, and other materials that may be made available through the portal.

Change Management Training

1. County / MA sites have the responsibility to continue with in-house training on acceptance of the CBMS automated system that replaces many manual processes.

Help Desk

1. County / MAs have the responsibility to use the CBMS/DHS Help Desk Ticket Process to register CBMS problems.

CBMS Claim System Specifications

1. County / MA site staff are responsible for ensuring that overpayments/underpayments are processed accurately and according to the program rules and regulations.
2. County / MA site staff are responsible for ensuring vendor information is recorded accurately and vendor payments are paid according to the County / MA rates.

CBMS Reconciliation

1. County / MA site staff are responsible for evaluating their data entry / system inputs, reports and other related CBMS user input. Through internal management evaluation, and with input from the appropriate program areas, County / MA site staff ensure that reconciliation processes / procedures are in place to support accurate issuance of benefits.

Other

1. County / MA site staff are responsible for ensuring that CBMS recommended changes be brought through the County User Group (CUG) to CBMS. County and MA site staff are responsible for participating in the CUG and following CBMS processes for recommended changes.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**

Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

2. County / MA sites have the responsibility to properly identify those personnel who may request a CBMS user account be created, modified, or deleted per the process described in the CBMS/County / MA User Account Procedures.
3. County / MA sites are responsible for ensuring parameters of the user account setup are specified and accurate prior to submission to CBMS and that such parameters are periodically reviewed for appropriateness.
4. County / MA sites are responsible for disabling user accounts due to termination of employment after a specified time period.
5. County / MA sites are responsible for ensuring requests for application changes and maintenance are standardized, documented, and subject to formal CBMS change management procedures.
6. County / MA sites are responsible for post-implementation reviews performed to verify application controls are operating effectively.
7. County / MA sites are responsible for establishing user anti-virus and malicious software policies that instruct users on basic detection and reporting of suspected (or validated) viruses and malicious software on systems connected to the CBMS network infrastructure.
8. Users are responsible for the balancing and transmission of daily work. Procedures should be in place at County / MA sites to provide for the balancing of daily work.
9. County / MA sites are responsible for maintaining the integrity of any connections to CBMS from any other network connection, (e.g., the Internet, leased line). This should be achieved via the deployment of control mechanisms (e.g., firewalls, routers, switches, etc.) to monitor and manage traffic between the client network and the client connection points with CBMS.
10. County / MA sites should maintain adequate safeguards to restrict physical access to computer terminals and printer output areas to only appropriate authorized individuals.
11. County / MA sites are responsible for ensuring CBMS communications is made available to all staff.
12. Counties are responsible for ensuring that CBMS reports are used to provide statistical information to their management and county commissioners.

**Colorado Department of Health Care Policy & Financing
and Department of Human Services
Colorado Benefits Management System**
Report on Controls Placed in Operation and Tests of Operating Effectiveness
Period from January 1, 2005 through June 30, 2005

Distribution Page

The electronic version of this report is available on the Web site of the
Office of the State Auditor
www.state.co.us/auditor

A bound report may be obtained by calling the
Office of the State Auditor
303.869.2800

Please refer to the Report Control Number 1735A when requesting this report.