SUPPLEMENT ARTICLE

Paying for Obesity: A Changing Landscape

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ABSTRACT

BACKGROUND. Coverage for obesity-related services is highly variable. Despite this, health plans, purchasers, and states have mounted numerous recent initiatives.

OBJECTIVE. To identify the range of approaches being used to address coverage and reimbursement for childhood obesity services.

METHODS. Key informant interviews were conducted using a semi-structured protocol to identify the types of activities they or their organization were engaged in to address childhood obesity, to learn about private payer policies and procedures, to identify best practices, potential resources and/or other key informants. Domains addressed in the protocol included scope of the respondent’s organization’s activities, the rationale for supporting obesity activities, the degree to which obesity services were a covered benefit and what if any barriers or challenges were encountered in implementation, the policy climate within which the organization operates (e.g. state legislation, initiatives or task forces), and any assessment of the impact and/or cost of implementing their initiatives. The individuals interviewed represented respondents from each of the following categories: employer, health plan, and state insurance programs and conducted by phone between November 2007 and March 2008. In addition to the information gathered by the key informant interviews we conducted a search of the relevant peer review and grey literature between 2005 and 2008 and input from a national expert advisory group.

RESULTS. Significant variation, as well as recent changes, were identified in both the private and public sector. Approaches included new benefits and incentives for parents and providers. Only anecdotal evidence of impact of the recent changes was available.

CONCLUSIONS. There is important forward movement in how public and private players are addressing paying for obesity related services. Medicaid and SCHIP programs have an opportunity to provide additional leadership. Substantial investments in evaluation and research are needed to learn which approaches are most effective. Pediatrics 2009;123:S301–S307

THE OBESITY EPIDEMIC and its costs, estimated at more than $100 billion, have garnered the attention of employers, health plans, and policy makers at the national and state levels. Most responses have focused outside the clinical setting, but in the last 5 years, changes in how insurers view their role in obesity have emerged, in part, in response to provider complaints about lack of payment. We review here what is known about the costs of obesity and coverage and reimbursement for childhood-obesity services and make recommendations to improve coverage and reimbursement as a necessary, but certainly not sufficient, step in the health system’s response to the epidemic. We draw on the existing peer-review literature, reports of innovations, and information collected during a series of 13 key informant interviews conducted between August 2007 and July 2008 with representatives from health plans, employers, and states.

THE PRESENT AND FUTURE COSTS OF OBESITY

Various estimates of the national costs of obesity, including medical and other costs, have been published. The most often cited estimate puts the total cost of obesity in 2001 at $117 billion.\textsuperscript{1} Finkielstein et al\textsuperscript{2} estimated that approximately half of obesity-attributable medical expenses among adults are financed by Medicare or Medicaid. Costs to states through their Medicaid budgets are already significant, with estimates ranging from $23 million in Wyoming to $3.5 billion in New York in 2003. The picture related to health care costs for childhood obesity is far less clear. Some studies have documented excess health care costs for obese children, whereas others have shown no difference between obese and nonobese children in health expenditures. In 2002, Wang and Dietz\textsuperscript{3} found a more than threefold increase in hospital charges for obesity-related conditions, from $35 million to $127 million over a 20-year period ending in 1999. This and other studies have led the Robert Wood Johnson Foundation to report that...
childhood obesity carries a “price tag” of $14 billion per year in direct health care costs. In contrast to this set of studies, a recent study that used the 2002 Medical Expenditure Panel Survey found that although overweight and obese children had lower health status, their expenditures were actually lower or no different from those of normal-weight children.

PRIVATE-SECTOR COVERAGE TRENDS
Whether a service is covered depends on both employer and plan decisions. Here we summarize trends in both sectors.

Employers
From our interviews we learned that a growing number of employers are concerned about, and beginning to develop responses to, the obesity epidemic. However, most of these responses are directed at their employees rather than their dependent children and through innovations other than a traditional insurance benefit. However, employers are reevaluating their benefit plans and coverage policies as the epidemic continues to grow. The innovation about which we heard often in our employer interviews and review of the literature was employers’ use of incentives: wellness policies that penalize or reward employees and their dependents for their health status. Examples of these policies include insurance surcharges, insurance discounts, and rebates only to low-risk workers. Mello and Rosenthal reported that in 2007 nearly 40% of all employers in a survey stated that they would pay employees for health-enhancing behaviors in the next 2 to 3 years. The only employer we identified that has moved to provide an incentive linked to childhood obesity is IBM. In 2004, IBM established the Children’s Health Rebate to “help families focus on good nutrition, physical activity and other habits that aid children in the maintenance of healthy weight” (M. Benedict, IBM, e-mail communication, June 2008). The program offers families who complete the program a $150 cash rebate.

Health Plans
Health plans are highly variable in the extent to which they cover obesity-related services for children and adults. The last 5 years has seen growing activity on the part of insurers in responding to the obesity epidemic, and similar to employers, the emphasis has been on adults with an additional focus on children being far more recent. In addition, as with employers, health plan responses are not limited to their role in coverage and payment; many are supporting community responses to obesity through their community benefit programs.

Benefit Design
On the insurance benefit side, the majority of plans continue to report that a claim received with obesity as the sole diagnosis coded for a visit will be rejected. This widespread practice has led to physicians being increasingly savvy about which codes to use for comorbidities to secure payment. Where plans are moving beyond this blanket nonpayment policy, the most commonly cited examples of innovations come from the family of BlueCross BlueShield plans and Kaiser plans. Again, most of these are not specific to children. For example, beginning in 2005, BlueCross BlueShield of North Carolina became the first health insurer in the nation to cover obesity as a primary condition by initiating a 2-part benefit structure to address obesity as its own diagnosis, with no comorbidities needed for physicians to be reimbursed for the visit. The second part of the benefit is referrals for nutrition counseling or allied health services, with the plan allowing up to 3 visits yearly to nutritionists (although their data show that the average use is only 2 visits). In 2007, they began extending these benefits to their members’ children. In a 2007 interview, Sylvia Stevens-Edouard indicated that BlueCross BlueShield of Massachusetts (BCBSMA) has long covered nutrition services with no restrictions on obesity as a diagnosis; the only requirement is that physicians judge the visit to be medically necessary. To date, BCBSMA has not analyzed how many visits are related solely to obesity.

Education Strategies
Whether or not plans are providing reimbursement for obesity-related services, they have moved into educating providers and patients about childhood obesity. Provider-based strategies have focused on providing tools to initiate dialogue with parents around nutrition and physical activity as part of regular preventive visits. For example, a plan in California has distributed more than 12 000 tool kits to pediatricians and family practitioners that include a desktop reference on counseling. What is less prevalent is education and assistance to providers on how to integrate these tools into clinical workflow and how to improve their office-based systems to systematically identify and manage childhood obesity. Provider education is also being used in conjunction with the design of new benefits, because many plans have found initial low uptake of the new coverage. For example, at BCBSMA, executives discovered an entrenched belief that there is a barrier to reimbursement and even when the benefit became available, few providers were aware of it. Since making this discovery, BCBSMA has made a concerted effort to reeducate its providers during scheduled site visits, Stevens-Edouard said.

Incentive Strategies
One barrier to participation in weight-management programs is the cost of the intervention. Although we found no research on this topic specific to children, some studies have examined this in adults. Most of the evidence for behavioral approaches to weight loss has emerged from randomized clinical trials in which there was no cost for participation. In practice, the situation is far different, because most weight-loss programs come with a substantial price tag. Evidence from smoking-cessation programs indicates that full coverage by insurance improves both access and quit rates. Although insurance coverage might offset the out-of-pocket costs of partici-
opating in weight-loss programs, it does not address the opportunity costs of such participation for families: time and convenience. These are significant factors in determining long-term participation. For this reason, many plans are turning to incentive strategies to promote healthy behaviors. Most of these plans focus on adults and have tied financial benefit, such as gifts, rebates, coupons, or cash, to achieving a desired behavior or outcome. Although most of these plans have not been well evaluated, the most successful have tied the incentive directly to outcomes: actual weight loss, not just the adoption of healthy behaviors. In 1 study of adults in a group health plan in which they were required to pay for 90% of the costs of a weight-management intervention, fewer than 10% were interested in participating. If the costs were fully covered, more than 40% expressed interest. Although less common, many insurers also support the idea of charging higher premiums for obese persons who do not participate in weight-management programs or the idea of requiring participation as a condition of coverage.

Provider incentives were less frequently reported in conjunction with obesity. In 2005, BCBSMA instituted a primary care physician incentive program, and 1 of the incentives in the program was charting of BMI in children aged 3 years and older and documentation of any action taken if the child’s BMI is >85%. In the first 2 years of this incentive program, Stevens-Edouard says they witnessed an increase from 30% to 60% of providers routinely documenting BMI during well-child visits.

Community Benefit Programs
Several health plans are addressing obesity through their community benefit programs either in addition to a benefit strategy or as the sole response. Initiatives are varied and include partnerships with schools, training, and deployment of peer educators, parent education, a focus on culturally diverse populations, provision of farmers’ markets in underserved communities, and working with local governments to improve children’s built environments and access to physical-activity options. Examples of these types of initiatives abound: BlueCross of California has partnered with the Los Angeles Unified School District and the University of California, Los Angeles, to evaluate the outcomes of an elementary school-based intervention to promote fruit and vegetable consumption and provide a nutrition curriculum to students; Highmark Health Plan in Pennsylvania has partnered with Pittsburgh Public Schools to provide nutrition education and physical activities in the curriculum at 10 school sites and has made grants to help schools develop activities and programs to prevent childhood obesity; and Kaiser offers farmers’ markets at 30 of its locations, from Georgia to Hawaii. Here again, evaluations are not yet available to understand the impact and cost of these programs.

Public/Private Partnerships
A final area into which plans have moved is partnerships with states, particularly state health departments, to address childhood obesity. A recent report from the Association of State and Territorial Health Officers provided an overview of 3 collaborations between state health agencies and health plans to reduce overweight and obesity in Massachusetts, Pennsylvania, and Tennessee. Once again, BCBSMA is an exemplar program and partnered with the Massachusetts Department of Public Health to implement a school-based health initiative, Healthy Choices, that was focused on obesity prevention. By 2007 the program had expanded to more than 125 Massachusetts schools, with plans for further expansion. In addition to its benefit initiative, the Highmark Health Plan partnered with state agencies to launch a school-based program through its foundation (Highmark Foundation). It offers a unique intervention targeted at school nurses, educators, and principals. A secure Web-based portal (https://www.healthetoolsforschools.org) enables school nurses to input, track, and communicate student health and fitness information (including BMI) through an electronic version of the required school health record.

State Responses
There are at least 3 ways in which states are addressing payment for obesity-related services, and most of these actions are adult-focused, although a growing number include or solely address children. These strategies are (1) Medicaid-focused interventions including reimbursement and/or specific weight-management or health-promotion programs or incentives, (2) public employee benefit programs adding obesity-prevention programs or incentives, and (3) insurance-coverage mandates.

Medicaid- and State Children’s Health Insurance Program–Based Interventions
Variation in how the Medicaid program reimburses for obesity-related services is widespread. Depending on the state, providers have reported that they can get paid at least as well for obesity and its related comorbidities as for other conditions they treat, or, at the other end of the spectrum, that every 1 of their claims is rejected. A first-order question is whether obesity-related services, in particular nutritional counseling, are covered within Medicaid. In a 2005 report, Rosenbaum et al found that Medicaid’s existing Early and Periodic Screening Diagnostic and Treatment (EPSDT) coverage standards provide for comprehensive, obesity-related pediatric health care interventions. They concluded that “CMS [Centers for Medicare and Medicaid Services] guidelines interpreting the EPSDT program make clear that all necessary coverage exists; what is needed is a clear strategy for translating these guidelines into real service delivery action at the community level.”

A follow-up report by Wilenski et al that included a 2006 review of available Medicaid fee-for-service documents and Medicaid managed care contracts reinforced that “existing billing codes permit coverage of all procedures and interventions essential to high quality obesity-prevention pediatric practice” within Medicaid.
Despite this, states are often not recognizing this fact or creating barriers to service delivery such as restricting the number of visits for which payment will be made, using extensive previous authorization requirements, excluding coverage on the basis of “excessive” coded services for same day-visits, and instituting prohibitions against billing for certain procedures.18

However, just as in the private sector, examples of positive approaches exist. States have also begun using the Deficit Reduction Act of 2005, and the added flexibility it confers to state Medicaid programs, to design health services and the health condition of the Medicaid population. Because the Deficit Reduction Act eliminated the requirement that certain efforts be implemented statewide, states are starting to target alternative benefit packages to specific subsets of Medicaid beneficiaries.19 By 2006, 3 states (Idaho, Kentucky, and West Virginia) had already launched tailored benefit packages for certain populations at risk for chronic diseases. West Virginia and Pennsylvania have both been at the forefront of using this flexibility to respond to the obesity epidemic. West Virginia offers Medicaid enrollees an optional, extended benefits package that includes coverage for nutrition education, diabetes care, and cardiac rehabilitation. Pennsylvania Medicaid has expanded its benefit package and launched childhood-obesity-specific actions in the last 4 years for its estimated 319,000 obese and overweight children enrolled in the state Medicaid program.20

Other approaches being pursued by Medicaid and State Children’s Health Insurance Programs (SCHIPs) mirror the trend in the private sector: the use of incentives that require federal waivers to promote healthy behaviors. Incentives can take the form of reduced cost-sharing or vouchers/coupons for health-related products such as over-the-counter medications. As of June 2007, there were at least 3 states with existing programs (Florida, West Virginia, and Idaho) and 7 more states considering an incentive approach (California, Kentucky, Michigan, Missouri, Pennsylvania, Texas, and Wisconsin).21 California and Wisconsin seem to be the only states with incentives specifically focused on children. California Medicaid parents who keep up with scheduled well-child visits for their infants and adolescents receive movie tickets or gift certificates.22 Wisconsin is incorporating incentives for healthy behaviors into their SCHIP expansion program, BadgerCare Plus, but the state seems to be taking a more conservative approach to the use of incentives and has partnered with the state’s Population Health Institute to test various incentive strategies in 5 demonstration projects.23

West Virginia Medicaid enrollees who opt for the extended benefits package and sign a “personal responsibility contract” have the opportunity to earn credits toward health services in a “Healthy Rewards Account.” The credits can be used to cover other medical and pharmaceutical costs such as copayments.24 Critics of the West Virginia program are concerned that the plan places the health of low-income children and parents at risk by linking the provision of vital services such as skilled nursing care and mental health services to parent compliance with the behavior requirements in the personal responsibility contract.25

A recent report from the Center for Budget and Policy Priorities pointed out that few rigorous studies have been conducted of these approaches to determine whether incentives have led to achieved goals.22 Although some evidence points to incentives improving the use of preventive care services, there have been none showing their impact on smoking or obesity.26

Public Employee Approaches

In addition to state initiatives within the Medicaid program, a number of states are recognizing the prevalence of obesity among their public employees and the real cost impact it is having on state budgets. A 2008 report concluded that public employer health plans are responsible for a large share of state health care spending, second only to state Medicaid programs.27 Arkansas and Kentucky were 2 of the leading states to establish healthy-behavior programs for their state employees, including a focus on obesity prevention. In 2003, Arkansas examined health costs in the public plan and found that they significantly increased for employees with 1 or more of 3 risk factors: smoking, physical inactivity, and/or obesity.28 Armed with this information they went on to implement a multifaceted approach that included extended benefits and incentives for healthy behaviors. In Kentucky, the state launched a program called “Why Weight Kentucky,” a weight-education program for its 235,000 state employees and dependents.29 The program is focused on extremely overweight individuals, and it is not clear to what extent children and adolescent dependents have participated in the program.

State Legislative Actions

In other situations where coverage policy has been inconsistent and/or largely lacking, states have moved in and created coverage mandates (eg, maternity stays and assisted reproductive technologies). Such action on diabetes preceded mandates related to obesity: as of January 2008, 46 states had some type of law requiring coverage to include treatment for diabetes, and in most states this includes equipment and supplies for diabetic treatment such as needles and glucometers.30 At least 7 states are now mandating coverage of 1 or more obesity-related service.31 The existing mandates seem to apply only to adults or do not indicate an age-eligibility requirement and tend to be restricted to coverage of treatments for morbid obesity. No specific childhood-obesity mandates have been considered to our knowledge. However, state-mandated coverage for childhood obesity at this stage would be premature given the state of our knowledge. Recently, the American Academy of Pediatrics defined a core set of benefit plan principles for insurers that include the principle that “benefit plan design must include coverage and payment for pediatric obesity assessment, evaluation, and treatment.”32 If a state were to move in this direction, it would be wise to link the mandate to a data-collection effort or at least a formal evaluation to be able to understand the uptake
and costs of the benefit as well as its impact on both process and, ultimately, outcomes for children.

**FUTURE NEEDS**
The private and public sectors are both devoting an increasing amount of resources to the epidemic; however, several areas warrant continued attention. We focus here on 3 that we identify as priorities: the need for better evidence; the need for education, training, and support for providers; and increased leadership and attention from the Medicaid and SCHIP programs.

**Growing the Evidence**
The evidence base for practice-based interventions was evaluated as part of the new American Medical Association recommendations released last year. Although some evidence exists, certainly enough to develop recommendations for systematic approaches by clinicians, the expert committee identified many gaps in knowledge and in the quality of the evidence. Clearly, much more research needs to be funded, conducted, and reported on effective clinic-based and comprehensive approaches to understand which interventions work under which circumstances and for which populations.

Specific ideas for promoting more rapid development of the evidence needed include the development of payer- or system-based registries and/or linking reimbursement to the provision of extra data on obese children and the services they receive. Registry-based approaches have been instrumental in monitoring and improving care and outcomes to other groups of children (eg, cystic fibrosis). Finally, the concept of “coverage with evidence development” (CED) is growing in its acceptance. After gaining a foothold in the Medicare program and internationally, CED is now spreading to the private insurance market in the United States. CED permits coverage of certain interventions that currently lack adequate evidence of benefits or risks, but only in the context of planned research and data collection to develop the evidence that will be needed to determine if definitive coverage is warranted.

In addition to evidence of clinical effectiveness, we are very much in need of sound evidence about the cost-effectiveness of interventions that are now spreading throughout the country, as well as their potential unintended consequences. We also do not know of any studies that have examined whether parent participation in adult wellness programs had beneficial derivative effects on the children in those families. Because children’s nutritional and physical-activity behaviors are heavily influenced by those of their parents, it would seem reasonable to expect some impact. Finally, research on the impact of incentive programs, either linked to other components as described above or stand alone, particularly among low-income and Medicaid populations, is sorely lacking, and the little that is known to date is not encouraging.

**Training and Support of Providers**
As noted in this report, several health plans and states have launched provider-education strategies to promote the identification and management of childhood obesity. However, the effectiveness of training-based interventions alone to change provider behavior is, at best, low. Although education and training have certainly been shown to affect knowledge, skills, and attitudes of providers on various topics, its effect on provider behavior has been modest. Few studies have specifically examined the relationship between provider training and the provision of obesity-related services. Despite this modest evidence base on the impact of training initiatives, 1 of our interviewees raised the possibility of health plans developing a reimbursement strategy linked to providers’ demonstration that they had either participated in a specific educational intervention on childhood obesity or were otherwise able to demonstrate some competencies in this area. This is similar to the long-standing use of a “centers of excellence” designation by health plans for limiting payments for certain high-risk and costly procedures.

Perhaps more promising is the application of quality-improvement (QI) principles and interventions in obesity care. By assisting providers in their ability to implement the recent recommendations based on the best available evidence, QI approaches serve to accelerate practice-based adoption of new interventions. This approach is a central feature of the Childhood Obesity Action Network, a network founded by the National Initiative for Children’s Healthcare Quality in 2007 to specifically accelerate improvements in the health system’s response to the epidemic of childhood obesity. Several articles in this supplement to *Pediatrics* describe successful QI interventions.

**Increased Leadership and Attention From Medicaid and SCHIP**
The government is already financing approximately one half of obesity-related costs among adults through the Medicare and Medicaid programs. As obese and overweight children become obese adults, this proportion will only grow. The case for public-sector action, at both the state and federal levels, is clear.

More than 3 years ago, Rosenbaum et al identified 2 simple federal policy actions that would be important in improving state responses to the epidemic. First, the CMS could improve the dissemination of information about the importance of childhood-obesity risk to state Medicaid and SCHIP programs. Second, the CMS could proactively clarify to states that obesity-related services are a covered benefit under EPSDT. This guidance should make clear that if states use managed care or disease-management programs for delivering services to children who are on Medicaid, they must still provide comprehensive obesity-prevention programs for children at risk. This latter action, implemented for example through a Dear State Medicaid Doctor (DSMD) letter, would go a long way in helping providers secure reliable reimbursement for obesity-related services.

Medicaid and SCHIP can also contribute to growing the evidence by sponsoring large demonstration projects on childhood obesity. Indeed, $25 million was earmarked for these types of projects, which specifically
require that the grants be focused in underserved and low-income communities.17

CONCLUSIONS

Much remains to be learned about how best to cover and pay for obesity-related services. Adequate coverage and reimbursement for these services are essential components of any health-system strategy to reverse the epidemic. Providers have the opportunity and responsibility to work with health plans, states, and others to help design appropriate coverage policies. However, providers should also work with partners, including the Childhood Obesity Action Network, to add an evaluative component to any coverage innovation so that we can learn the impact and effectiveness of promising practices. However, at the same time that adequate payment is being sought, providers need to focus on improving their use of the best available clinical evidence and be more effective in identifying, preventing, and treating childhood obesity. A well-planned approach focused on improving the evidence base for care and reimbursement will be critical if we are to be successful in reversing the epidemic.

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