



**COLORADO DEPARTMENT OF HEALTH CARE
POLICY AND FINANCING**

REPORT TO THE JOINT BUDGET COMMITTEE

DISEASE MANAGEMENT DEMONSTRATION PILOT

APRIL 15, 2004

I. INTRODUCTION

In 2002, the Colorado General Assembly enacted legislation authorizing the Department of Health Care Policy and Financing to develop disease management programs “to address over- or under-utilization or the inappropriate use of services or prescription drugs, and that may affect the total cost of health care utilization by a particular Medicaid recipient with a particular disease or combination of diseases.” Section 26-4-408.5(2), C.R.S.

The statute requires the Department to report to the Joint Budget Committee of the General Assembly an estimate of the fiscal implications generated by the implementation of the disease management programs. Such report shall be made on or before February 1 of the year following the implementation of a disease management program and on or before each February 1 thereafter in which such program is in place.

The Department has implemented several disease management programs, which were reported to the Joint Budget Committee in December 2002 and February 2003.

II. STATUS OF DISEASE MANAGEMENT PILOT PROGRAMS

The Department initiated seven disease management pilot programs to identify the most appropriate strategies to contain rising health care costs, improve access to services and improve the quality of care for the fee-for-service Medicaid clients. The targeted disease conditions include High-Risk Infants, Clients with Asthma, Clients with Diabetes, Clients with Schizophrenia, Female Clients with Breast and Cervical Cancer and Clients with Chronic Obstructive Pulmonary Disease. The Care Management Organization Pilot is also underway to coordinate all of the disease management programs and to establish a means for additional fee for service clients to obtain intensive case management or health counseling.

The program revolves around three key managed care principles: appropriate and timely access to health care services, evaluation and support for adherence to appropriate medical regimens/treatments and provision of nationally recommended practice guidelines for each chronic disease. The vendors, and in some cases an independent evaluator, will be analyzing medical spending across all service categories. The groups will conduct a "return on investment" analysis based on vendor costs to the program and utilization of services. The pilot programs will enable the Department to obtain actual Colorado Medicaid disease management data and experience to be utilized for future program development if warranted.

The clients targeted for five of these programs were chosen for levels of high utilization and high Medicaid claims costs. This approach can maximize the savings realized by the pilot programs, but caution should be taken in extrapolating these results to the broader Medicaid population. Clients in the High Risk Infants pilot and Breast and Cervical Cancer pilot were chosen differently, as discussed below.

No State General Fund or federal funds have been utilized for these pilots. The pharmaceutical companies funding the pilot programs provided all funding directly to the disease management vendors.

Initial program funding allowed the programs to continue through December 31, 2003. Additional funding has been obtained to continue the Diabetes, High Risk Newborn and Schizophrenia programs for an additional six to twelve months. The Chronic Obstructive Pulmonary Disease program will continue through October 2004. The Asthma and Care Management Organization programs concluded December 31, 2003.

A. High Risk Infants

Funding for this program was obtained from two sources. Johnson and Johnson Pharmaceuticals provided the funding to initiate the program and Clinician Support Technologies, the vendor, provided in-kind donation of services and staff. Level III Neonatal Intensive Care Units at The Children's Hospital, Presbyterian/St. Luke's Medical Center and University Hospital participate in the program. Participation was initially offered to all Level III Neonatal Intensive Care Units in the state.

The program is a web-based hospital specific education and training resource for parents of high-risk infants. As soon as an infant is admitted to the Neonatal Intensive Care Unit, the parents can have remote access to their infants' vital information including weight, feeding and health status, as well as a daily digital photograph. The parents can access educational modules specific to the needs of their infant, interact with the providers and join chat rooms with other new parents around the country. The modules include information about the procedures and tests performed for their infant and, as appropriate, training in the technical aspects of caring for their infant so that parents are well prepared to care for their infants at home. Johnson and Johnson Pharmaceuticals has also donated loaner laptop computers with Internet access for clients unable to access computers through other means.

Parents are able to utilize the program for up to 18 months after the baby is born. This allows parents to continue their education while receiving age appropriate information on the immunizations and health care visits necessary to maintain their infant's health. The premise of this program is that cost-savings would be realized by reducing length of stay initially and by reducing the hospital recidivism rate in the first six months after discharge.

B. Clients with Asthma

Novartis Pharmaceutical and Astra Zeneca Pharmaceuticals funded this pilot program and National Jewish Medical and Research Center was the vendor. According to the experts at National Jewish, asthma is a seasonally and environmentally affected disease, with the highest

level of inpatient rates and acute, life-threatening episodes occurring from December through May each year. The Asthma program therefore was active during this concentrated timeframe.

The program consists of an assessment of current status of the client's disease and medical history, care plan evaluation, interaction with appropriate medical providers and telephone contact with the client or the client's parent. The client or parent keeps a home journal and highly trained pulmonary nurses make educational and consultative calls to the client with the goal of disease self-management. A 24-hour a day, 7 day a week National Jewish care line is utilized to assist in acute episodes. The premise of this program is that cost-savings would be realized by reducing hospitalizations and emergency room visits.

C. Clients with Diabetes

Eli Lilly has provided funding for this pilot and McKesson Health Solutions is the vendor. When routinely out of control, diabetic clients can suffer a multiplicity of complications affecting virtually every body system. Routine blood sugar testing, diet and exercise can reduce the occurrence or severity of complications.

This pilot program ranks the severity of each client's condition and clients then receive telephonic support and education based on the severity of the disease. Nurses specially trained in diabetes care develop care plans and self-management goals in conjunction with each client. The premise of this program is that cost-savings would be realized by reducing hospitalizations and emergency room visits.

D. Clients with Schizophrenia and Co-morbid Conditions

Clients with schizophrenia, who also have medical co-morbidities, are among those most likely to fall through the cracks in traditional medical care, resulting in avoidable hospitalizations for psychiatric as well as medical conditions. Those patients identified with schizophrenia and medical conditions such as congestive heart failure, chronic obstructive pulmonary disease, diabetes and other disease states have the medical portion of their care coordinated by a team of community outreach nurses.

Eli Lilly funds this pilot project and the vendor is Specialty Disease Management Services, Inc. Specialty Disease Management Services, Inc. has hired and trained nurses within each of the pilot project's mental health service area and is making home counseling visits and referrals to medical providers as needed. The premise of this program is that cost-savings would be realized by reducing hospitalizations and emergency room visits.

E. Breast and Cervical Cancer Clients

The Colorado breast and cervical cancer treatment program for low-income women began in July 2002, with monies from the tobacco settlement fund's cessation and research programs. The goal of the treatment program is to reduce the mortality rate from breast and cervical cancer by expanding treatment opportunities for women diagnosed with breast or cervical cancer.

The disease management pilot program is a longitudinal study to evaluate costs and outcomes for clients in this program. Astra Zeneca has funded the study evaluation design. A comparative analysis of clients with equivalent diagnoses is planned.

F. Clients with Chronic Obstructive Pulmonary Disease

Boehringer Ingleheim has provided the funds for the program, which will enroll 250 clients. National Jewish Medical and Research Center is providing care evaluation, education and care management services to these clients. Colorado Medicaid has a large number of clients diagnosed with chronic obstructive pulmonary disease. The presence of chronic obstructive pulmonary disease is an irreversible condition with a significant number of end stage complications. The pilot program will focus on client education regarding the disease process to decrease emergency room visits and shorten hospital lengths of stay. This pilot program had a late start, November 2003, and will continue through November 2004. The 24-hour a day, 7 day a week National Jewish care line is provided to assist clients at all times.

G. Care Management Organization

Pfizer Pharmaceuticals provided the Care Management Organization funding with GlaxoSmithKline, Abbott and Astra Zeneca funding home monitoring interventions and development of a formal structure for the Primary Care Physician Program. McKesson Health Solutions, current vendor of the Nurse Triage Line and the diabetes disease management program, is the primary vendor for this pilot program.

McKesson has developed a multi-tiered system of nurse phone triage, health counseling and intensive case management, utilizing nurses for clinical support to home based clients using biometric and behavioral monitoring. The program also includes 24 hours a day, 7 days a week call center support to foster medical self-management. This pilot program provided the Department a means to evaluate the efficacy of different types of home based monitoring as a way to avoid inpatient care.

**Disease Management Pilot Program Overview
January 2004**

Pilot Program # of Clients	Funder	Disease Management Vendor	Start Date	Performance Measures
Asthma 398	Novartis and Astra Zeneca	National Jewish	9/02	Number of hospitalizations and ER visits, client functional status, client and provider satisfaction
Diabetes 287	Eli Lilly	McKesson	7/02	Number of hospitalizations and ER visits, client functional status, complication rates, client satisfaction
Schizophrenia 253	Eli Lilly	Specialty Disease Management	7/02	Number of hospitalizations and ER visits, medication compliance, client functional status and provider and client satisfaction
Breast/Cervical Cancer Longitudinal Study	Astra Zeneca	HCPF Case Manager	7/02	Utilization and client satisfaction
High Risk Infants 317 Medicaid 399 non- Medicaid	Johnson and Johnson and Clinician Support Technologies	Clinician Support Technology	10/02	Length of stay, readmissions and parent satisfaction
Care Management Organization 124	GlaxoSmithKline, Pfizer, Abbott, Astra Zeneca	McKesson, Health Integrated, Lexicor, American Medical Alert Company	2/03	Number of hospitalizations and ER visits, client functional status
Chronic Obstructive Pulmonary Disease 137	Boehringer Ingleheim	National Jewish	11/03	Number of hospitalizations and ER visits, client functional status, client and provider satisfaction

III. PILOT PROGRAM EVALUATIONS

The Department held a meeting with program vendors and funders in October 2003 to discuss program termination and evaluation. The funders and vendors in attendance unanimously agreed that evaluations conducted by organizations independent from the Department, the vendors and the funders should be pursued, although each of the vendors would perform a self evaluation of their program if an independent evaluation was not possible. Independent evaluations were requested to provide unbiased, valid program results. Pilot program funders have been approached for additional monies to perform the evaluations.

A. Diabetes and Schizophrenia

Eli Lilly has agreed to provide funding for independent evaluations of the Diabetes and Schizophrenia programs. The Department has selected the University of Arizona, College of Pharmacy, Center for Health Outcomes and Pharmacoeconomic Research to conduct the evaluations. In addition to comparing pre and post study comparisons, the evaluation will compare pilot program outcomes to that of a control group. Contracting with the University of Arizona is in process and utilization, quality of life and financial evaluation results are anticipated late summer 2004.

B. Asthma Program

National Jewish Medical and Research Center conducted a self-evaluation of 258 clients completing the program. Utilization and quality of life data for periods before and after program enrollment were compared. This evaluation showed statistically significant improvement in nearly all aspects measured. A financial analysis of the program has not yet been completed and is expected by early summer.

A copy of the self-evaluation document is available from National Jewish Medical and Research Center.

C. High Risk Infants

Clinician Support Technologies conducted a preliminary self-evaluation using the data available to date from 235 infants. The Department is analyzing the evaluation. Data on hospital readmissions and a financial analysis is expected in late summer or early fall.

A copy of the report can be obtained from Clinician Support Technologies.

D. Breast and Cervical Cancer

The Colorado Health Outcomes Program of the University of Colorado Health Sciences Center designed an evaluation methodology to assess the outcomes of this program. Options for conducting the evaluation are being explored.

E. Care Management Organization

Evaluation of this program is not being pursued. Enrollment in the program began February 2003 and reached a high of 124, less than one half the 250 target. Challenges in this program included data, use of high technology monitoring in an elderly client population, low volume of client calls requiring coordination between programs, and failure to initially enlist support and participation from all caregivers.

F. Chronic Obstructive Pulmonary Disease

This program will continue until the end of 2004 and will be evaluated by late summer 2005.

IV. NEXT STEPS

Once claims for services delivered through December 31, 2003 have been received and adjudicated, after April 2004, the Department will pursue final program financial assessments with the vendors and independent evaluators, which take into account the cost of the programs.

The Department is looking to contract with National Jewish Medical and Research Center and will evaluate whether other contracts would be feasible.

Eli Lilly is funding continuation of the diabetes and schizophrenia pilot programs for another year, through December 2004. Clinician Support Technology is funding continuation of the High Risk Infant pilot program for an additional six months, through June 2004. All three of these programs will have a December 31, 2003 evaluation and an evaluation conducted of the continuation period.