

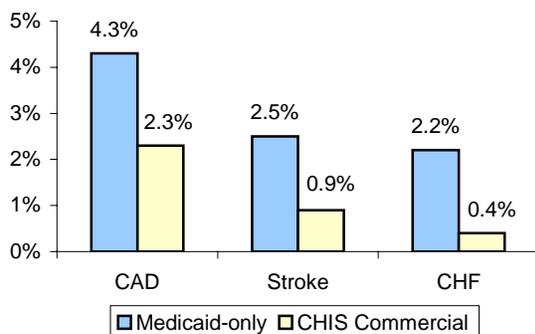


More than 79 million Americans currently live with a cardiovascular disease, and the cost of heart disease and stroke in the United States is projected to be \$432 billion for 2007, including health care expenditures and lost productivity from death and disability.

This report provides a detailed evaluation of the prevalence, utilization, and payments associated with cardiovascular and other circulatory disorders. The study used New Hampshire (NH) Medicaid and Comprehensive Health Care Information System (CHIS) commercial administrative eligibility and claims data for services rendered during calendar year (CY) 2005 to evaluate coronary artery disease (CAD), cerebrovascular disease (stroke), and congestive heart failure (CHF). Members with only hypertension (high blood pressure) or dyslipidemia (high cholesterol) were also evaluated as potentially “at risk” for cardiovascular diseases.

Medicaid members who are also eligible for Medicare are referred to as dual eligibles. Because Medicare is the primary payer and Medicaid, as the payer of last resort, does not cover all of the costs for these members, their claims experience is incomplete. In addition, the commercial group comprises a relatively small number of elderly and disabled members. Therefore, while the complete report includes findings for both the dual eligible and Medicaid-only populations, this Brief focuses on Medicaid-only members.

**Prevalence of Cardiovascular Diseases and Circulatory Disorders in New Hampshire, CY2005**



**Coronary Artery Disease (CAD)**

Medicaid-only members (those not also enrolled in Medicare) had a CAD prevalence rate (4%) that was double the CHIS commercial member rate (2%). For

several age groups, the Medicaid-only prevalence rate was three times higher than the CHIS commercial rate, and for Medicaid-only members age 50-54, the rate was four times the commercial group.

The highest rate of CAD prevalence was in the physically disabled eligibility group (13.4%). Prevalence rates in Medicaid were lower in the southern border areas compared with northern, rural areas of the state.

**Cerebrovascular Disease (Stroke)**

During CY2005, Medicaid-only members had a cerebrovascular disease prevalence rate (2.5%) that was almost 3 times the CHIS commercial rate (0.9%) and was consistently higher by individual age groups. For Medicaid-only members, the prevalence of cerebrovascular disease reached 13% for age 60-64 compared to 3% for CHIS commercial members of the same age.

Within Medicaid-only, the physically disabled eligibility group contributed to the high rate and accounted for 287 of the 515 Medicaid-only cases.

**Congestive Heart Failure (CHF)**

Medicaid-only members had a CHF prevalence rate (2.2%) that was more than five times the CHIS commercial member rate (0.4%). Similar to stroke, the Medicaid-only rate for CHF was consistently higher by individual age groups, with the prevalence of CHF reaching 13% for age 60-64 compared to 2% for CHIS commercial members of the same age.

The highest rate of CHF prevalence was found in the physically disabled eligibility group, which accounted for 252 of the 450 Medicaid-only cases.

**Members “at risk” for Cardiovascular Disease**

A large number of members were also identified with hypertension (high blood pressure) or dyslipidemia (high cholesterol) only. These members did not have other circulatory disease diagnoses on claims during the year. Members with these conditions may be “at risk” of developing cardiovascular diseases.

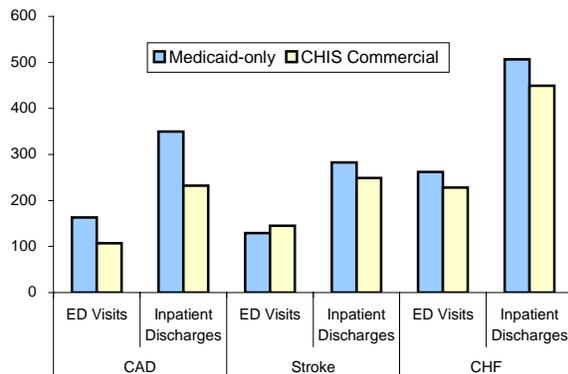
The prevalence rates for high cholesterol were twice as high in CHIS commercial (10.3%) compared to Medicaid-only (5.1%). It is possible that the lower rate in Medicaid could be the result of undiagnosed dyslipidemia which would result if Medicaid members were

less likely to be tested for high cholesterol compared to CHIS commercial members.

### Utilization and Costs

Standardization for age differences was made in the comparison of Medicaid to commercial population rates. For Medicaid members with CAD, the outpatient Emergency Department (ED) and inpatient hospitalization rates were more than 50% higher than CHIS commercial. The office-clinic rates of the Medicaid-only and commercial groups were similar. The study also evaluated procedures and medications commonly associated with CAD. Medicaid-only members had a higher rate of cardiac catheterization and slightly lower rates of angioplasty or coronary bypass procedures compared to CHIS commercial. The rate of members using cholesterol medication was significantly higher in CHIS commercial members (74.1%) compared to Medicaid-only (61.0%). Similarly, the rate of beta blocker treatment for members with acute myocardial infarction (AMI) was significantly higher in CHIS commercial (79.0%) compared to Medicaid-only (67.4%) members.

### Age-Standardized Circulatory Disease Utilization, per 1,000 members, CY2005



The outpatient ED rate for members with cerebrovascular disease was 11% lower than CHIS commercial, while the Medicaid-only inpatient hospitalization rate was 13% higher than commercial. Medicaid-only members with cerebrovascular disease were seen in an office-clinic setting at a rate that was 13% lower than CHIS commercial. For members with CHF, the ED and inpatient rates were 15% and 13% higher, respectively, than the CHIS commercial group. The office-clinic rate for Medicaid-only members with CHF was

17% lower than CHIS commercial.

CAD represented the largest proportion of Medicaid claims payments for circulatory diagnoses (\$4.7 million), followed by stroke (\$3.2 million) and CHF (\$2.9 million). Medicaid typically pays less per service than CHIS commercial. The age-standardized payment PMPM rates for members with CAD, stroke and CHF were 32%, 10%, and 50% lower, respectively, for Medicaid-only compared to CHIS commercial.

It should be noted that these payment rates are based only on those claims involving a circulatory diagnosis or cardiovascular medications. Members with cardiovascular diseases and circulatory disorders often have multiple coexisting conditions that contribute to utilization and payments. Medicaid members with CAD, stroke, and CHF had high prevalence rates of coexisting conditions (e.g., diabetes, mental disorders). For example, Medicaid members with CAD incurred \$89.6 million in payments during CY2005, of which only \$22.7 million was directly attributable to claims with a circulatory diagnosis or medication.

### Limitations

Claims and eligibility data are constructed primarily for administrative purposes, which poses some limitations. Other information, especially diagnoses, may be under-reported. Variances in provider or insurer claims coding, data processing, or reimbursement arrangements may also contribute to the variances shown in this report.

### Conclusion

This study demonstrated that cardiovascular and circulatory diseases were much more prevalent in the NH Medicaid population than the commercial population, and that members with cardiovascular diseases contribute significantly to utilization and costs. Medicaid members were hospitalized at higher rates than CHIS commercial members. While Medicaid members used pharmacy for CAD at a similar rate to CHIS commercial, they were less likely to use an antihyperlipid and were less likely to use a beta blocker if they had a heart attack. Finally, Medicaid members with cardiovascular diseases and circulatory disorders had complex medical problems as indicated by high rates of coexisting conditions, such as diabetes and mental disorders.

#### About the New Hampshire Comprehensive Health Care Information System

The New Hampshire Comprehensive Health Care Information System (NH CHIS) is a joint project between the New Hampshire Department of Health and Human Services (NH DHHS) and the New Hampshire Insurance Department (NHID). The NH CHIS was created by state statute (RSA 420-G:11-a) to make health care data "available as a resource for insurers, employers, providers, purchasers of health care, and state agencies to continuously review health care utilization, expenditures, and performance in New Hampshire and to enhance the ability of New Hampshire consumers and employers to make informed and cost-effective health care choices." For more information about the CHIS please visit [www.nhchis.org](http://www.nhchis.org) or [www.nh.gov/nhchis](http://www.nh.gov/nhchis).