REPORT OF

THE

STATE AUDITOR

Department of Corrections
Internal Health Care Provided to Inmates

Performance Audit
September 2005

LEGISLATIVE AUDIT COMMITTEE
2005 MEMBERS

Representative Val Vigil
Chair

Senator Norma Anderson
Vice-Chair

Representative Fran Coleman
Senator Deanna Hanna
Representative David Schultheis
Senator Stephanie Takis
Senator Jack Taylor
Representative Al White

Office of the State Auditor Staff

Joanne Hill
State Auditor

Cindi Stetson
Deputy State Auditor

Becky Richardson
Tobin Bliss
Mette Boes
John Conley
Legislative Auditors

JOANNE HILL, CPA
State Auditor

STATE OF COLORADO

OFFICE OF THE STATE AUDITOR
303.869.2800
FAX 303.869.3060

Legislative Services Building
200 East 14th Avenue
Denver, Colorado 80203-2211

September 14, 2005

Members of the Legislative Audit Committee:

This report contains the results of a performance audit of the Department of Corrections. The audit was conducted pursuant to Section 2-3-103, C.R.S., which authorizes the State Auditor to conduct audits of all departments, institutions, and agencies of state government. The report presents our findings, conclusions, and recommendations, and the responses of the Department of Corrections.

TABLE OF CONTENTS

STATE OF COLORADO
OFFICE OF THE STATE AUDITOR **REPORT SUMMARY**

JOANNE HILL, CPA
State Auditor

Internal Health Care Provided to Inmates
Performance Audit
September 2005

Authority, Purpose, and Scope

This performance audit was conducted pursuant to Section 2-3-103, C.R.S., which authorizes the Office of the State Auditor to conduct performance audits of all departments, institutions, and agencies of state government. The audit work, performed between February 2005 and May 2005, was conducted in accordance with generally accepted governmental auditing standards. During this audit we reviewed the medical services provided internally to inmates at state-run adult correctional facilities. As part of the audit, we engaged the services of the Caley Gordon Group to evaluate the quality of medical care being provided by the Department at its on-site clinics. The audit did not review dental and optometry services, substance abuse, mental health, or sex offender treatments, nor did the audit evaluate the services provided by the Department's external health care administrator, which were evaluated in the April 2005 *Performance Audit of External Health Care Services Provided to Inmates*.

Overview

The Department of Corrections' (Department) Division of Clinical Services (Division) is responsible for ensuring that inmates receive health care services during their incarcerations at state-run adult correctional facilities. The Division's clinical staff provide primary and emergency care on-site at clinics located in 20 of 21 state-run correctional facilities. In addition to the 20 clinics, the Denver Reception & Diagnostic Center and the Colorado Territorial Correctional Facility have infirmaries. In Fiscal Year 2005 the Division provided medical services to a total of about 21,700 inmates and each inmate visited the clinics and infirmaries an average of about seven times.

The Division's funding derives almost entirely from the State's General Fund. In Fiscal Year 2005 the Division spent almost $61 million to provide health care services to inmates. Of this total, almost $33 million was spent on the internal medical services provided at its clinics and infirmaries.

Summary of Audit Comments

Quality of Care

The first contact inmates have with clinical staff is upon entry or reentry into the State's correctional system. It is at this point the Department conducts intake screenings and examinations. After inmates are transferred to their assigned facilities, medical care (with the exception of emergency and inpatient care) is provided on-site at the facilities' clinics and infirmaries. We evaluated both the medical intake and ongoing medical care provided at the facilities and found:

- **Health intake procedures are not being completed for all inmates in a timely and comprehensive manner.** Statutes require the Department to conduct an assessment of each inmate's mental health, substance abuse, and medical treatment needs upon entry or reentry into the correctional system. The Department has established standards and time frames outlining the medical screening and examination activities that are to occur during this process. We sampled a total of 99 male and female inmates and found that 51 inmates did not receive the complete series of necessary screenings and examinations. Further, for the 48 inmates who did receive all of the required screenings and examinations, only 12 received these within the required time frames. We provided this information to the Department. As of September 2005, the Department reports that screenings for 36 of the 51 inmates have been completed, screenings for 3 inmates are pending, and the remaining 12 inmates are no longer in the Department's custody.

- **Greater uniformity and consistency is needed to deliver quality care at the clinics.** We reviewed a sample of 236 inmate clinical visits that occurred during the first nine months of Fiscal Year 2005 and found quality-of-care concerns in 86 of the records (36 percent). Further, we identified almost 100 actions, inactions, or underlying causes at the Department's clinics that led to these quality-of-care concerns. To address these issues, the Department needs to ensure staff apply all standards, guidelines, and protocols consistently. Additionally, the Department needs to standardize drug treatments across facilities by incorporating drug therapies into disease management and chronic care guidelines and protocols. Finally, the Department needs to ensure inmates' medical records contain all relevant information on the care received both at the clinics and from external providers.

Management and Oversight

We evaluated the Department's oversight and management of the systemwide delivery of internal health care services and found:

- **Critical components are lacking in the Quality Management Program.** We found flaws in the design and operation of the Quality Management Program that have, for the most part, diminished its effectiveness. Specifically, the Program operates as a fragmented system of

numerous committees that meet inconsistently. Further, quality management reviews have focused primarily on retrospective reviews of complaints, incidents, or deaths and generally have not included prospective ongoing reviews, such as reviewing the routine medical decisions made by staff.

- **Available data are not being used sufficiently for management decision-making.** The Department does not routinely analyze or access basic programmatic data, such as medical grievances related to health care services, lawsuits resulting from clinical activities, and numbers of emergency room visits. Additionally, the Department does not routinely compile and analyze information from inmate medical records to assess trends.

- **Documented evidence of systemwide staffing analysis is lacking.** During our audit we found wide variability in staffing levels and costs among the Department's clinics. During Fiscal Year 2005 clinic costs per inmate ranged from about $500 to $5,800, depending on the clinic. According to Department staff, these and other differences in costs, staff-to-inmate ratios, and other workload measures can be explained by the distinct characteristics of each facility. Department staff report they distribute clinical staff among the facilities based on various factors, such as the number of inmates with chronic conditions, the number of facility lock downs, and the ratio of the various staffing levels to inmates. However, the Department lacked analysis demonstrating how these factors led to the staffing levels and mixes currently in place at each clinic. Without systematic and comprehensive staffing analyses, the Department does not have a sound basis upon which to support permanent staffing decisions and cannot determine whether its clinics are performing optimally within the resources available.

Cost Containment

Many factors contribute to rising health care costs in correctional facilities, including a growing inmate population, increasing numbers of female inmates, longer incarcerations, aging inmates, expensive services for chronic and communicable diseases, and costly prescription medications. We reviewed measures available to the Department to generate revenue and contain costs, and found:

- **Contrary to statutory intent, copayments are not assessed for all clinic encounters.** Statutes require the Department to charge consistent copayments for every medical, mental health, dental, and optometric service provided to inmates. We found that the Department's regulations categorically exclude about one-half of all encounter types, including follow-up appointments, from copayment charges. In Fiscal Year 2005 only 26 percent of all medical encounters (39,800 of 153,300) were assessed a copayment due to these exclusions. Medical encounters have increased by 70 percent (in comparison to a 1 percent increase in the inmate population) from Fiscal Years 2004 through 2005, raising questions about the effectiveness of the Department's application of copayments. Further, if the Department had charged the

$5 copayment on all medical encounters in Fiscal Year 2005, it could have collected about $766,400, or more than three times the $209,900 that it actually collected.

- **The formulary is outdated and an ineffective management tool.** The formulary has not been updated since 2002 and consequently, does not include some drugs shown to be effective in treating certain medical conditions at a lower cost. For example, we found the Department could have saved about $22,800 by replacing Zomig with Midrin, a non-formulary migraine medication that is effective and less costly. An outdated formulary also forces physicians to prescribe many off-formulary medications, which creates additional administrative work for the pharmacy and unnecessary delays in dispensing. Over a three-month period, the pharmacy manager approved all but 9 of the approximately 260 non-formulary medication requests, for an approval rate of 97 percent. Further, 80 of these non-formulary requests (31 percent) were for the same five medications.

- **Sufficient controls are lacking for drug inventories.** The Division uses an electronic Medication Administrative Record system to track the types and quantities of medications dispensed to inmates through the clinics. However, we found that clinic staff enter data in the electronic system inconsistently and therefore, data are not accurate or reliable. Additionally, the Department lacks controls over the destruction of medications. Clinic staff do not consistently record the exact amount of medications destroyed, use secure methods of destroying medications, or obtain a witness when medications are destroyed.

Our recommendations and the responses of the Department of Corrections can be found in the Recommendation Locator and in the body of this report.

RECOMMENDATION LOCATOR

Rec. No.	Page No.	Recommendation Summary	Agency Addressed	Agency Response	Implementation Date
1	19	Meet health intake standards for all inmates by (a) reassessing current intake processes and procedures and developing appropriate strategic and contingency plans for completing all mandatory screenings and examinations; (b) communicating any changes to intake and clinical staff; and (c) developing a mechanism for tracking completion of the intake process and any subsequent clinical followup.	Department of Corrections	Agree	July 2006
2	25	Ensure the consistent application of current standards of care by (a) evaluating and updating current standards, guidelines, and protocols; (b) developing checklists and flow sheets for use by staff and for inclusion in inmates' medical records; and (c) conducting more routine and comprehensive reviews of medical records.	Department of Corrections	Agree	January 2006
3	28	Improve medication management policies and practices by (a) developing and ensuring compliance with drug treatment protocols; (b) making additional, easily accessible drug-drug interaction and drug-disease information available for use by clinical staff; (c) reevaluating policies and establishing a formal process for approving over-the-counter medications for sale through Canteen Services; and (d) adopting a medication alert system to notify clinical staff of medical conditions or over-the-counter medications that could be contraindicated for certain inmates.	Department of Corrections	Agree	July 2006
4	30	Ensure inmate medical records are complete and current by (a) adopting procedures for periodic review of medical records to ensure compliance with established policies and formats and (b) developing methods to ensure external provider information is received and appropriate follow-up care and treatment is provided in a timely manner.	Department of Corrections	Agree	July 2006

RECOMMENDATION LOCATOR

Rec. No.	Page No.	Recommendation Summary	Agency Addressed	Agency Response	Implementation Date
5	34	Develop and implement a comprehensive and proactive quality management program by (a) reassessing and revising the current structure to ensure committees are multidisciplinary, that they meet and report regularly, that responsibility and accountability are clearly assigned; (b) routinely identifying and reviewing programs, activities, and quality-of-care issues at both clinic and staff levels as well as systemwide; and (c) developing and measuring outcomes related to the quality of care provided to inmates.	Department of Corrections	Agree	July 2006
6	37	Improve use and management of critical decision-making information by periodically reviewing key operating data, developing additional data sources, ensuring the accuracy and reliability of data, taking steps to minimize data discrepancies among facilities, and monitoring for compliance among clinics and clinic staff.	Department of Corrections	Agree	July 2006
7	40	Ensure clinic staffing levels are appropriate and provide efficient, quality health care by (a) identifying all critical factors needed to establish optimal staffing levels; (b) conducting and documenting regular staffing analyses; and (c) making permanent and temporary staffing changes based on the annual analysis.	Department of Corrections	Partially Agree	January 2006
8	47	Ensure copayment policies and practices comply with statutory intent by either assessing copayments for every type of clinic encounter or proposing legislation to include current regulatory exclusions in statute.	Department of Corrections	Agree	January 2006

RECOMMENDATION LOCATOR

Rec. No.	Page No.	Recommendation Summary	Agency Addressed	Agency Response	Implementation Date
9	51	Ensure the cost-effectiveness of prescription drug practices by (a) conducting a systematic and comprehensive review and update of the current formulary; (b) including a date-specific time for the establishment of an updated formulary in the contract with an outside provider; (c) establishing and maintaining a schedule for monitoring prescription patterns and drug utilization, including adherence to a regular calendar of review committee meetings; and (d) controlling non-formulary requests through the use of prior authorization approval and monitoring.	Department of Corrections	Agree	March 2006
10	53	Take immediate steps to improve drug inventory management practices by (a) ensuring staff are consistently and accurately entering data into the electronic medication inventory system; (b) adopting a standard drug destruction policy for implementation at the clinics; and (c) regularly monitoring staff and clinic compliance with the drug inventory management policies.	Department of Corrections	Agree	March 2006

Overview of Internal Health Care Provided to Inmates

Background

The Department of Corrections' (Department) Division of Clinical Services (Division) is responsible for ensuring that inmates receive health care services during their incarcerations at state-run adult correctional facilities. The Division's mission is to deliver cost-effective, quality health care comparable with community standards. To fulfill this mission, the Division provides medical, optometry, and dental services as well as substance abuse, mental health, and sex offender treatment to an average daily population of about 14,000 inmates housed in state-run facilities. Division clinical staff provide primary and emergency care on-site at clinics located in the Department's correctional facilities throughout the State. In addition, as described in our April 2005 *Performance Audit of External Health Care Services Provided to Inmates*, the Division provides inpatient hospital services, outpatient tests and procedures, specialty physician consultations, and ancillary services through a contractual arrangement with an external health care administrator. The Division does not administer the health care provided to the approximately 2,800 inmates housed in Colorado's six private prisons. Health care for these inmates is provided by the private prisons' operators and overseen by the Department, as explained in our *Performance Audit of Private Prisons*, also released in April 2005. Our current audit focuses on the internal medical services provided by the Department at its on-site clinics.

Services

All but one of the Department's 21 state-run correctional facilities operate on-site medical clinics. The Colorado Correctional Center, a minimum security facility located in Golden, usually transports its inmates to the Denver Reception & Diagnostic Center (DRDC) for their health care needs. In addition to the 20 clinics, two facilities – DRDC and the Colorado Territorial Correctional Facility (CTCF) in Canon City – house infirmaries. Most clinics operate between 16 and 18 hours a day, while the infirmaries are staffed around the clock. The clinics and the infirmaries are capable of treating inmates with acute and chronic medical conditions. However, unlike the clinics, the infirmaries have permanent beds for the chronically ill, as well as for inmates recovering from surgery performed at outside hospitals.

The Department staffs its clinics and infirmaries with full-time equivalent (FTE) employees and some contractual personnel. When needed, staff physicians refer inmates for external diagnosis or treatment at local hospitals or specialty clinics. Programmatically, the Division administers the following:

- **Reception and diagnostic.** The Division oversees the intake and initial health assessment of all inmates upon entry or reentry into the correctional system. Male and female inmates are assessed at DRDC and the Denver Women's Correctional Facility (DWCF), respectively. The initial health assessment includes medical, mental health, dental, and substance abuse evaluations. See Chapter 1 for details and findings related to the health intake process.

- **Clinic visits.** Physicians, physician assistants, licensed nurse practitioners, certified practical nurses, and regular nurses staff the clinics and provide a range of services, including emergency and non-emergency treatment, medication distribution, optometry, mental health, and dental care. See Chapter 1 for details and findings related to the quality of care.

- **Infirmary.** As previously mentioned, the Division provides skilled nursing care at the DRDC and CTCF infirmaries. The infirmaries provide pre- and post-hospital care, special testing, and treatment of low resource-intensive and acute and chronic conditions. The CTCF infirmary also offers licensed hospice services. See Chapter 1 for details and findings related to the quality of care.

- **Ancillary.** For most ancillary services, such as laboratory screenings, the Department contracts with outside providers. However, some clinics provide radiology services, and prescription medications are currently provided to all facilities through the Department's pharmacy in Pueblo. See Chapter 2 for details and findings related to pharmacy services.

The American Correctional Association (ACA) has accredited all but four of the Department's clinics and infirmaries. To be accredited by ACA, the entire operations of a correctional facility must meet the standards, including physical plant, security, programming, and health care services. According to Department staff, the Department has not sought ACA accreditation for the Buena Vista, Colorado Territorial, Fort Lyon, and Fremont correctional facilities because the overall age and physical condition of these facilities prevent them from meeting the standards. Therefore, for these four clinics and infirmaries to be accredited, the entire facilities in which they are located would first have to be brought up to ACA standards. In addition to ACA accreditation, all of the Department's clinics and

infirmaries are licensed as "community clinics" by the Colorado Department of Public Health and Environment.

Usage

On any given day in Fiscal Year 2005, the Department housed an average of about 14,000 inmates in its state-run adult correctional facilities. Throughout the year, many more inmates than the average daily population of approximately 14,000 enter and leave the State's correctional system. Therefore, in Fiscal Year 2005 the Division provided medical services to a total of about 21,700 different inmates. As seen in the table below, these inmates visited the clinics and infirmaries a total of approximately 153,300 times. This means that each inmate who resided in one of Colorado's state-run correctional facilities, at some time during Fiscal Year 2005, visited a clinic or infirmary an average of about seven times. Furthermore, the Department's infirmaries have a total of 68 beds. In Fiscal Year 2005, on average, about 67 percent of the infirmary beds at DRDC and 84 percent of the beds at CTCF were occupied.

Department of Corrections
Encounters per Inmate
Fiscal Years 2002 Through 2005

	Fiscal Year 2002	Fiscal Year 2003	Fiscal Year 2004	Fiscal Year 2005	Percent Change Fiscal Years 2002 – 2005
Total Encounters	118,600	108,400	90,300	153,300	29%
Total Inmates Served	18,000	18,100	18,400	21,700	21%
Encounters per Inmate	6.6	6.0	4.9	7.1	8%

Source: Office of the State Auditor's analysis of Department of Corrections' data.

Fiscal Overview

In Fiscal Year 2005 the Division spent a total of about $61 million for internal and external health care services, and employed more than 420 full-time equivalent (FTE) positions. The Division's funding derives almost entirely (99 percent) from the General Fund. The remaining 1 percent is cash funds ($224,700) and cash funds exempt ($114,200). The source for cash funds is copayments for health care services, which we discuss later in Chapter 2. The source for cash funds exempt is federal funds transferred from the Division of Criminal Justice for the purchase of

computers at the facility clinics. Of the total $61 million expended during Fiscal Year 2005:

- $33 million (54 percent) was spent on internal medical services, including purchasing medications and contract staff to supplement staffing vacancies.
- $25 million (41 percent) was spent on external medical services, including inpatient and outpatient hospital services provided through an external health care administrator.
- $3 million (5 percent) was spent on other health care services, such as dental.

The costs for providing internal medical services has increased by 12 percent between Fiscal Years 2002 and 2005. Since Fiscal Year 2002 these increases in internal costs have been primarily in personal services and prescription medications.

Audit Scope

Our audit focused on the medical services provided internally to inmates at state-run adult correctional facilities. Our current audit did not include a review of external services; dental and optometry services; or substance abuse, mental health, and sex offender treatments. As part of the audit, we collected and analyzed data, interviewed management and staff, surveyed other states, and analyzed relevant national data and research literature. We conducted site visits to clinics located within the Arkansas Valley, Arrowhead, Buena Vista, Colorado State Penitentiary, Denver Women's, Four Mile, Fremont, Limon, San Carlos, and Sterling correctional facilities. We also visited the intake clinic and infirmary at DRDC and the pharmacy at Pueblo. During our visits we toured the clinics, observed their daily operations, interviewed staff, and reviewed a sample of inmate medical records.

In addition, we contracted the services of the Caley Gordon Group, whose staff included both a Colorado-licensed physician and a pharmacist. The purpose of these services was to evaluate the quality of medical care being provided by the Department at its on-site clinics. Included in the evaluation was a review of inmate medical records and an analysis of encounter data from the Department and its external health care administrator. The findings of this review are discussed in detail in Chapter 1.

Quality of Care

Chapter 1

Overview

Inmates have a well-established constitutional right to health care. In 1976 the Supreme Court ruled in *Estelle v. Gamble* that an inmate's right to health care is embodied in the Constitutional protection from "cruel and unusual punishment." Since that time, three basic rights have emerged in the case law: (1) the right to access health care, (2) the right to care that is ordered, and (3) the right to a professional medical judgment. According to the U.S. Department of Justice's National Institute of Corrections (NIC), to provide for constitutional care and to protect against litigation, correctional administrators must adopt procedures to protect inmates' basic rights, including:

> ...a functioning sick call system..., a means of addressing medical emergencies, a priority system so that those most in need of care receive it first, the development and maintenance of adequate medical records, liaison with outside resources for specialist and hospital care when needed, a system for staff development and training, and an ongoing effort at quality control.

Achieving these goals in a correctional setting presents many unique challenges not necessarily present in the general population. First, inmates have a higher incidence of chronic and communicable diseases. According to the National Commission on Correctional Health Care, the prevalence of infectious diseases, such as active Hepatitis-C infection, HIV/AIDS, and active tuberculosis, is significantly greater among the inmate population than among the population as a whole. Second, many inmates suffer from years of alcohol and substance abuse. For example, according to the Government Accountability Office, 74 percent of female inmates used drugs regularly before incarceration. Third, many inmates have had little or no health care prior to incarceration. Moreover, correctional systems have additional considerations, including transportation, security, and recruiting and retaining qualified medical personnel.

In this chapter we present our findings and recommendations related to the quality of medical care provided internally to inmates at clinics located in 20 of Colorado's state-run adult correctional facilities. We begin our review with the initial contact the Department of Corrections' (Department) clinical staff have with inmates at the

time of their entry or reentry into the correctional system. We then discuss the ongoing care inmates receive after they arrive at their assigned facilities, and make recommendations specific to the care provided at the clinics and infirmaries. Finally, we present our findings related to systemwide oversight and management.

Health Intake Process

By statute, the Department is required to conduct an assessment of each inmate's mental health, substance abuse, and medical treatment needs upon entry or reentry into the correctional system. This initial health appraisal is crucial because it addresses immediate and potentially life threatening medical conditions, identifies communicable diseases, and establishes health benchmarks for each inmate. According to the National Institute of Corrections, the intake health screening may be the single most important health standard for correctional facilities to meet.

The Department conducts its health-related intake assessments at two facilities: male inmates are evaluated at the Denver Reception & Diagnostic Center (DRDC) and female inmates at the Denver Women's Correctional Facility (DWCF). According to data provided by the Department, about 8,700 inmates were processed through intake in Fiscal Year 2005. On average, DRDC received about 29 male inmates per business day and DWCF received about 4 female inmates per business day.

The Department has established standards outlining the medical screening and examination activities that are to occur during intake. According to Department management, the standards are based on national protocols established by health care organizations, such as the American Cancer Society, American Diabetes Association, and the National Institute of Health. In addition to requiring certain screenings and examinations, the Department has adopted time frames within which the various intake activities are to be completed, as follows:

- **First day.** Inmates complete a self-reported medical history and a basic medical interview, and undergo laboratory and diagnostic screenings for communicable diseases and blood abnormalities. The first day is an opportunity for clinical staff to gather basic, but vital, health information from each inmate. Clinical staff report that based upon the results of the medical interview, they separate inmates with emergency and nonemergency conditions. Inmates with medical emergencies are immediately referred for further examination. Clinical staff estimate that about 5 percent of incoming inmates require immediate emergency care.

- **Third day.** Inmates receive a complete physical examination, vision screening, and a statutorily required blood draw for the Colorado Bureau of Investigation's DNA database.

- **Additional mandatory screenings.** Based on an inmate's age, gender, or certain preexisting medical conditions, he or she must undergo additional screenings. These include diabetic blood sugar screenings, prostate and colon cancer screenings for men over the age of 50, and breast examinations for all women. According to the Department's *Clinical Standard and Procedure for Preliminary Screenings and Periodic Health Examinations*, some of these additional screenings are to be performed on the first day at DRDC. Others may be completed at DRDC or, later, at the inmate's assigned facility.

Finally, after an inmate is transferred from DRDC or DWCF to his or her assigned facility, clinical staff at that facility are required to review the inmate's medical record within 72 hours.

We evaluated the Department's medical intake activities to determine whether inmates are receiving the required screenings and examinations within the specified time frames. We sampled a total of 99 male and female inmates who entered the State's correctional system from September 2004 through March 2005. We found the Department did not complete the health intake procedures for 51 of these 99 inmates. Further, for the 48 inmates who did receive all of the required screenings and examinations, only 12 received these within the required time frames. Upon completion of our intake review, we provided the Department with the details so that staff could take appropriate follow-up action, as needed. According to the Department, staff reviewed and followed up on the 51 inmates who did not receive the complete series of necessary screenings. As of September 2005, the screenings for 36 of these 51 inmates have been completed, screenings for 3 inmates are pending, and the remaining 12 inmates are no longer in the Department's custody.

Overall, we found that the Department does not sufficiently prioritize those inmates with greater health needs. Rather, inmates who are generally healthy or who have fewer preexisting medical needs are more likely to receive complete and timely health intake assessments, as described in the following sections.

Comprehensive Intake

As previously described, depending upon inmates' preexisting medical conditions or certain personal characteristics, additional screenings and examinations are required. We found that the Department is not administering these additional

screenings to all of the inmates requiring them. Of the 99 inmates in our sample, 66 had characteristics requiring additional mandatory screenings and examinations. Of these 66 inmates, 51 (77 percent) did not receive the complete series of necessary screenings. Inmates required as many as nine additional screenings and examinations. For example, inmates over 40 years of age are to receive a cholesterol screening to identify the risk of heart disease. As the following table shows, staff did not administer the required cholesterol screenings to 76 percent of inmates requiring them. Clinical staff also did not administer the required colon cancer screenings to 9 of the 13 inmates over 50 years of age.

Department of Corrections
Additional Mandatory Screenings and Examinations
September 1, 2004 Through March 31, 2005

Type of Screening or Examination	Number of Inmates Requiring Screening[1]	Number of Inmates Not Receiving Required Screening	Percent of Inmates Who Did Not Receive Required Screening
Cholesterol	34	26	76
Hypothyroid	30	8	27
Thyroid Function	27	10	37
Blood Sugar	26	18	69
Psychiatric	19	4	21
Hepatitis Panel	17	9	53
Breast	17	2	12
Urinalysis	15	4	27
Colon Cancer	13	9	69
Nutrient & Electrolyte	13	4	31
Chest X-Ray	10	9	90
EKG	10	2	20
Prostate Cancer	10	2	20
Sickle Cell	7	7	100
Diabetes	3	0	0

Source: Office of the State Auditor's analysis of Department of Corrections' inmate medical records.

[1] Many inmates are recorded in more than one category because they required multiple screenings and/or examinations.

Timely Intake

From our sample of 99 inmates, we identified 48 who received complete intake screenings and examinations. However, only 12 of these 48 inmates received all of the mandatory screenings and examinations within the time frames specified in the Department's *Clinical Standards and Procedures*. Although most of the inmates' screenings and examinations were completed within one to two weeks, some were delayed by more than one month, as described below:

- Forty percent (19 of 48) did not receive physicals on the third day of intake. Additionally, 6 of these 19 inmates (32 percent) did not receive their physicals within the American Correctional Association's (ACA), the Department's accrediting body, national standard of 14 days. The longest an inmate waited for a physical exam was 32 days after arriving at DRDC.

- Twenty-three percent (11 of 48) did not receive the required psychiatric examinations and mandatory screenings, including those for tuberculosis and hepatitis, within the specified time frames. One inmate waited 82 days for a hepatitis screening.

- Thirty-eight percent (18 of 48) did not have their medical records reviewed by staff within 72 hours after arriving at their assigned facilities. Additionally, during the period of our review we found that staff did not review the medical records for 2 of these 18 inmates. The records for the other 16 inmates were reviewed within six weeks of their arrival at their assigned facilities.

When clinical staff are unable to conduct all of the physical examinations on the third day of intake, staff told us they informally prioritize the overdue physicals for completion as soon as possible. According to clinical staff, this prioritization is based on the inmates' medical needs. However, we did not always find this to be the case. For example, two inmates arrived at DRDC within a day of one another. One inmate had a family history of cancer, multiple health problems including two prior heart surgeries, chronic hypertension, and lower back problems. This inmate did not undergo a physical for six days. The other inmate, with no identified health risks, was examined on the third day. A wait of six days for a physical exam may not appear to be excessive especially when compared with the length of time members of the general public sometimes wait for medical appointments. However, there are several critical distinctions in a closed institutional setting that make timeliness an issue.

First, there is a higher risk of infectious or communicable disease in a prison setting. Second, inmates are the responsibility of the Department. As such, a comprehensive

and timely medical intake serves as the foundation for meeting inmates' medical needs and for ensuring a level of quality health care during their incarcerations. By not administering all mandatory screenings, the Department cannot ensure that all chronic conditions are identified. According to the Department's standards, delays in diagnosis and treatment can result in "permanent material impairment, permanent loss of function, or unmanageable pain." Unidentified or untreated chronic conditions, such as hypertension or diabetes, can lead to congestive heart failure, stroke, renal failure, and even death. Additionally, failure to conduct screenings and examinations increases the Department's legal liability. Finally, in addition to the individual and public health benefits from timely and complete health assessments, the cost savings resulting from early detection and treatment are well documented in the medical community.

Intake Process Improvements

The problems we identified are not new or isolated occurrences. Rather, they are the result of a continuing combination of factors that show no signs of changing unless the Department takes action to address them. Overall, the Department needs to strengthen its intake process by undertaking the following corrective measures:

- **Planning.** According to DRDC staff, when more than 35 inmates arrive at the facility per day, it is difficult to process all of them through intake in accordance with the established time frames. Resource limitations, including an insufficient number of private rooms for physical and psychiatric examinations, lessen staff's ability to complete intake in a timely manner. Although the Department has taken temporary steps to address backlogs, such as occasionally transferring in staff from other facilities to assist, it has not developed long-term solutions for this problem.

- **Prioritization.** As previously mentioned, one of the standards correctional administrators need to establish and achieve is a system of prioritization, or triage, so that those most in need of care receive it first. Administering intake based on need provides greater assurance that inmates with chronic or more serious medical conditions or risks receive more timely access to medical care.

- **Communication.** Within a nine-month period, the Department changed components of its intake standards three times without effectively communicating the changes to clinical staff. In addition, staff at both DRDC and the clinics we visited were unclear about where responsibility lay for follow-up and completion of screenings begun or never performed at DRDC. According to Joint Commission Resources, an affiliate of Joint Commission on Accreditation of Healthcare Organizations (JCAHO), communication is

a critical component in delivering quality care. The JCAHO reports that communication problems were the primary cause of about two-thirds of all events reported to it, including medication errors and delays in treatment.

- **Compliance monitoring.** The Department does not review inmate medical records to ensure all essential screenings and examinations are completed in a timely manner. In addition, no tracking mechanism exists to ensure that appropriate follow-up occurs after the inmates arrive at their assigned facilities. The Department needs to develop the necessary mechanisms to monitor and track intake procedures, such as checklists and sign-off sheets, and hold staff and clinics accountable for incomplete and untimely intakes.

The Department needs to improve its health intake process to ensure that standards are met and inmates receive complete and timely assessments. According to Department management, completion of some of the current mandatory tests and screenings is not necessarily critical within the existing time frames. If this is the case, the Department needs to revise its intake standards and time frames, and communicate changes to all clinical staff. Responsibility for completing intake screenings and examinations and follow-up should be clearly assigned, whether at DRDC or at the facilities. If shifting responsibility for some screenings and examinations to the facilities results in an increased burden on facility staff, the Department should adjust the intake time frames and staffing levels accordingly. A system for prioritizing inmates' medical conditions must be implemented, and long-range plans for addressing overflow and backlogs need to be developed. Finally, the Department should adopt a mechanism for tracking the intake process to ensure continuity of care across facilities and for all inmates.

Recommendation No. 1:

The Department of Corrections should ensure it meets health intake standards for all inmates in a timely and comprehensive manner by:

a. Reassessing current intake processes and procedures, and developing appropriate strategic and contingency plans for completing all mandatory screenings and examinations.

b. Communicating any changes to intake and clinical staff.

c. Developing a mechanism for tracking completion of the intake process and any subsequent clinical follow-up.

Department of Corrections Response:

Agree. Implementation date: July 2006. The Denver Reception & Diagnostic Center (DRDC) was designed and built in 1989. At that time, DRDC could accommodate a maximum intake of 15 inmates per day. Currently, DRDC is processing 35 inmates or more per day and, at times, has had to increase the number to 45 inmates a day to decrease jail backlog. Plans were once developed to expand the intake area at DRDC, but had to be dropped due to budget restrictions. In an attempt to accommodate this physical resources challenge, the Department is in the process of creating another examination room to be utilized for the midlevel providers, by moving the mental health providers out of an existing room to another building at DRDC. The Department is optimizing the resources and space allotted, but the Department also realizes its resource limitations and many variables that intermittently have an impact on operations.

The Department is developing a long-term solution to this problem. As a result of its action, the Department is now fully staffed with clinical managers. Currently, there is only one vacancy for a midlevel at DRDC. The Department has increased the hours for the intake physician and is currently keeping up with the backlog. The Department has reassessed its strategy, and has decided to place a full time physician in the infirmary.

The Department agrees that there are opportunities for improving communications and improving a mechanism for tracking completion of the intake process, and any subsequent clinical follow-up. The Department will further investigate the feasibility of checklists and other forms to improve this process. In addition, the Department recently implemented a Quality Management Program in October 2004 and is in the process of developing the mechanisms for ensuring the completion of the required medical tests.

Medical Record Review

After inmates arrive at their assigned facilities, their medical needs are handled through the clinics located in the Department's facilities across the State. We reviewed a sample of 236 inmate clinical visits that occurred during the first nine months of Fiscal Year 2005 (July 1, 2004, through March 31, 2005). The purpose of the review was to determine the quality of care provided, by assessing factors such as the timeliness and appropriateness of care, Department oversight of care, and standards of care. Our review was conducted by both a Colorado-licensed physician

and a pharmacist. Inmate medical records were randomly selected from the categories below. We chose these categories because they represent situations in which the clinical outcome, such as an emergency room or inpatient admission, could have been positively or negatively affected by the care provided during the clinic encounters. The categories chosen were:

- Inmates with four or more external emergency room visits.
- Inmates with an inpatient hospital admission.
- Inmates with a hospital readmission within 30 days.
- Inmates with an ambulatory clinic encounter.

In reviewing the medical records, if we identified a quality-of-care concern, we then assigned a level of severity to the concern using the Department's severity index. The Department's regulations outline several levels of severity when a quality issue is identified and the actions to be taken in response to each of the levels. The regulations also state that severity codes will be assigned by the chair and co-chair of the Quality Management Committee "based on the circumstances of the incident, including the potential for, or actual adverse outcome." However, the regulations are vague regarding the types of incidents, or potential or real adverse outcomes that are to be associated with each level. Other health care providers or provider-related groups, such as Mississippi's Medicaid Peer/Utilization Review Organization, South Dakota's Medicare Peer Review and Quality Improvement Organization, and the largest federally qualified health maintenance organization in Nevada, provide greater direction to their reviewers for assigning severity levels or defining the quality concerns identified. For example, Mississippi's Medicaid quality-of-care reviews use three levels of severity that define the levels as confirmed quality problems with "minimal potential for significant adverse effect," "potential for significant adverse effect," and "significant adverse effect." Additional descriptors and examples for each level are also provided to reviewers. South Dakota's Medicare review organization has developed a guide for reviewers that focuses more on quality improvement than on the severity of concerns. Nonetheless, the reviewer guide details severity levels and provides definitions for the specific types of concerns identified, such as improper diagnosis, failure to establish an appropriate treatment plan, or inappropriate assessment of laboratory tests. As we describe in more detail later in this chapter, we believe the Department should adopt more explicit criteria for assigning severity levels and the actions to be taken as part of its quality management and review processes.

Because the Department's regulations are vague about the types of quality concerns to be assigned to each severity level, our physician and pharmacist reviewers used their clinical expertise in determining the appropriate assignment of severity levels for each quality-of-care concern they identified. Overall, as the following table

shows, we found that 64 percent of the inmate health records we reviewed had no quality-of-care issues (150 of 236). For the other 86, or 36 percent of records, we did identify quality-of-care concerns.

Department of Corrections
Quality of Care Concerns

Severity of Concern	Number of Records	Percent of Total
No Quality Issue	150	64
Quality Issue[1]	80	34
Serious Quality Issue[2]	6	2
Death[3]	0	0
Totals	**236**	**100%**

Source: Office of the State Auditor's review of 236 of the Department of Corrections' inmate medical records for the period July 1, 2004, through March 31, 2005.

[1] According to the Department of Corrections' regulations, depending upon the severity level of the concerns categorized here as "quality issues," staff are either to collect and monitor data for possible future intervention or to notify the medical provider or other staff central to the issue.

[2] Serious quality issues require a written statement to the Department of Corrections' Quality Management Committee.

[3] All deaths are to be referred to the Department of Corrections' Peer Review Mortality/ Morbidity Committee to determine whether a quality-of-care issue contributed to the death.

To identify opportunities for improving care, we further analyzed the quality and serious quality concerns. We identified almost 100 actions or inactions at the Department's clinics associated with the 86 quality and serious quality issues shown above. We grouped all of these actions, inactions, or underlying causes into various categories, as illustrated in the following table. The three most frequently identified categories were missed opportunities, lack of documentation, and lack of comprehensive physical examinations by clinical staff.

Department of Corrections
Types of Quality Concerns

Type of Concern	Number	Percent of Total
Missed opportunities	25	26
Lack of documentation	20	21
Lack of comprehensive examinations by clinical staff	14	14
Lack of proper medication and monitoring	10	10
Inappropriate prescription of nonsteroidal anti-inflammatory drugs	8	8
Delay in diagnosis or treatment	5	5
No evidence of following guidelines or nursing protocols	5	5
Inmate noncompliance with prescribed care	4	4
Service unavailability	4	4
Inability of clinics to handle acuity of care	3	3
Totals	**98**	**100%**

Source: Office of the State Auditor's review of 236 of the Department of Corrections' inmate medical records for the period July 1, 2004, through March 31, 2005.

Again, we provided the Department with the details of our medical record review so that staff could take appropriate follow-up action, as needed. According to the Department, the six incidents that were identified as having serious quality-of-care concerns are currently under review by the Quality Management Committee.

We believe the Department should do more to ensure its clinical staff provide a uniform, consistent level of quality care. As a direct result of our medical record review, we identified several specific areas in which improvements could be made to reduce the number and frequency of quality concerns originating at the clinics. These areas are detailed below.

Standards and Protocols

Clinical standards are requirements that correctional health care facilities must achieve and maintain to ensure the delivery of quality health care. According to the ACA, protocols are written instructions and procedures that guide implementation of expected practices. The Department has adopted clinical standards, care guidelines, and protocols. However, we found the need for improvement in a number of areas:

- **Existing standards and protocols.** The Department needs to expand its clinical standards, particularly as they relate to chronic and common conditions and diagnoses. Also, the Department should incorporate best practices, such as Milliman recommendations, community standards, and evidence-based medicine into its care management protocols and patient flow sheets. Furthermore, use of the Department's established standards varies among clinics. For example, some clinics follow the comprehensive *Clinical Standard and Procedure for Hepatitis-C* completely, while others do not. Compliance with this standard, in particular, is important because hepatitis-C is about 10 times more prevalent among inmates than among the general population. In another example, we found that staff do not always comply with the *Clinical Standard and Procedure for Laboratory Services* regarding the review and sign-off of laboratory results. We found laboratory results with no initials or dates, and delays of more than 30 days before staff reviewed laboratory results.

- **Clinical assessments.** We noted differences in the clinical assessments performed and documented by clinical staff. Generally, clinical staff documented physical examinations, clinical observations, and assessments of vital signs, such as blood pressure, temperature, and pulse. However, some physicians, mid-level practitioners, and nurses performed limited exams, conducted incomplete or inadequate assessments to support diagnoses or complaints, and did not record vital signs. We found that limited examinations contributed to delays in diagnosis and treatment. In a few cases, more costly treatment could have been avoided had complete work-ups been performed and documented. For example, an inmate came into a clinic with complaints of dizziness and black stools. Clinical staff did not perform a hemoccult and delayed ordering blood tests for at least one additional day, despite the inmate's recent hospitalization for esophageal varices (an uneven, permanent dilatation of the vein) and bleeding. Because the medical work-up for this inmate was incomplete, treatment was delayed, resulting in his five-day hospital stay.

- **Checklists and flow sheets.** Using checklists and flow sheets helps ensure clinical staff follow the appropriate evidence-based treatment steps and provides a tool for monitoring compliance. In cases in which the Department has developed flow sheets, such as for diabetes and coronary patients, we could not always locate the sheets in the medical records for inmates with these conditions. In other cases, such as for inmates with pulmonary conditions, the Department has not developed disease-specific patient care or peak flow assessment sheets for use by staff. In addition, even in medical records that contained chronic care flow sheets, we found that staff did not consistently or completely follow the guidelines or record all necessary information.

The Department has adopted the national Milliman Care Guidelines and developed the *Clinical Standards and Procedures Manual* to govern the care provided at the clinics. However, the Department has not done enough to ensure clinical staff apply these standards, guidelines, and protocols consistently. To ensure an adequate and comparable level of care for all of its clinics, the Department needs to assess its current standards to ensure they are up to date; incorporate additional reference tools, such as community standards and evidence-based medicine, into its standards, protocols, and patient care flow sheets; improve compliance with the required standards by developing checklists and flow sheets for inclusion in inmates' medical records; and increase its compliance monitoring. This last step could be accomplished through regular, random reviews of inmate medical records. The reviews should assess the comprehensiveness of physical examinations, whether ordered care occurred, and whether all pertinent clinical information is documented in records.

Recommendation No. 2:

The Department of Corrections should ensure the consistent and complete application of current standards of care throughout its clinics and among its clinical staff by:

a. Evaluating its current standards, guidelines, and protocols, and making changes or additions where needed.

b. Improving compliance by developing checklists and flow sheets for use by staff and for inclusion in inmates' medical records.

c. Monitoring for compliance by conducting more routine and comprehensive reviews of medical records.

Department of Corrections Response:

Agree. Implementation date: January 2006. The Department agrees that improvements can be made to the system. Developing checklists and flow sheets for use by staff and conducting more routine and comprehensive reviews of medical records to monitor for compliance are areas the Department will continue to investigate and implement changes where needed. As previously stated, a Quality Management Program was initiated in October 2004 followed by the development of a peer review process in the Spring of 2005. In addition, one of the projects on our formal documented agenda is developing a more official chronic care program, which will include checklists and flow sheets. This project will be completed in the next six to nine months.

The Department has taken steps to evaluate its current standards, guidelines, and protocols. The Department has a policy and procedure committee that meets monthly to review and revise existing standards and/or develop new standards. This committee has been in effect for over a year and has reviewed all of the existing policies and procedures. All of our existing policies and procedures were revised this year. After each standard has been reviewed and revised, it is sent to the Chief Medical Officer and the Chief of Clinical Services for final approval and signature. One of the Department's projects this past year was to combine all of the existing nursing and provider standards into one manual. This was accomplished in addition to writing an entirely new infectious disease management program with all of the associated new polices to include such topics as HIV, scabies, MRSA, chickenpox, etc. All of the nursing protocols are in the process of being reviewed and revised, and this project should be completed in the next 60-90 days.

The Department believes that the real issues are compliance of the providers with the standards and improving clinical assessments. The Department is already implementing peer review as a component of the Quality Management Program and has an active project to formalize chronic care along with the associated checklist and flow sheets. During the past six months, all of the clinics have developed Continuous Quality Improvement Committees. The committees can also be utilized for monitoring compliance as well as outcomes.

Medication Management

Broadly defined, medication management is the system health care providers use to handle medications effectively, including ordering and prescribing; procuring and storing; preparing and dispensing; and administration and monitoring. During our review of medical records, we identified several concerns related to the dispensing of medications to, and the use of medications by, inmates that diminish the effectiveness of the Department's management of inmate medication. First, we found that clinical staff do not always adjust drug therapy according to disease states. That is, many drugs require lower dosages or adjusted dosing frequencies to avoid drug toxicity. For example, we identified one inmate who had compromised renal function. Doses for two drugs were not adjusted for this inmate based on his renal function. We also identified a total of ten inmates who had histories of, or were hospitalized for, gastrointestinal (GI) bleeding and had taken or were prescribed nonsteroidal anti-inflammatory drugs (NSAID). These drugs can cause GI bleeding and should not be taken by individuals with a known history of GI bleeding. Inmates may also purchase some NSAIDs, such as Aleve and Motrin, over the counter, through the Department's canteens. In Fiscal Year 2004 Motrin was the third most frequently purchased over-the-counter medication at the northern canteen and the sixth most frequently purchased medication at the central canteen.

We did not find any instances of drug toxicity related to emergency room or hospital admissions. However, failure to adjust drug therapy or to adequately monitor inmates' use of over-the-counter medications, increases the likelihood for adverse drug reactions and other quality-of-care concerns. We believe the Department needs to take action to improve its medication management policies and practices. First, the Department should standardize drug treatment across facilities by incorporating drug therapies into disease management and chronic care guidelines and protocols. Second, although clinical staff have access to online drug-drug interaction information, we found they do not always use this available resource. Additional information on drug-disease states, such as for renal and liver diseases, could augment patient care, particularly given the higher prevalence of certain diseases and conditions among the inmate population. Third, inmates' medical records often do not contain sufficient information to determine the reason(s) for drug and/or dosage choices, and a system for alerting staff of contraindications does not exist. Using a simple notification process like color-coded markers on the front of inmates' medical records could alert clinical staff to drug allergies and other potentially serious situations. Finally, the policies and practices for making over-the-counter medications available at the canteens should be strengthened. The process for adding or deleting medications from the list of available over-the-counter medications has not been standardized. All of these factors contribute to an

increased risk that existing medical conditions may be exacerbated, resulting in avoidable emergency room or hospital admissions.

Recommendation No. 3:

The Department should improve its medication management policies and practices by:

a. Developing and ensuring compliance with drug treatment protocols.

b. Making additional, easily accessible drug-drug interaction and drug-disease information available for use by clinical staff.

c. Reevaluating policies and establishing a formal process for approving over-the-counter medications for sale through Canteen Services.

d. Adopting a medication alert system to notify clinical staff of medical conditions or over-the-counter medications that could be contraindicated for certain inmates.

Department of Corrections Response:

Agree. Implementation date: July 2006. The Department agrees with the basic concept of improving the management of medications. These are long standing problems that are now being addressed through a partnership with an outside vendor to correct many of the problems. Drug interaction information is available to every provider entering prescriptions into the system. This information automatically presents on the computer screen every time a provider enters a prescription and to override it takes conscious intent.

The Department agrees with the recommendation related to compliance with drug treatment protocols. In addition, the Department believes this is only one aspect of disease management. The Department has already begun the first step in this process with the implementation of the Milliman Care Guidelines available online internally to all DOC providers for the past year. All providers have had training on the use of the guidelines. The second step is to complete the project on chronic care previously discussed, which could include drug treatment protocols for these disease processes. The third step is reviewing and revising the formulary to ensure efficacy and cost-effectiveness consistent with chronic care guidelines and Milliman Care

Guidelines. The final phase is to ensure that all providers are fully trained and educated in disease management. Clinical Services now has a trainer and will be part of this process including onsite presentations and training.

The Department agrees that a system of medication alerts be developed and that this notification system be used by Departmental staff regarding the contraindications for allergies. The Department is developing an electronic medical records system that will incorporate a drug contraindication alert system.

The Department currently has representation on the canteen committee and a process is in place for approving over-the-counter medications for sale through the canteen. Other than for security reasons, the right to purchase items off canteen is considered to be an inmate right by the Attorney General's Office. Clinical staff will continue to work with the Canteen Committee to investigate areas to strengthen current practices and policies.

Documentation and Record Keeping

In its 2001 report on *Correctional Health Care*, the National Institute of Corrections (NIC) states that courts have held that "maintenance of adequate medical records is a necessity." According to the NIC, at a minimum, medical records should include a medical history and problem list; notations of patient complaints; treatment progress notes; and laboratory, X-Ray, and specialists' findings. Proper medical records promote continuity of care across correctional facilities and from outside providers, and protect the health and safety of inmates. They also provide correctional administrators with treatment documentation in the event inmates sue, alleging care was not provided.

During our review we found that the Department does not ensure inmates' medical records contain all relevant information on the care received both at the clinics and from external providers. We found missing chart notes; incomplete, out-of-date, or absent problem lists; missing medication administration records; and missing emergency room and hospital discharge summaries in 14 percent of the total records we reviewed (33 of 236). According to regulations, this information should be contained in the records. We also found that patient care information coming into the Department from external providers is not date-stamped, so there is no way to determine whether treatment plans were followed or updated in a timely manner. This is especially problematic for inmates with chronic medical conditions. Inmates with multiple emergency room visits or inpatient hospital stays for certain medical conditions, such as uncontrolled hypertension, diabetes, and asthma, are high-risk

patients in need of active medical management and timely monitoring. Incomplete or missing medical information can result in failures or delays in diagnosis and treatment. Further, failure to document recommendations by specialists or hospital providers can result in unnecessary or repeated emergency room or hospital stays.

Documentation of the care provided in external settings also serves as a record for payment purposes. We found numerous instances related to one external hospital provider in which discharge summaries were not included in inmates' medical records. In one case, claims data from the external health care administrator showed that an inmate had an emergency room visit. However, there were no chart notes, chest pain protocols, or discharge summaries from the hospital in the inmate's medical record. Therefore, it is not clear whether the emergency room visit actually occurred.

Although the Department has a regulation outlining the format to be followed in recording and documenting clinical assessments and treatment, we found wide variability in compliance among the clinics and staff. Possibly, revising the format to include Milliman Care and chronic disease guidelines; chronic care flow sheets; and responses to laboratory results, diagnostic procedures, or speciality consults could serve to improve the continuity of care. The Department's medical records staff should establish procedures for date-stamping external provider data and for following up when information is not received in a timely manner. The Department should also consider online physician consultations to reduce the lag time in receiving critical information. Finally, the Department should create checklists and/or other forms to document actions or treatment plan adjustments based on external provider recommendations.

Recommendation No. 4:

The Department of Corrections should ensure inmate medical records are complete and current by:

a. Adopting procedures for periodic review of medical records to ensure compliance with established policies and formats.

b. Developing methods to ensure external provider information is received and appropriate follow-up care and treatment is provided in a timely manner.

Department of Corrections Response:

Agree. Implementation date: July 2006. The Department agrees that compliance is an issue and is aware of the need to adopt procedures for periodic review of medical records to ensure compliance with established policies and formats through the quality management program. Three steps have been taken thus far to improve in this area. These steps include the implementation of an in-house electronic encounter system used by all providers each time they deliver medical care to an inmate. This system is set up in the correct format and has improved the quality of the documentation compared to the handwritten forms that were previously utilized. The second step taken was a series of educational talks presented at provider meetings by personnel from the Attorney General's Office and the Chief Medical Officer regarding the important components of documentation from a medical-legal perspective. The third step was the initiation of the peer review process which was initiated approximately six months ago and is in the process of refinement.

The Department agrees improvement must be made in the area of developing methods to ensure external provider information is received and appropriate follow-up care and treatment is provided in a timely manner. The Department is working with the external provider, Physician Health Partners, in developing an implementation plan for this task.

The internal electronic medical record has been developed, but it is not comprehensive enough to meet the needs of the Department. A major project in progress is bringing to completion the development of a comprehensive electronic medical record project (M-Track). Once this system is implemented, the scanning of these consults into the record will be a possibility, and will assure the prompt entry into the system. In the meantime, as the team is established for the centralized scheduling unit, manual systems will be implemented to improve the current process.

Management Oversight

The National Institute of Corrections reports that the continuous review of policies, procedures, practices, material, and people will result in continual improvement in correctional health care. In the following sections of this chapter, we discuss our findings and recommendations related to the Department's oversight and management of the systemwide delivery of internal health care services. In our 1996

audit we found the Department did not adequately monitor some of the medical functions of its Division of Clinical Services (Division). In our current audit we continue to have concerns about the adequacy of oversight. Our findings in this section address three functions – quality assurance, information management, and staffing – that are central to the delivery of cost-effective health care services.

Quality Management

Quality management, or assurance, has been defined as a "process of ongoing monitoring and evaluation to assess the adequacy and appropriateness of the care provided and to institute corrective action as needed." It is an essential component of any well-run health care system. For some time, the Department has had a Quality Management Program (Program). However, we found flaws in the design and operation of the Program that have, for the most part, diminished its effectiveness. Some of these include:

- **Fragmented structure.** The Department's Program has not functioned as a cohesive or comprehensive program but rather as a fragmented system of numerous committees lacking a central systemwide focus. Specifically, the Department has eight quality management committees and groups that review deaths, infectious diseases, resource utilization, and practice patterns. Some committee members serve on as many as five or six different committees. This can overburden individual workloads and lead to scheduling difficulties. In fact, we found that not all designated members attend meetings, as required, and not all meetings are held as frequently as specified in the Department's regulations.

- **Retrospective in nature.** Quality management programs must be sufficiently proactive so that actions can be taken before serious quality-of-care issues arise. Although reviewing or investigating particular events retrospectively is appropriate, it should not be the primary purpose of a quality management program. We found, however, that the Department's efforts, to date, have been more retrospective than prospective in nature. The quality management committees' reviews typically have been based on complaints, incidents, deaths, or concerns identified at the clinics. According to regulations, the clinics are supposed to perform more prospective, regular reviews of the quality of care. However, according to staff at the clinics we visited, they currently perform these reviews informally and sporadically, and generally do not document their results.

- **Lack of documentation.** We reviewed minutes from the various quality management committees' meetings for Fiscal Years 2004 and 2005 and

found that two committees do not keep minutes of their activities and decision-making processes. This lack of documentation is a concern on several levels. Most importantly, there is no permanent record of management's decisions. We also found that for the committees and groups that do document their meetings, the minutes consist largely of narrative commentary. There is no clear delineation of the steps to be taken or to whom responsibility for action has been assigned. Further, there is no evidence that follow-through on previous business has occurred and that staff and the Department are held accountable.

Recognizing the weaknesses in its quality management, Division management recently began revamping its Program. Management expects the new program to be fully operational in June 2006. We commend the Division for undertaking this considerable task. However, we believe more needs to be done to ensure the new program contains critical components that, at present, do not appear to be included. Specifically, the Department needs to determine the activities related to inmate health care to be reviewed and identify those activities that are the most crucial in terms of potential problems, frequency, or risk. Data then need to be tracked and analyzed for these activities and evaluated to determine if opportunities exist for improvement. The Department also needs to provide greater guidance to reviewers for determining the severity of the quality issue(s) identified. The Quality Management committees need to be more multidisciplinary, and records need to be maintained of their activities and decisions.

Recently the Division began conducting peer reviews of physicians and psychiatrists. This is a step in the right direction. However, peer reviews should not be limited to only these two staff levels. Reviews of other clinical staff positions need to be included in this process. Routine reviews or audits of inmate medical records, similar to the review conducted during our audit, need to take place. The state of Georgia prospectively audits its correctional system's clinical operations to determine compliance with standard operating procedures, evaluate the quality of care, and monitor inmates' access to care. Georgia's clinics are then required to provide corrective plans for any resulting recommendations. Finally, the Department needs to continually evaluate its performance against established measures or "best practices."

Recommendation No. 5:

The Department of Corrections should develop and implement a comprehensive and proactive quality management program by:

a. Reassessing and revising the current structure to ensure committees are multidisciplinary, that they meet and report regularly, and that responsibility and accountability are clearly assigned.

b. Routinely identifying and reviewing programs, activities, and quality-of-care issues at the individual clinic and staff levels as well as systemwide.

c. Developing and measuring outcomes related to the quality of care provided to inmates.

Department of Corrections Response:

Agree. Implementation date: July 2006. The Quality Management Program began in October 2004, meets ACA standards, and has improved the quality of care being provided to the population. The program includes the multidisciplinary oversight Quality Management Committee, the active sub-committees as well as ad-hoc committees to address and improve systems and other quality issues. The Department will continue to reassess and revise the committees and continue to monitor scheduling and committee accountability.

The Department has implemented an even more progressive quality partnership. With the assistance of our new managed care partner, Physician Health Partners, the Department will become much more sophisticated in the development and measurement of outcome information and audit capabilities. The Department expects to be developing the ability to perform predictive modeling regarding high cost patients within the next 12-24 months. In addition, the Department also agrees that the administrative regulation for its quality management program can be improved upon in the delineation of the levels of severity regarding quality issues.

As a component of its Quality Management Program, the Department has implemented a Continuous Quality Improvement (CQI) program at all clinical health care facilities. The Department will integrate these committees into reporting to the multidisciplinary departmentwide committee. The CQI program is proactive, concurrent and retrospective in

nature based on the specific components at each facility. This full integration will prevent fragmentation as well as the ability to assure proper implementation of individual quality programs and systemwide quality initiatives. The Department anticipates that within the next six months all facilities will have the CQI program fully implemented at its facilities, and that by the end of Fiscal Year 2006 a quality improvement study will have been completed.

As noted previously, the Department agrees with identifying and reviewing programs, activities, and quality-of-care issues at the individual clinic and staff levels within our current structure. We perform this function as a responsibility of our quality program.

Information Management

Few activities are more necessary than collecting and managing data. Decisions regarding the numbers and types of clinical staff needed, the services to be provided, the location and design of clinics, the choice of equipment, and the quality improvements to be made all depend on the data available to and used by management. The Department collects or has access to significant quantities of data. However, the Department has not placed a sufficiently high priority on compiling and analyzing these and other data for use in management decision making.

This issue is not new to our audits of the Department's health care services. In our 1996 *Performance Audit of Inmate Health Care*, we reported that in order for the Department to manage its services and costs effectively, it needed comprehensive and accurate information, such as the types of and costs for resources being used to deliver inmate health care. Although the Department has made progress in developing databases, such as the electronic Encounter System, its analysis of data is still problematic. Consequently, it is unclear how the Department arrives at important management decisions. For example, during our audit we found that the Department does not routinely analyze or have easy access to reliable data on the following:

- The most common medical services provided to inmates internally at the clinics, and the costs for each service.

- Costs and workloads per clinic, per staff, and per inmate.

- The most frequent reasons for inmates' clinic encounters, the number of inmates with chronic conditions, and the most common chronic conditions.

- The number and types of medications refused by inmates and destroyed by clinical staff.

- Medical grievances related to health care services and any lawsuits resulting from clinical activities.

- The amount of copayments collected and amount of refunds granted at each facility.

- The costs to transport inmates to and from outside consultations.

- The number of emergency room visits and the modes of transportation to and from outpatient settings.

Additionally, the Department has not developed or accessed other available data sources. For example, we intended to compare the results of our intake and medical record reviews with similar data collected and trended by the Department. However, we found the Department does not routinely compile and analyze information from inmate medical records. Neither does the Department use inmate grievances as a source of information for analysis. In our 1996 audit, the Department reported that grievances served a valuable function by alerting management to potential situations that could cause serious problems. In our current audit, we found the grievance database contains only rudimentary information and is not useful for analysis purposes. For example, grievances are broadly grouped into categories, including "medical," "mental health," "banking," and "canteen services." However, for the most part, there is no detailed information to describe the specific type of medical grievance, such as treatment delays, provider complaints, or medications. Other states have found that analyzing grievances helps identify potential problems with the provision of care and improve the overall quality of their correctional health care systems.

Finally, we found that data collected are not always accurate or reliable. For example, during our medical record review we found improper coding in 3 percent of the total records reviewed (7 of 236). We identified instances in which there was evidence of care provided for a condition that was different from the medical condition coded in the medical record. For example, we found no evidence of treatment for the coded conditions, including headache, backache, and prostate hyperplasia. Although a 3 percent error rate may not appear significant, these errors indicate a need for the Department to improve controls over data accuracy.

By not routinely compiling and analyzing data, the Department lacks a critical tool for planning, developing, and monitoring its services. For example, although the

Department does not evaluate wait times for clinic visits, we found considerable variation among the clinics. Specifically, the average statewide wait time for an appointment is 10 days, with inmates waiting as little as 1 day and as long as 22 days. Department staff may have explanations for these and other variations in services; however, these explanations typically are anecdotal. Therefore, they do not provide a sound or reliable basis upon which comprehensive or costly decisions should be made. Further, without reliable data and routine analysis, the Department cannot establish whether variations are justified or whether they are indicators of inefficient or substandard operations.

To accomplish its constitutional and statutory responsibilities, the Department must manage the quality of care provided to its inmates. To improve the quality of its program information, the Department must define the data needed for making operational and other decisions, ensure that data are accurate and reliable, and identify and develop additional data sources. The Department should investigate anomalies in data and take steps to minimize discrepancies systemwide. Finally, the Department should trend quality-of-care data to identify and address other systematic changes.

Recommendation No. 6:

The Department of Corrections should improve its use and management of critical decision-making information by periodically reviewing key operating data, developing additional data sources, ensuring the accuracy and reliability of data, taking steps to minimize data discrepancies among facilities, and monitoring for compliance among clinics and clinic staff.

Department of Corrections Response:

Agree. Implementation date: July 2006. The Department believes there is a need to improve the use and management of critical decision-making information. This could be accomplished by periodically reviewing key operating data, developing additional data resources, ensuring the accuracy and reliability of data, developing additional data sources, ensuring the accuracy and reliability of data, taking steps to minimize data discrepancies among facilities, and to monitor for compliance among clinics and clinic staff. In addition, the Department realizes that its current system is not always reliable or accurate and this issue is currently being addressed by management.

The Department recognizes the need to improve information systems that will enable the review, analysis, and accuracy of the data collected. Currently, the Clinical Services User Board (CSUB) is in place and meets monthly to address technology strategies to ensure accurate and timely information with respect to data collection. The board is constantly prioritizing which projects will bring the most benefit to Clinical Services. The board also coordinates the development and implementation of the new electronic medical record (M-Track). However, the Department, like many other state departments is resource driven, and is being resourceful given the current allocation of funding and personnel.

The Department's Clinical Services Management team has developed an organized project management system to approach resolving these issues in a priority manner. One example of this is that the board recently made the decision to implement current coding systems to correct the issue of incorrect coding.

Staffing

According to the National Institute of Corrections, the effectiveness of any correctional health care system is largely dependent on staffing considerations. Additionally, expenditures for staff represent the biggest portion of most health care budgets. In Fiscal Year 2005 expenditures for the Department's approximately 420 FTE clinical staff represented about 64 percent ($21 million) of the $33 million spent on internal medical services. Most of the FTE, or about 380 (90 percent), are assigned to the clinics and infirmaries around the State. They include physicians, physician assistants, licensed nurse practitioners, certified practical nurses, and regular nurses. The remainder of staff are assigned to the Division's administrative sections, including the Department's headquarters office in Colorado Springs. In addition to its appropriated FTE, the Department contracts with outside agencies to supplement its staffing vacancies on both short- and long-term bases.

Historically, the Department's clinical staffing levels have been based on the facilities' inmate populations. This was the situation in our 1996 performance audit of *Inmate Health Care* in which we found that the Department did not know whether its staffing patterns and workloads were appropriate. During our current audit the Department reported that it recently began analyzing staffing models and levels. According to Department staff, when they distribute clinical staff among the facilities they use staffing models that consider various factors, such as the medical acuity of inmates, the security level of the facility, and the ratio of various staffing levels to inmates. We agree that the use of such staffing models is appropriate.

Other states, such as Ohio, use numerous factors, including the age and gender of the inmate population, the number of inmates referred to specialty clinics, and the number of unscheduled medical assessments when developing staffing plans for their correctional clinics.

During our audit we found wide ranges in the expenditures per inmate for internal health care services at the Department's 20 clinics. For example, in Fiscal Year 2004 the Pueblo Minimum Center spent about $500 per inmate, while the San Carlos Correctional Facility spent about $5,800 per inmate. According to the Department, these and other differences in costs, staff-to-inmate ratios, the mix of staff at each facility, and other workload measures can be explained by the distinct characteristics of each facility. For example, San Carlos exclusively houses mentally ill inmates. As such, the clinical costs at San Carlos and other specialized facilities are likely to be higher. By contrast, other facilities have significantly fewer inmates with serious medical needs which would likely be reflected in lower costs. However, the Department could not provide documentation of the models developed and the ways in which these models have been applied to the staffing allocations at each facility. Consequently, we were unable to determine whether the differences we found among the facilities are the result of the Department's comprehensive, systematic application of its staffing models.

According to the Department, staffing shortfalls exist at all of the clinics. In addition, staff told us they regularly review staffing at the clinics, and make adjustments, such as shifting staff from one facility to another as needs arise. Also, according to the Department, it has difficulty recruiting and retaining clinical staff to work in correctional facilities. We believe these types of conditions make the need for systematic and comprehensive staffing analyses essential. Without such analyses and a record of it, the Department does not have a sound basis upon which to support permanent staffing decisions. Furthermore, the Department cannot show whether clinic facilities with the lowest costs are operating optimally or simply providing a level of service below that of others. Conversely, the Department cannot show whether clinics with the highest costs are inefficient or provide excessive care, and thus present opportunities for potential savings.

Recommendation No. 7:

The Department of Corrections should ensure clinic staffing levels are appropriate and provide efficient, quality health care by:

a. Identifying all critical factors needed to establish optimal staffing levels given the resources at each clinic.

b. Conducting and documenting regular staffing analysis at a minimum as part of the annual budget process.

c. Making permanent and temporary staffing changes based on the annual analysis.

Department of Corrections Response:

Partially agree. Implementation date: January 2006. The Department agrees with the overall concept that there should be assurances that clinical staffing levels are appropriate and that they provide efficient, quality health care. Based on the current fiscal environment, the Department's position is to staff at a minimally safe level. Two years ago, Clinical Services was challenged to abolish 73 clinical positions and the management team had to make decisions on how to absorb the workload. This reality goes against the philosophy of establishing optimal staffing levels. However, over the past few years, the Department has had to undertake massive restructuring and reorganizations to maintain workload levels to provide basic health care services.

The Department does not agree that it does not conduct and document regular staffing analysis. The Department has conducted weekly and monthly staffing analyses, which has been massive and on-going just to maintain minimal staffing levels. The Chief of Clinical Services and the three Regional Health Services Administrators meet at least twice a month, and the team reviews components of staffing. Numerous changes and adjustments from the level of the individual clinic to major system changes have been made to ensure access to medical care and safety in the clinics. One example is reducing the number of hours most clinics are open from 24 to 16 hours. The Department also analyzed the infirmary staffing levels and as a result decided to staff them with physicians rather than physician assistants.

Auditor Addendum:

This audit identified weaknesses in the Department's ability to document and justify the systemwide variances that exist in clinic staffing levels, workload measures, and costs per inmate. We emphasize that in a tight budget environment, documented staffing analyses and standards are key to controlling staffing costs while maintaining sufficient levels of service.

Cost Containment

Chapter 2

Background

The costs for health care in the United States have increased significantly over the past two decades, at a rate exceeding inflation. Rising health care costs are not limited to the general population. They also impact prison populations. In fact, health care costs are a leading contributor to the increase in prison costs nationwide. For example, between Fiscal Years 2002 and 2005, internal medical expenditures for the Division of Clinical Services (Division) increased by 12 percent, while overall expenditures for the Department of Corrections (Department) increased by 4 percent. As discussed in the Overview Chapter, the Division spent almost $33 million in Fiscal Year 2005 to provide medical services internally at its clinics.

In addition to the rise in health care costs generally, a number of factors particularly impact correctional health care budgets. These factors include a growing inmate population, increasing numbers of female inmates, longer incarcerations, aging inmates, expensive services for chronic and communicable diseases, and costly prescription medications. Although the Department cannot control these factors, it can and should, to the extent possible, ensure its costs are contained while maintaining quality health care for the State's inmates.

We reviewed several cost containment measures available to the Department. In this chapter we discuss our findings and recommendations related to copayments and the purchase of prescription medications. We found that although the Department has implemented some measures, such as reducing clinic hours of operation, it has not been as effective as it could be in containing its health care costs. This is due primarily to the Department's failure to adequately communicate and monitor the implementation and consistent application of cost containment measures throughout the clinics.

Copayments

By statute, in 1987 the Division began charging inmates a user fee, or copayment, for health care services. In the following years, the General Assembly made statutory changes that excluded several services from the copayment requirement. For example, for a time, copayments were not statutorily required for follow-up

appointments. In 1998, however, the General Assembly eliminated all of the statutory exceptions. Since that time, Section 17-1-113, C.R.S., has required the Department's clinics to assess ***consistent*** copayments for "***all*** medical, [mental health], dental, and optometric service rendered to or on behalf of inmates" (emphasis added).

Statutes also authorize the Department to set the copayment amounts in regulation. Prior to August 2004, the Department charged inmates a $3 copayment for clinical visits (encounters) with physicians, dentists, and optometrists, and 50 cents for visits with physician assistants, licensed nurse practitioners, and nurses. In August 2004 the Department changed the copayment amounts. Now, according to current regulations, inmates are to be assessed the following:

- $5 when an inmate schedules and keeps a clinic appointment.
- $10 when an inmate declares he or she cannot wait for an appointment through routine clinic scheduling and must be seen immediately.
- $5 for a "no show" or failure to keep an appointment.

Contrary to statutory intent, the Department does not charge a copayment when an inmate visits the clinic for scheduled follow-up care or when the Department schedules an inmate's visit, such as for intake or to prevent the spread of infectious diseases. When an inmate visits the clinic, staff select the reason for the visit in the Department's clinical Encounter System. Depending upon the type of visit staff select, the system will, or will not, electronically debit the inmate's bank account the applicable copayment amount. In Fiscal Year 2005 the Department collected about $209,900 in copayments. This total includes 1 month of revenue collections based upon the lower copayment rates and the remaining 11 months at the higher $5 rate.

The use of copayments in correctional health care settings serves two purposes. First and foremost, copayments are used as a means of controlling costs by reducing the number of unnecessary encounters. Second, copayment revenue can be used to offset a portion of the inmate health care costs. We reviewed the Department's copayment policies and practices and found that they have not been effective in reducing encounters or in maximizing revenue. First, we found that despite the increase in the copayment charge to $5, the total number of clinic encounters has not declined. From Fiscal Years 2004 through 2005, total clinic encounters increased by 70 percent (90,300 to 153,300). By contrast, during this period the average daily inmate population increased by only 1 percent (13,800 to 13,900). Further, the increase in encounters was not isolated to a few clinics. Rather, three-fourths of the clinics (15 of 20) had increases in the number of inmate encounters in Fiscal Year 2005.

Second, we found that the amount of revenue generated from the copayment is not optimal. As stated previously, in Fiscal Year 2005 the Department collected about $209,900 in copayment revenue. However, if the Department had charged the $5 copayment on all clinic encounters, we estimate it could have collected more than three times that amount, or about $766,400. In other words, for every encounter in which the Department charged the copayment, regulations exempted about three encounters from the copayment. Consequently, the Department did not generate additional revenue that could have offset some costs, including the costs for three clinical staff, as specified in the Fiscal Year 2005 Long Bill.

Legal Issues

More than three-fourths of the states and the federal government charge inmates copayments for health care services. Despite the prevalent use nationwide, debate exists about the fairness and constitutionality of the practice, and there have been some legal challenges. However, courts generally have held that charging inmates a fee for health care can be constitutional, provided certain safeguards are in place. From a review of data compiled by the Colorado Office of the Attorney General, we found that since Fiscal Year 2004, two inmates have brought charges against the Department regarding copayments. In both cases, the courts dismissed the charges.

We examined central arguments for and against charging inmates copayments for health care services to assess whether the Department's policies and practices provide necessary safeguards. We found the following:

- **Access to care.** We found no evidence that the Department has denied any inmates access to health care due to an inability to pay. Even if inmates have insufficient funds to cover the copayment amount, Department regulations allow them to carry negative account balances. In addition, upon entry into the correctional system, the Department informs all inmates of its policy to provide health care in the absence of sufficient funds. Each inmate is given a copy of the Department's *Clinical Services Patient Handbook*, which clearly states that "no one will be denied health care because of inability to pay." Inmates may also request refunds if they believe they were wrongly assessed copayments.

- **Use of care.** Determining whether copayments discourage inmates from requesting necessary health care is more difficult than determining whether access has been denied. However, from our review of inmate grievances, cases filed with the Attorney General's Office, and other data, we found no evidence that copayments have discouraged inmates from seeking medical

attention. In fact, the increase in inmate clinic visits indicates that inmates have not been deterred from seeking health care.

- **Lack of funds.** One criticism of assessing copayments for health care is related to inmates' financial resources or their ability to earn sufficient incomes. We obtained inmate bank records to examine account balances and found that the average inmate account balance during the period of our review was more than $25. We also sampled canteen purchases and found that during the same month inmates visited the clinic – January 2005 – they also purchased various items from the canteen, such as snacks, a radio, sports equipment, clothes, and personal hygiene items.

Improvements

Section 17-1-113(5), C.R.S., requires the Department to monitor the information collected during a clinic encounter to ensure copayments are being assessed consistently. We found that although the Department has adopted policies mandating the assessment of copayments, these policies are neither consistently applied nor regularly enforced. Further, policies that delineate copayment charges are not consistent with the statutory intent that ***all*** medical services rendered to inmates be subject to a copayment. Specifically, Department regulations categorically exclude about one-half of all encounter types, including intake examinations, follow-up appointments, and referrals to specialists, from copayment charges. In Fiscal Year 2005 only 26 percent (39,800 of 153,300) of all encounters were assessed a copayment due to these exclusions. Additionally, staff do not consistently assess copayments, even when regulations specify a copayment is required, because they may choose to classify an encounter as a type that is not subject to the copayment. This type of misclassification can lead to an inequitable treatment of inmates and a reduction in the amount of revenue due the Department from this source.

This is not the first time we have identified concerns with the use of copayments. In two prior audits – our 1992 *Performance Audit of the Department of Corrections* and 1996 *Performance Audit of Inmate Health Care* – we recommended the Department monitor facilities to ensure copayments were applied to clinic encounters consistently and appropriately. We believe as long as statutes mandate the use of copayments for all clinic visits, the Department has a duty to comply. Uniform application of the copayment will eliminate inconsistencies and confusion among clinics and staff, ensure equitable treatment of all inmates, and lessen administrative duties. If the Department determines there are circumstances for which the copayment would serve as a deterrent to treatment, then it should seek statutory change or clarification. Another option would be for the Department to lower the $5

copayment and apply the lower amount, across the board, to all health care services. This would reduce the real or perceived financial burden on inmates and, possibly, be more effective at controlling utilization and costs.

Recommendation No. 8:

The Department of Corrections should ensure its copayment policies and practices comply with statutory intent by either assessing copayments for every type of clinic encounter or proposing legislation to include current regulatory exclusions in statute.

Department of Corrections Response:

Agree. Implementation date: January 2006. The Department increased the amount of the copayment and collected over 6.5 times the amount from the prior year. Prior to the decision being made to change the copayment, the Department contemplated charging $5.00 for all visits. The Department instead decided that the new policy would not charge a copayment for follow-up visits and other specific appointments. The Department has devoted significant IT resources to an electronic "encounter" to track its encounters. Although the new copayment policy leads to better consistency and standardization, it did not go far enough. The Department anticipated adjusting the policy after the first full year of implementation. As a result, discussions have already taken place regarding lowering the copayment to $3.00 and charging for each and every visit, regardless of the type of visit. The Department will investigate proposing new legislation regarding copayments. Lowering the copayment will involve the revision of the current copayment regulation. The Department anticipates collecting the same or a larger amount which would allow the Department to fund additional FTE.

The Department has analyzed the encounter data from Fiscal Year 2002 to Fiscal Year 2005 and has determined that individual facility clinics have not been keeping accurate encounter data prior to the implementation of the electronic encounter system. For example, the Colorado Territorial Correctional Facility recorded less than 2,000 encounters in Fiscal Year 2004 and over 17,500 encounters in Fiscal Year 2005. The new electronically captured data suggests that Fiscal Year 2005 may be the baseline year for accurately tracking encounters.

Prescription Medications

In Fiscal Year 2005 the Department filled about 262,200 inmate prescriptions. On average, more than 1,000 individual prescriptions are filled each business day. The most commonly prescribed medications are cardiovascular, psychotropic, nonsteroidal anti-inflammatory, and gastrointestinal medications. Currently, all prescriptions are filled through the Department's only pharmacy located in Pueblo. Prior to November 2004 the Department operated a second pharmacy in Denver. According to staff, due to difficulties in filling vacant pharmacist positions, the Department consolidated the services and functions of the Denver pharmacy with those of the Pueblo pharmacy.

For an inmate to be prescribed a medication, he or she must see a physician. The physician diagnoses the inmate's condition and then orders the prescription(s) electronically. The electronic prescription is transmitted to the Pueblo pharmacy for review. Upon receipt, pharmacy staff fill the prescription and send the medication(s) back to the originating facility via a delivery service. Clinical staff then dispense the medications to the inmates. In Fiscal Year 2005 the Division spent $8.4 million on medications.

At the time of our audit, the Division was negotiating a contract for an outside pharmacy services vendor to replace the operations of the Pueblo pharmacy. The contracted services are to include prescription medication ordering, dispensing and delivery, formulary and inventory management, billing, and quality assurance. The Division anticipates awarding the contract and having services fully operational by November 2005.

Formulary Utilization

Pharmaceutical industry standards define a formulary as a list of medications that a committee of practicing physicians and clinical pharmacists has reviewed and selected based on quality, cost savings, and effectiveness. Drug formularies may also provide physicians with dosing information, indicated precautions, restrictions, and cost indicators. Physicians and pharmacists are expected to follow an approved drug formulary when writing, ordering, and filling prescriptions. At the Department, responsibility for approving a drug formulary has been assigned to the Pharmacy and Therapeutics Committee (P&T Committee). By regulation, the P&T Committee's members consist of the Chief Pharmacist, Chief Medical Officer, Operations Manager (this position no longer exists) or designee, and other appointed staff. In addition to developing, approving, and revising the formulary, the P&T Committee is responsible for meeting quarterly, achieving maximum drug therapy at the lowest

possible cost, and evaluating drug usage. The Department's current formulary consists of approximately 320 medications.

To be an effective management tool for standardizing cost-effective drug prescription practices, a formulary must be updated regularly. We reviewed the Department's drug formulary and found that it has not been updated since 2002. As a result, the formulary does not include some drugs shown to be effective in treating certain medical conditions at a lower cost. We reviewed several medications on the Department's formulary that, according to pharmacy staff, have less expensive alternatives or could be taken off the formulary entirely. For example, Zomig, a formulary medication for treating migraines, could be replaced by Midrin, a non-formulary migraine medication that is effective and less costly. During a one-year period, the Department spent almost $22,900 on about 1,700 pills of Zomig. If Midrin had been on the formulary and prescribed instead of Zomig, the cost would have been about $100 for the same number of pills; a savings of about $22,800. We also reviewed utilization and costs for Prilosec and Zantac, two comparable formulary medications for treating stomach ulcers and heartburn. Prilosec costs the Department about 55 cents per tablet. By contrast, Zantac costs 5 cents per tablet, or about 50 cents less. We recognize that less costly but effective alternatives to Zomig, Prilosec, and the other approximately 320 medications on the formulary are not appropriate or available in every case or for every inmate. However, in the absence of regular formulary reviews and updates, the Department cannot ensure overall maximum drug therapy at the lowest possible cost.

Finally, we reviewed the frequency of physician requests for non-formulary drugs. When a physician prescribes a formulary medication, there is no need for additional review by the pharmacist and the order is processed with minimal effort. If, however, the prescription is for an off-formulary drug, the pharmacy manager must review and approve it prior to its being filled. An outdated formulary forces physicians to prescribe many off-formulary medications. This, in turn, creates additional administrative work for the pharmacy and unnecessary delays in dispensing. In the three month period between January and March 2005, physicians treating the Department's inmates prescribed about 260 non-formulary medications, excluding psychotropics. Each of these requests requires review and approval by the pharmacy manager in Pueblo. Of the approximately 260 requests, the pharmacy manager approved all but nine, for an approval rate of 97 percent. Further, 80 of these requests (31 percent) were for the same five medications. The percentage of requests for identical medications and the high approval rate are strong indicators that the current formulary is in need of revision.

Formulary Updates

The P&T Committee, which is to meet quarterly to conduct formulary management and evaluate drug usage, has not met in almost a year. Since that time, the U.S. Food and Drug Administration has approved about 80 new medications. Some of these medications and others that have been approved since the Department last updated its formulary in 2002 could be appropriate and cost-effective additions to the existing formulary. Correspondingly, other medications could be deleted.

Currently, the Department does not have an established timetable for regularly updating its drug formulary. We surveyed four other states' correctional departments to determine the frequency with which they update their formularies. We found that all four conduct reviews and updates more frequently than is the case in Colorado. For example, Oregon updates its formulary monthly and Oklahoma does so twice each quarter. The Department needs to formally adopt a timetable for updates and ensure its adherence. Determining the frequency of updates is just one in a series of steps the Department should undertake to ensure its drug formulary functions as an effective management tool. First, the Department needs to conduct a systematic, comprehensive review of its outdated formulary. This should include compiling and analyzing data on the costs, efficacy, prescription patterns, and appropriateness of every drug on the formulary list. Information on comparable drugs should be studied and then deletions, substitutions, and additions should be made to establish an updated and cost-effective formulary. The Department should also ensure a new formulary is developed as a part of its contract with an outside provider. According to the Request for Proposal (RFP) for outside pharmacy services, the contractor will maintain an up-to-date prescription formulary. However, this formulary will initially be based upon the Division's current, outdated formulary. The RFP does not include a process or timeline for updating the formulary. We believe the Department needs to specify a deadline for updating the formulary in its contract.

Second, regular review committee meetings need to be scheduled. As stated previously, the P&T Committee is responsible for managing the formulary, but it has not met in almost one year. Regular meetings of the P&T Committee are critical for timely monitoring of prescription patterns and drug utilization. Finally, the Department should continue regulating deviations from the formulary. Requiring prior authorization or approval from another individual, such as a qualified pharmacist or physician, for non-formulary drugs is a sound internal control. In addition, monitoring requests for non-formulary medications can serve as another source of information for use in evaluating the existing formulary.

Recommendation No. 9:

The Department of Corrections should ensure the cost-effectiveness of prescription drug practices by developing and updating its formulary on a regular basis. This should include:

a. Conducting a systematic and comprehensive review and update of its current formulary.

b. Including a date-specific time for the establishment of an updated formulary in its contract with an outside provider.

c. Establishing and maintaining a schedule for monitoring prescription patterns and drug utilization, including adherence to a regular calendar of review committee meetings.

d. Controlling non-formulary requests through the use of prior authorization approval and monitoring.

Department of Corrections Response:

Agree. Implementation date: March 2006. The Department became aware of significant pharmacy issues and called for an internal financial audit. The results of the audit were completed in June 2004. Based on the audit results, as well as knowledge of the issues, the clinical management team undertook a very detailed initiative to determine the best solution for the issues identified. Based on these deliberations and a mass exodus of pharmacy staff, including the pharmacy manager, a Request for Proposal (RFP) for external pharmacy services was issued in April 2005. The Department received three responses, which were from the three largest national companies. The Department analyzed possible internal scenarios against the best external proposal and made the decision to partner with Secure Pharmacy in June 2005. The Department is currently awaiting final approval from the Department of Personnel & Administration based on the re-organization plan and will begin contract negotiations soon after plan approval. The audit recommendations have been previously identified internally and this independent audit supports our decision. The Department is aware of the management issues with the formulary and, by March 2006, the Department will update the drug formulary in conjunction with Secure Pharmacy. The formulary will be reviewed and updated on an annual basis. The Department anticipates that all of this audit recommendation, as well as

performance measures, will be incorporated into the new pharmacy contract with Secure Pharmacy.

Drug Inventory Management

According to the American Pharmacists Association and the U.S. Department of Justice, a good medication inventory system is important for making purchasing decisions, reducing waste, and preventing abuse. In addition, it can provide needed information on drug usage for developing and maintaining a cost-effective drug formulary. Currently, the Division uses an electronic Medication Administrative Record (MAR) system to track the types and quantities of medications dispensed to inmates through the clinics. We reviewed the use of this system and of other drug inventory practices at the clinics and identified two areas of concern:

- **Inventory data are not accurate or reliable.** We reviewed the process for documenting the administering of medications at six clinics and found problems with the accuracy of the data being entered. Specifically, staff at some clinics enter the number and type of medications dispensed to inmates directly into the Department's electronic MAR system. Other staff manually record the information for later entry. There are no controls, however, to ensure staff follow through and transfer the manually recorded data into the electronic system. Compounding this problem are inconsistencies in the data staff actually enter into the system. For example, if an inmate is prescribed three pills once a day, some clinics enter a quantity of three. Other clinics' staff will enter a dose of one. When tabulating the number of pills administered, the electronic system cannot distinguish a count of one pill from a count of one dose. Therefore, the MAR counts the one dose as one pill, rather than the three actually dispensed.

- **Drug destruction practices.** According to the Department's *Protocol for Returning Drugs to the Pharmacy*, medications are not supposed to be destroyed at the clinics. However, staff at the six clinics we visited report that they destroy medications on-site if an inmate refuses his or her medications. The refused medication is coded into the system with the letter "R" and is destroyed by clinic staff. However, staff do not enter the quantity of medication destroyed. Therefore, no record of the exact number of pills destroyed exists. Further, the clinics employ various methods for destroying medications. For example, one facility crushes the medication and pours it down the sink drain. Another facility places the medication in a trash receptacle that is handled by an inmate porter. In both cases, no witness is required when the medication is disposed of or destroyed.

As mentioned earlier, the Department is currently negotiating a contract for its pharmacy services. One of the services the contractor is expected to provide is a complete medication inventory tracking system for each clinic. Whether provided by an outside contractor or internally, the Department needs a drug inventory tracking system to accurately and automatically record all received, dispensed, and returned medications at each clinic. The lack of adequate control over drug inventory was discussed in our 1999 *Statewide Single Audit* of the Department. We consider this issue a critical one because the risk for fraud and abuse is high. The Department should establish standard data codes, educate clinic staff on their consistent and accurate use, and monitor compliance by staff and by the clinics. Finally, the Department needs to adopt a standard drug destruction policy. Included in this policy should be requirements for the proper ways in which to destroy unused medications and a method for recording the numbers and types of drugs destroyed.

Recommendation No. 10:

The Department of Corrections should take immediate steps to improve its drug inventory management practices by:

a. Ensuring staff are consistently and accurately entering data into the electronic medication inventory system.

b. Adopting a standard drug destruction policy for implementation at the clinics.

c. Regularly monitoring staff and clinic compliance with the drug inventory management policies.

Department of Corrections Response:

Agree. Implementation date: March 2006. As previously described in the Department's response to Recommendation No. 9, and as a component of the comprehensive pharmacy audit and review, the Department identified the need for a complete redesign of the pharmacy management drug inventory system. One aspect of the redesign will include developing processes to ensure that staff are accurately and consistently entering data into the electronic medication system. Therefore, as a section within the new pharmacy management contract with Secure Pharmacy, the Department will develop, in conjunction with Secure Pharmacy, a sophisticated inventory management system. This system will be able to track individual medications completely from the point of ordering, to facility receipt, to

patient delivery, and potential return to the Pharmacy and/or its destruction based on non-use or expiration, and state laws. A component of the inventory system will include a policy for drug destruction. The new system will provide the ability to report and audit pharmacy information, and thereby improving pharmacy utilization and cost efficiency, and providing high quality management of the Department's pharmaceutical usage. The Department will also develop and implement a process to regularly monitor clinic compliance with the new drug inventory management policies.

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 below when requesting this report.

Report Control Number 1688