Insurance Reimbursement in a University-Based Pediatric Weight Management Clinic

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Objectives: To compare third-party payor reimbursement for patients evaluated in a university-based pediatric weight management clinic in central Kentucky.

Study Design: Demographic and reimbursement data were reviewed for 120 patients evaluated January to December 2004. Statistical analysis included Kruskal-Wallis test and Friedman's test.

Results: Overall, median reimbursement was 60%. For new appointments, contracted (56%) and capitated (60%) reimbursements were higher than Medicaid (55%). For established appointments, Medicaid reimbursement (100%) was higher than contracted (37%) and capitated (58%).

Conclusion: Our data suggest that reimbursement is influenced by regional factors and is improving in central Kentucky.

Key words: health insurance ■ children/adolescents ■ overweight

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INTRODUCTION

The precursors to adult obesity and its associated health risks often begin in childhood and adolescence. Therefore, reversal of adult obesity and its morbidities will ultimately require implementation of effective multidisciplinary interventions aimed at slowing the current trend of pediatric overweight. The most recent data from the National Health and Nutrition Examination Survey revealed that the prevalence of obesity [body mass index (BMI) ≥95th percentile] was 10% among children 2–5 years of age and 15% among children 6–19 years. When children at risk for obesity were included, the values increased to 20% and 30%, respectively.[1] Based on these prevalence rates, approximately one of every four patients examined by pediatricians is either overweight or is at risk for overweight. Consequently, pediatricians constitute a valuable resource for counseling patients to achieve a healthier weight status based on the 2005 Dietary Guidelines for Americans.[2]

Historically, preventive counseling has not been routinely reimbursed very well by third-party payors, and dietary counseling is time consuming.[1] The lack of reimbursement for obesity treatment is an acknowledged deterrent to the treatment of obesity.[3] In addition to reimbursement rates, Dietz[4] identified three other barriers to obesity treatment: lack of available time for counseling families, lack of effective treatment protocols and lack of commitment by primary care providers to care for affected patients.

In 1999, Tershakovec et al.[5] published data for patients aged ≥2 years and enrolled in the Children's Hospital of Philadelphia Weight Management Program. The overall median reimbursement rate for the initial evaluation and management of obese children in specialty clinics was 11%. The rates varied from 0–100% among insurance policies. The median reimbursement rate for managed care organizations was 50% but only 11% for Medicaid.

To determine if current reimbursement rates were more favorable for pediatric overweight interventions in primary care settings, we reviewed the demographics and reimbursement rates for patients evaluated from January to December 2004 in our university-based pediatric weight management clinic. We compared our results with the data provided by Tershakovec et al.[5] to determine the feasibility and sustainability of a pediatric weight management intervention in a primary care practice setting.

METHODS

Patients were evaluated in the University of Kentucky TEAMS (Teens Enjoying Active Management Systems) clinic by a general pediatrician with a special interest in pediatric and adolescent weight management. Patients were enrolled either as referrals from their primary care providers or as self-referrals. When the initial appointment was scheduled, the parent was mailed a detailed

questionnaire to complete and bring to the appointment. The questionnaire provided information on the family's medical and weight history, eating habits, meal preparation pattern, exercise and physical activity habits. The questionnaire also included information on the patient's birthweight and feeding history, past and present medical history, current medications, age of onset of excessive weight, previous attempts to lose weight, social history, eating history, and exercise and physical activity habits. Height and weight measurements were obtained by trained clinic personnel using standardized anthropometric procedures. Each patient received a complete physical examination and had fasting screening laboratory studies that included a comprehensive metabolic panel, lipid panel, insulin, TSH, free T4, and hemoglobin A1-C. Additional studies were obtained if indicated by the history and physical findings. Patients received individualized recommendations for dietary and physical activity modification. Patients were referred to a psychologist or exercise physiologist who assisted with the program on an as-needed basis during the intervention. No charges were submitted for patients evaluated by the exercise physiologist. Patients evaluated by the psychologist were billed with the physician. Patients were routinely evaluated by the physician and dietitian on all visits.

Data for this study were derived from the administrative database of the Kentucky Medical Staff Foundation (KMSF), the medical practice plan for the department of pediatrics. The study database includes all patients with the ICD-9 code for obesity and evaluated for the weight management clinic from January to December 2004. Other information obtained included medical record number, dates of visits, insurance company, fees charged and the exact amount received. The protocol was reviewed and approved by the University of Kentucky Chandler Medical Center Institutional Review Board.

REIMBURSEMENT INFORMATION

The patients' insurance companies were grouped into one of three categories:

1. Contracted: insurance plans that assume responsibility for the delivery of healthcare for insured patients as detailed in specific contracts. Patients pay a fixed amount monthly and a nominal copayment for each service).
2. Medicaid cost-based: a joint federal and state program that helps pays healthcare costs for people with low incomes and limited resources. Eligibility criteria vary among states. At the University of Kentucky, Medicare category includes both regular Medicaid and the Kentucky Patient Access and Care Program (KenPac). The KenPac program allows the insured to choose a primary care provider who coordinates the patient's healthcare. Most Kentucky Medicaid members are enrolled in KenPac. The main goals of the KenPac are to increase primary and preventive services, coordinate use of other healthcare services and control overall costs of the Medicaid program.
3. Capitated: Organizations pay participating physicians a flat rate (capitation) for providing healthcare to enrolled patients. Capitation payments typically take the form of a negotiated price per member per month.

All evaluation and management charges were based on the level of care provided to the patient. Charges for each level of care were based on current market value and Medicare's Resource Based Relative Value Scale. A single charge was generated for the physician and dietitian services during each visit.

STATISTICAL ANALYSIS

We collected demographic information for all children evaluated. Appointment types were divided into two groups: new appointment and established appointment. The median reimbursement percentage was calculated for each insurance category. Reimbursement rates were analyzed using Kruskal-Wallis test and Friedman's test. A p value of 0.05 was considered as statistically significant. Analysis was conducted with SAS® statistical analysis package version 8.

RESULTS

One-hundred-twenty children were seen (61.2% white, 33.0% African American, 5.8% others; 37.9%

Table 1. Insurance category-specific patient characteristics for new appointments

Category	Overall	Capitated	Contracted	Medicaid
Number	120	17	33	70
Age (years)*	11.2 ± 0.34	12.44 ± 0.79	9.43 ± 0.66	11.31 ± 0.46
BMI (kg/m^2)*	34.85 ± 0.77	33.27 ± 1.56	32.35 ± 0.93	36.17 ± 1.17
White (%)	61.17	62.50	60.87	60.00
Female (%)	62.14	68.75	60.87	61.67
Reimbursement rate (%)§	60 (0–100)	60 (0–69)	53 (0–100)	99 (0–100)

* Mean ± SEM; § Median (range)

male, 62.1% female). Mean BMI varied for gender (33.68 ± 1.01 for females and 36.79 ± 1.13 for males) and race (35.97 ± 0.98 white; 33.59 ± 1.35 African American, others 30.67 ± 2.56). Approximately 70% of patients had multiple established appointments. Reimbursement rates varied based on the insurance plan and type of appointment. Table 1 shows reimbursement rates by insurance category. Median reimbursement rates for new appointments and established appointments were 59% and 69%, respectively. The overall median third-party payor reimbursement rate was 60%.

Figure 1 shows the median reimbursement rates based on appointment type and insurance category. For established appointments, the reimbursement rates were significantly different among the insurance plans (Kruskal-Wallis test p value <0.0001). Median reimbursement rate for Medicaid (100%) was higher than that for capitated (58%), p value <0.0001 and the latter was higher than contracted (37%), p value=0.0038. For new appointments, the reimbursement rates did not differ significantly among insurance plans (60% capitated, 56% contracted and 55% Medicaid), p value=0.1812.

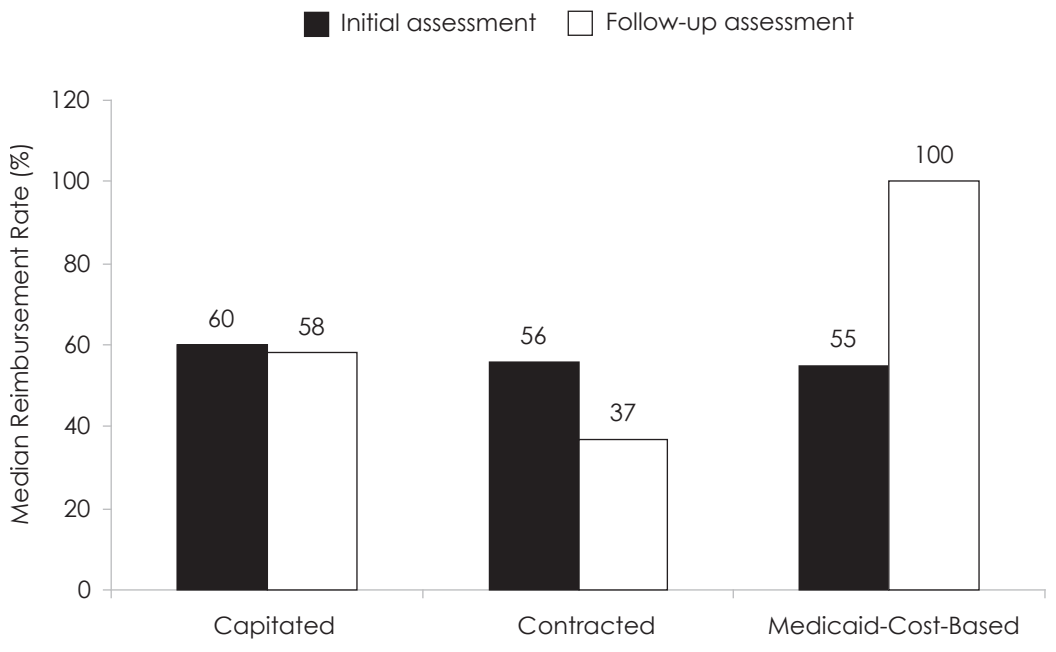
Within insurance plans, the reimbursement rates differed by appointment types. For contracted patients, the median reimbursement rate for the initial appointment (56%) was higher than for the established visits (37%), p value=0.0021. For Medicaid cost-based patients, the median reimbursement rate for the initial visit (55%) was lower than the established appointment rate (100%), p value=0.0010. No significant appointment specific difference was noted for capitated (60% for the new appointment and 58% for established appointments). No differences were note in the rate of reimbursement based on race, gender or BMI.

DISCUSSION

The increased prevalence of pediatric overweight and its associated comorbidities, such as cardiovascular disease, nonalcoholic fatty liver disease and type-2 diabetes,[6-12] makes it a major public health concern. Previously published data have demonstrated that childhood and adolescent overweight are predictive of subsequent adult obesity,[13-16] which is often associated with increased health-related financial costs. The Centers for Disease Control (CDC) estimated that the annual direct cost of treating adult obesity-related illnesses and conditions will exceed $76 billion. However, when indirect costs such as lost wages are factored in, the estimate exceeds $117 billion a year.[17]

The barriers to overweight management (lack of adequate reimbursement, lack of available time for counseling, lack of effective treatment protocols and lack of commitment to care for affect patients) still exist for primary care providers. It was only seven years ago that Tershakovec et al.[5] reported an 11% median reimbursement rate for obesity treatment. However, primary care providers are in a unique position to effect a positive change in the lives of their patients.[1] With the increased emphasis on primary care site interventions to reverse the current pediatric obesity epidemic, removal of the barrier of low insurance reimbursement will be critical for future interventions.

Figure 1. Reimbursement rates based on appointment type and insurance category



Our study demonstrated that the overall median reimbursement rates by Medicaid and private insurance plans for patients evaluated in a primary care pediatric weight management clinic were higher compared to rates from 1995–1997, as previously published.[5] The higher rate may reflect regional variation in Medicaid reimburse between Kentucky and Pennsylvania.

In March 1998, to determine the state's Medicaid management payment, the Medicaid directors in all 50 states and the District of Columbia were mailed surveys. Only the Medicaid directors from capitated health maintenance organizations (HMO) programs for Aid to Families with Dependent Children (AFDC) and related groups (low-income unemployed parents and poverty-related children and pregnant women) were asked to respond. State Children's Health Insurance Plan (CHIP) expansions, the elderly and disabled, and the medically needy were not included. Forty-one of a possible 45 states (including the District of Columbia) with capitated managed care programs responded. The participating states represented 94% of the nation's Medicaid beneficiaries and 96% of Medicaid beneficiaries enrolled in capitated managed care programs.[18]

The study revealed that there was more than a two-fold variation in capitation rates among states. The correlation between the variation in Medicaid capitation rates among states and the variations in Medicare's adjusted average per capita costs was very low.[18]

The authors posited several reasons why the capitation rates may vary among states. First, capitation rates generally reflect previous fee-for-service spending (FFS), minus some discount, both of which will have different levels of influence depending on whether the state's objective is to improve access to a provider or control spending. Second, rates will vary due to differences in Medicaid eligibility rules and participation rates. States with relatively strict eligibility criteria or difficult enrollment may experience adverse selection, which raises utilization and spending. Adverse selection will affect the FFS base used to determine capitation rates. Third, the geographic distribution of the Medicaid managed care population may affect the rates. States with managed care enrollment mainly in urban areas will have higher rates than states in which the enrollment is distributed throughout the state. Fourth, rates may be high in some states if they included data on the medically needy or the Supplemental Security Income (SSI) population in the database used to estimate prior FFS spending. Fifth, states with relatively new managed care may initially encourage plan participation by establishing relatively high rates.[18]

Based on data from this survey, as of July 30, 1997, Medicaid managed care penetration in Kentucky was 51% (all primary care case management) and in Pennsylvania it was 55% (16% primary care case management and 39% full risk, i.e., capitated health maintenance organization). The Kentucky adjusted Medicaid managed care (MMC) rate was 23% higher than the national median rate. Pennsylvania provided information on payment methods but did not provide rates; therefore, no data were available for comparing its rate with Kentucky.[18]

This survey was repeated in 2001 and showed that the two-fold variation in Medicaid capitation rates remains; however, there was an average 18% increase in Medicaid capitation rates between 1998 and 2001. Both Kentucky and Pennsylvania participated in the 2001 survey. Kentucky's capitation rate was 28% above the national median (an increase from 23% in 1998) and Pennsylvania was 33% below the national median.[19] The 2001 statewide adjusted MMC rate for Kentucky was $191.95. This represented a 22% increase from a rate of $156.42 in 1998.[19]

Another conceivable explanation for the increased rate of reimbursement may be a greater willingness of third-party payors to acknowledge the benefits of preventive efforts and compensate accordingly. However, at the University of Kentucky, the overall mean reimbursement rates for the department of pediatrics remained fairly stable. During the 2004–2005, 2003–2004 and 2002–2003 fiscal years, the departmental mean reimbursement rates were 55%, 60% and 54% respectively.

The reimbursement rates for the pediatric subspecialties for the department of pediatrics in the 2004–2005, 2003–2004 and 2002–2003 fiscal years ranged from 39–107%, 34–104% and 38–86%, respectively. Therefore, the higher reimbursement rate for obesity probably does not represent an artifact of the level of reimbursement for the Lexington, KY area.

The considerable difference in the rate of reimbursement by visit type for Medicaid patients (median reimbursement rate: new visit = 55%; follow-up visit = 100%) was not readily explainable. It is possible that the reimbursement for follow-up visits may have been higher because the reimbursement had already been established, and nonreimbursed patients would voluntarily not return. In contrast, the Medicaid patients may not be affected because the families will not receive any bills.

A third possible explanation for the overall higher reimbursement rates in our study may be that families contacted their insurance companies prior to making an appointment to ensure service would be covered. If this was true, the patient population may be a bias sample. We did not ask our patients if they had received prior approval before making their appointment. Therefore, we cannot address this question specifically.

The original article by Tershakovec et al. did not document whether the ICD-9 code for obesity was used as a primary, secondary or tertiary diagnosis. In our study, the diagnosis code for obesity was used for primary, secondary or tertiary diagnosis. We did not control for this information and cannot comment on whether this affected or influenced the rate of reimbursement. We acknowl-

edge that it would be informative to determine if there was a difference in the rate of reimbursement when the diagnosis of obesity was the primary diagnosis versus the secondary or tertiary.

Tershakovec et al. did not discuss the distinction between fee and the contracted rate. In our study, the average reimbursement rate was calculated by dividing the fee charged by the amount received for each visit. The median reimbursement rate was then determined. Our overall median third-party payor reimbursement rate was 60%. This reimbursement rate compares favorably with both the departmental and subspecialty mean reimbursement rates for the year before, during and after the study.

The potential for increased reimbursements could lessen the impact of one of the barriers to pediatric weight management interventions. It is anticipated that this study, along with the increased utilization of the obesity-related ICD-9 codes recently published by the American Academy of Pediatrics, will encourage more university-based primary care centers to develop pediatric overweight programs.

LIMITATION

One limitation of our study was the reliance on data from a central Kentucky university-based practice in which approximately 60% of the patients relied on Medicaid. This may reduce the ability to generalize our findings to other primary care settings.

SUMMARY

Our experience shows improved reimbursement rates for the evaluation and management of overweight children. This may convince primary care providers to devote more time and effort to the evaluation and management of overweight pediatric patients.

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