The Status of Billing and Reimbursement in Pediatric Obesity Treatment Programs

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Abstract

Pediatric psychologists provide behavioral health services to children and adolescents diagnosed with medical conditions. Billing and reimbursement have been problematic throughout the history of pediatric psychology, and pediatric obesity is no exception. The challenges and practices of pediatric psychologists working with obesity are not well understood. Health and behavior codes were developed as one potential solution to aid in the reimbursement of pediatric psychologists who treat the behavioral health needs of children with medical conditions. This commentary discusses the current state of billing and reimbursement in pediatric obesity treatment programs and presents themes that have emerged from discussions with colleagues. These themes include variability in billing practices from program to program, challenges with specific billing codes, variability in reimbursement from state to state and insurance plan to insurance plan, and a general lack of practitioner awareness of code issues or reimbursement rates. Implications and future directions are discussed in terms of research, training, and clinical service.

Pediatric psychologists are integral members of multidisciplinary teams providing care to children with medical conditions. Pediatric psychologists provide a range of behavioral health

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services, including assistance with adjustment to new medical conditions, adherence with medical regimens, and treatment of the comorbid psychiatric conditions that are often complicated by medical conditions. Payment for pediatric psychology services is often poor, creating a complex behavioral health issue that has been commented on widely, yet insufficient progress has been made to improve reimbursement. Some authors[1] have commented that innovative and promising advances in pediatric psychology, such as approaches to improving adherence, will likely not translate to clinical care without reliable billing structures being in place. Leaders in the field of pediatric psychology[2–5] as well as health economics[6] have discussed the problem of funding pediatric psychology. Recommendations agreed upon by most include, the need for providers to advocate for the benefit and necessity for pediatric psychology services to treat medically ill populations, and the need for services to be partially supported by hospital budgets, charitable funds, and grants. Moreover, by continuing to conduct research that examines and highlights the benefit that behavioral health interventions can have on physical health, pediatric psychology services will have increased value to the medical and insurance communities.

The purpose of this commentary is to discuss issues of billing and reimbursement related to pediatric obesity treatment programs. Pediatric obesity creates an interesting case study for several reasons. First, payment for obesity services is challenging across disciplines[7] and is most frequently cited by senior program administrators as a barrier to pediatric obesity treatment.[8] For adults, insurance coverage may be available for individuals with morbid obesity, but plans seldom offer coverage for medical treatment or dietary counseling when pediatric obesity is the sole or primary diagnostic code used for the visit. Most programs have multiple sources of funding including clinical revenue, institutional support, grant support, foundation support, and endowments.[9] Second, like other pediatric conditions, a multidisciplinary approach with an emphasis on behavior change is integral to effective obesity care, and behavioral health services are a recommended component of obesity intervention.[10] To date, psychologists have developed and tested interventions for obesity which include behavior change strategies including goal-setting, self-monitoring, stimulus control, problem solving, and parent modeling and reinforcement.[11] Multidisciplinary behavioral intervention has been found to be more effective in reducing weight than education alone,[12] with effects maintained over time.[13] Pediatric psychologists in the area of pediatric obesity face considerable challenges with respect to billing and reimbursement, making it difficult to practice the evidence-based interventions they have helped develop and test.

A potential solution to payment for pediatric psychology services in the area of obesity lies in the use of health and behavior codes, which can be used when billing for behavioral health services in the context of comprehensive medical treatment, using the patient's medical insurance dollars.[14] Behavioral change and emotional support for those struggling to cope with a medical illness is often integral to a comprehensive treatment plan, yet not all patients present with mental health diagnoses. The health and behavior codes were designed to allow for behavioral health needs to be addressed, and billed, as an integral aspect of treatment for the patient's medical illness rather than mental disorder.

These codes were initially proposed by the American Psychological Association in 1998 and approved by the American Medical Association for inclusion in the Current Procedural Terminology, or CPT, code system in 2002 (see Table 1 for list of codes and Medicare reimbursement rates). The hope and intention of the introduction of the health and behavior codes was to increase access to behavioral health services for all medical patients, and to create a more consistent system of reimbursement for pediatric psychologists. Yet, as we approach the 10-year anniversary of the approval of these codes, the issue of funding pediatric psychology services using the codes remains a challenge and the title of Noll's commentary, "Health and behavior CPT codes: An opportunity to revolutionize reimbursement in pediatric psychology," seems like a thus-far missed opportunity.

Table 1
Approximate Medicare reimbursement rate in dollars by health and behavior code and service duration

Code	Service	Service duration	
		15 min (1 unit)	60 min (4 units)
96150	Assessment: initial	$ 22	$ 88
96151	Re-assessment	$ 21	$ 85
96152	Intervention: individual	$ 20	$ 81
96153	Intervention: group (per patient)	$ 5	$ 19
96154	Intervention: family with patient	$ 20	$ 80
96155	Intervention: family without patient	$ 22	$ 88

Rates are for Medicare and thus for adult patients. Medicaid and private insurance reimbursement is state dependent and variable

Relatively few empirical studies have examined data related to the use of health and behavior codes. Evaluations within institutions have generally found that while health and behavior codes provide higher reimbursement than mental health codes, coverage is more often denied with health and behavior codes as compared to mental health codes.[15, 16] Within a pediatric obesity program, collections using health and behavior codes were particularly problematic for group treatment and family intervention without the patient present.[17] These types of analyses are limited in that they provide institution specific data that depends on state Medicaid and private insurance recognition of the codes. Data from the Centers for Medicaid and Medicare Services indicate that only 12 states have the entire health and behavior series of codes activated through Medicaid.[18] Twelve additional states and the District of Columbia have the series "partially" activated, meaning only certain codes are recognized, or there are restrictions on which practitioners can use the codes (e.g., physician only). Thus, the challenges and billing practices of pediatric psychologists working within obesity treatment programs across institutions and states are not well understood.

Psychologist Billing Practices in Pediatric Obesity Programs: Themes

In order to look at the real-world billing and reimbursement issues related to behavioral health services in pediatric obesity treatment programs across states and institutions, the authors sought feedback from fellow pediatric psychologists working within pediatric obesity treatment programs. An email was distributed to various groups of professional colleagues, including the American Psychological Association Society for Pediatric Psychology (Division 54) general listserv, the Division 54 Obesity Special Interest Group listserv, and a group of psychologists participating in a multidisciplinary obesity policy and practice workgroup sponsored by the Children's Hospital Association. Feedback was sought on use of health and behavior codes versus mental health codes, decision-making regarding why one code set is used over another, and psychologists' understanding of reimbursement with various diagnosis and procedure codes. Eleven psychologists covering ten states responded to the email. Four independent, overarching themes emerged.

Theme 1: Variability of billing practices Psychologists indicated wide variability in terms of billing practices. Some psychologists seeing patients in obesity programs used mental health codes, while others used health and behavior codes. When mental health codes are used, common diagnoses include adjustment disorder, psychological factors affecting a medical condition, internalizing disorder, or

eating disorder not otherwise specified, in contrast to the use of obesity or associated medical conditions (i.e., hyperlipidemia) when using health and behavior codes. It is interesting to note that only one of the psychologists reported using both health and behavior codes and traditional mental health codes, and the decision about which codes to use was dependent on the clinic within which the patient was seen rather than the presenting problem or conceptualization of the patient's concerns.

Theme 2: Challenges with particular billing codes Second, many psychologists see obese children individually, while some also see them in family-based behavioral groups and each of these scenarios present unique billing challenges. Psychologists reported that seeing a child individually in a typical clinic visit is easier to bill and better reimbursed, especially when a mental health diagnosis is used. Seeing patients in groups, which may be more efficacious and efficient,[19] is quite challenging because reimbursement rates are low to nonexistent. To further complicate the issue, psychologists reported that groups are frequently delivered by a variety of providers (i.e., a psychologist, dietitian, physical therapist, or physician) and sometimes by several providers simultaneously, with each provider potentially having a separate billing code for group-based services. Psychologists were in agreement, however, that regardless of whether groups were delivered by one or multiple providers, reimbursement rates were extremely poor across all professions for group-based obesity related services.

Another challenge related to mental health treatment of obesity emerges when the practitioner takes a family approach. Psychologists reported some challenges with getting the mental health code for family therapy reimbursed, even when the patient was present. None reported having success with billing for family therapy without patient present, although this approach can be clinically indicated and cost-effective. Studies indicate group-delivered parent-only intervention for obesity can be more cost-effective and have similar or even greater weight loss outcomes than family-based treatment with the child present.[20, 21] Notably, while a health and behavior code for family therapy without patient present exists, typically it is not covered by Medicare or Medicaid.[18]

Theme 3: Variability between states and insurance plans A third theme to emerge from psychologists was the variability between state and private insurance plans with regards to the acceptance of the health and behavior codes. With regard to state plans, whereas Medicare nationally recognizes the health and behavior codes, Medicaid's acceptance of the codes is state dependent. In addition to Medicaid, psychologists noted discrepancies among commercial plans with regard to whether the codes were recognized and services were reimbursed. In one institution, an analysis of reimbursement on an inpatient consultation service revealed reimbursement for an initial assessment using health and behavior codes ranged from $2 to $362. Psychologists also noted difficulties in communication with insurance plans, largely due to a general lack of awareness of the codes and how they are designed to be used, resulting in having to make multiple phone calls back and forth between the medical and mental health arms of the plan. This confusion further discourages the use of the health and behavior codes; many colleagues noted that their institutions have instructed them to use mental health codes rather than health and behavior codes due to the differences among states and insurances, as well as difficules obtaining appropriate pre-authorizations.

Theme 4: Practitioner knowledge and awareness A final theme that emerged from the pediatric psychologists who work with obesity was a lack of knowledge and awareness on psychologists' parts regarding their state and institutional policies, barriers related to billing, and trends in reimbursement. These issues mainly resulted from the limited communication between practitioners and administrative or financial staff at institutions. Many psychologists stated that they simply were not sure if health and behavior codes were accepted by their state Medicaid plans or private insurance companies. At least one psychologist reported she uses a billing protocol she designed for herself using a hybrid of health and behavior codes and mental health codes,

depending on the clinic within which the service was provided (outpatient mental health clinic vs. multidisciplinary clinic in a medical setting), but has no feedback from her institution on whether this model is financially sustainable. When practitioners have received feedback, the actual reimbursement for health and behavior codes has been quite low (27% in the case of one institution using health and behavior codes on their inpatient consults). Those psychologists who had some awareness of the reimbursement rates at their institutions cited lack of awareness on the insurer's part (e.g., not aware of health and behavior codes, not aware they are billed under medical rather than mental health insurance dollars) as a major challenge.

Discussion

The status of reimbursement for psychologists in pediatric obesity treatment programs appears to be poor, similar to other providers who care for this population of children (e.g., physician, dietitian, physical therapist, etc.). The use of health and behavior codes (which were designed to be a solution to this recognized problem in pediatric psychology) has a solid foundation in a comprehensive biopsychosocial model of medical illness, yet has not found its way into practice on multiple levels, including: (a) practitioner awareness and use, (b) institutional support, (c) state policy, or (d) private insurance recognition. The themes presented here echo challenges noted previously[15] indicating that the use of health and behavior codes is still impacted by many barriers, including the rejection of claims on the basis of elements that are written into the code procedures (e.g., use of medical diagnosis code and medical insurance dollars for behavioral health intervention).

It remains that a single billing rubric does not exist to guide pediatric psychologists working with childhood obesity. The "spirit" of health and behavior codes is to provide a mechanism for psychologists to provide important behavioral health support to patients with medical conditions, without unnecessarily diagnosing them with a mental health disorder and further "disconnecting" the mind and body. The decision about whether to bill using health and behavior or mental health codes becomes a clinical question dependent on case conceptualization, which often must come after an assessment is completed. None of the practitioners we polled reported using case conceptualization to guide billing practices, and it may be unrealistic to do so considering the need for pre-authorization for codes. The question remains, if and when psychologists have the choice of using health and behavior codes or mental health codes, how can this decision be made using sound and ethical clinical judgment? A solution may be that all initial assessments conducted in a pediatric setting are billed using health and behavior codes, and if the assessment indicates mental health needs are primary and the treatment plan will be guided by a patient's mental health condition, the billing shifts to mental health codes.

Future directions

Research Taken together, the available research on the effectiveness of pediatric obesity intervention, the lack of research on billing practices, and the challenges noted by obesity colleagues, points to a need to attend to bridging research and practice in this area of pediatric psychology. There are a number of research findings that highlight the effectiveness of multidisciplinary treatment for obesity that includes a strong behavioral component.[22] Additionally, pediatric obesity researchers have addressed the need for translating these findings into real-world practice by examining the effectiveness in a variety of settings including schools, faith-based organizations, and YMCAs.[23–26] Yet, these important findings, and ultimately effective treatments for childhood obesity, will not find themselves delivered in clinical practice without attention to more sustainable payment systems. For example, research has noted the

effectiveness of family-based, group-delivered multidisciplinary treatment,[19] yet as noted by colleagues, few institutions are having success billing for group treatment using either health and behavior or mental health CPT codes. Research evaluating the success of billing mechanisms for these tested interventions would assist in advancing the dissemination of these programs.

The creation of a national network of obesity programs to share outcome and financial data could assist in creating a more powerful message to bring to state and private insurance companies. The authors colleagues responses to the poll suggests a large disconnect between different states and institutions as far as billing practices, yet there are consistencies in the services provided, which are largely evidence-based. Developing this sort of network would advance science and practice in pediatric obesity treatment, including highlighting the need for consistent billing practices and structures that are aligned with the growing evidence base. An example of a centralized resource comes from the emerging field of integrated health care, which has also identified financing as one of the biggest barriers to sustaining their services.

Training An additional direction for future work is to better educate psychologists in the business of psychology, and train psychologists in advocacy and policy work. Many psychologists are reluctant business people, and have had little or no structured training in advocacy. Yet without considerable advocacy focused at multiple levels, the use of health and behavior codes or other potential billing solutions to the lack of reimbursement will likely remain merely misunderstood options that are not consistently practiced. If practitioners are knowledgeable about billing and reimbursement and work together with institutions to negotiate with managed care companies, it is more likely that the codes will be more consistently accepted. Further, if institutions have financial staff who understand the various ways to bill for psychologist services, provide feedback to practitioners and administrators, and appeal rejected claims the use and standardization of the codes will likely increase. It is also crucial that practitioners work with consumers of behavioral health to advocate for coverage of services with their insurance plan.

All of these recommended strategies require considerable time and work. In addition to little practitioner training, there is (1) little practitioner time to engage in building knowledge and engaging in advocacy in part because of productivity demands complicated by challenges with reimbursement, (2) billing is complex for obesity in general (e.g., rejection of claims where obesity is listed as a medical condition and difficulty with approval of nutrition visits, etc.), and (3) managed care companies are numerous, variable, and difficult to navigate. Adding structured education and training in financial issues and advocacy to pediatric psychology doctoral, internship, and post graduate training programs may lead to a workforce better prepared to address these issues as healthcare evolves.

Clinical In the meantime, as suggested by Drotar,[2] a diverse approach to reimbursement for psychology services that allows for psychologists to use consistent and ethical billing practices without the pressure to cover all expenses with billing, may be most sound. Some programs "bundle" services or have institutions that pay for psychology as part of a multidisciplinary approach. This model requires that psychology be seen as cost-effective for both the financial bottom line and quality patient care. Given the variability of insurance policies, this model may actually lead to the fewest disparities in access to behavioral health care among patients within an institution. Until the field comes to a point where psychologists can truly bill according to the biopsychosocial conceptualization of the patient, which may present mental health or medical health as the focus of treatment, billing must be supplemented by institutional and grant funding and/or contracts with outside agencies and schools. In the meantime, the authors of this study greatly urge consumers and psychologists to demand that the use of health and behavior codes be considered by all insurance companies.

Implications for Behavioral Health

With these billing challenges, pediatric psychologists find themselves in a bind, having to make decisions that fit the needs of the patient and are clinically appropriate, while keeping the financial sustainability of their services in mind. Some of the current practices (i.e., bundling psychology services with medical provider's billing, grant funding, using mental health codes) result in an absence of pressure for insurance plans to accept and reimburse health and behavior codes. However, as noted by some commentaries on the issue of funding pediatric psychology,[5, 6] the fee-for-service model may not be viable for psychology given the cost of health care and the tendency for insurance providers to manage behavioral health services through contracts with separate "carve-out" providers. In order for insurance providers to see psychology services as important to fund, they must see a demand for the services, and given the trends above coupled with the unlikelihood of patients advocating for their behavioral health benefits, this is unlikely to happen in the current billing climate.

Moreover, failure to use the health and behavior codes for multidisciplinary programs, like pediatric obesity programs, may create a barrier to access to mental health services for many patients. Institution contracts with medical and mental health insurance are often not consistent (e.g., an institution might have a contract with the patient's medical insurer but not their behavioral health insurer). Thus, while a patient may be able to access the medical provider within an obesity clinic, they may have more trouble accessing the mental health provider.

With the focus being on pediatric psychology, and specifically on pediatric obesity, adult providers were not polled. An interesting question remains: Are there disparities between the use of these codes with adults versus children? While Medicare has approved the use of the codes across state lines, Medicaid policies vary by state with respect to health and behavior codes. In most states, the policies of commercial insurance follow the policies set by state programs. Given the inconsistency in the acceptance of the codes by state Medicaid programs, it would be interesting to examine whether commercial insurance companies accept the codes for adults and not for children. It is possible that the current practices reflect an unfortunate disparity in access to care between adults and children.

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References

1. Schwartz, D., Cline, V., Axelrad, M., & Anderson, B. Feasibility, acceptability and predictive validity of a psychosocial screening program for children and youth newly diagnosed with Type I diabetes. *Diabetes Care* 2011; 34: 326–331
2. Drotar, D. Commentary: We can make our own dime or two, help children and families, and advance science while doing so. *Journal of Pediatric Psychology* 2004; 29(1): 61–63.
3. Koocher, G. P. Commentary: First, AIDE for pediatric psychology. *Journal of Pediatric Psychology* 2004; 29(1): 53–54.
4. Mitchell, M.C. & Roberts, M.C. Commentary: Financing pediatric psychology services: "Look what they've done to my song, ma" or "The sun'll come out tomorrow"? *Journal of Pediatric Psychology* 2004; 29(1): 55–59.
5. Rae, W.A. Financing pediatric psychology services: Buddy, can you spare a dime? *Journal of Pediatric Psychology* 2004; 29(1): 47–52.
6. Bradford, W.D. Commentary from a health economist: Financing pediatric psychology: On 'Buddy, can you spare a dime?' *Journal of Pediatric Psychology* 2004; 29(1): 65–66.
7. Simpson, L.A. & Cooper, J. Paying for Obesity: A Changing Landscape. *Pediatrics* 2009; 123(5): 301–307.

8. Eneli, I., Norwood, V., Hampl, S., et al. Perspectives on obesity programs at children's hospitals: Insights from senior program administrators. *Pediatrics* 2011; 128 (suppl 2): S86-S90.
9. Slusser, W., Staten, K., Stephens, K., et al. Payment for obesity services: Examples and recommendations for stage 3 comprehensive multidisciplinary intervention programs for children and adolescents. *Pediatrics* 2011; 128 (S2): S78-S85.
10. Barlow, S.E., & The Expert Committee. Expert committee recommendations regarding the prevention, assessment, and treatment of child and adolescent overweight and obesity: summary report. *Pediatrics* 2007; 120 (suppl 4): S164-S192.
11. Jelalian, E., & Saelens, B.E. Empirically supported treatments in pediatric psychology: Pediatric Obesity. *Journal of Pediatric Psychology* 1999; 24(3): 223–248.
12. Epstein, L.H., Wing, R.R., Steranchak, I., et al. Comparison offamily-based behavior modification and nutrition education for childhood obesity. *Journal of Pediatric Psychology* 1980; 5: 25–36.
13. Epstein, L.H., Valosky, A., Wing, R.R., et al. Ten year outcomes of behavioral, family based treatment for childhood obesity. *Health Psychology* 1994; 13: 373–383.
14. Noll, R.B., & Fischer, S. Commentary: Health and behavior CPT codes: An opportunity to revolutionize reimbursement in pediatric psychology. *Journal of Pediatric Psychology* 2004; 29(7): 571–578.
15. Brosig, C.L., & Zahrt, D.M. Evolution of an inpatient pediatric psychology consultation service: Issues related to reimbursement and the use of health and behavior codes. *Journal of Clinical Psychology in Medical Settings* 2006; 13: 425–429.
16. Duke, D.C., Guion, K., Freeman, K.A., et al. Commentary: Health and behavior codes: Great idea, questionable outcome. *Journal of Pediatric Psychology* 2012; 37(5): 491–495.
17. Sallinen, B.J., & Woolford, S.J. Commentary: Examination of health and behavior code reimbursement from private payers in the context of clinical multidisciplinary pediatric obesity treatment. *Journal of Pediatric Psychology* 2012; 37(5): 519–522.
18. The National Council for Community Behavioral Healthcare. *States use of medicaid's health and behavior assessment/intervention* (*HBAI*) *codes* (*96150–96155*). Available online at http://www.integration.samhsa.gov/images/res/Map_of_Available_HBAI_CPT_Codes1.pdf. Accessed Dec 10, 2011.
19. Savoye, M., Shaw, M., Dziura, J., et al. Effects of a weight management program on body composition and metabolic parameters in overweight children: A randomized controlled trial. *Journal of the American Medical Association* 2007; 297(4): 2697–26704.
20. Golan, M., Wiezman, A., Apter, A., et al. Parents as the exclusive agents of change in the treatment of childhood obesity. *American Journal of Clinical Nutrition* 1998; 67: 1130–1135.
21. Janicke, J.M., Sallinen, B.J., Perri, M.G., et al. Comparison of program costs for parent only and family-based interventions for pediatric obesity in medically underserved rural settings. *Journal of Rural Health* 2009; 25: 326–330.
22. Epstein, L.H., Roemmich, J.N., & Raynor, H.A. Behavioral therapy in the treatment of pediatric obesity. *Pediatric Clinics of North America* 2001; 48(4): 981–993.
23. Greening, L., Harrell, K.T., Low, A.K., et al. Efficacy of a School-Based Childhood Obesity Intervention Program in a Rural Southern Community: TEAM Mississippi Project. *Obesity* 2011; 19(6): 1213–1219.
24. Resnicow, K., Taylor, R., & Baskin, M. Results of Go Girls: A nutrition and physical activity intervention for overweight African American adolescent females conducted through Black churches. *Obesity Research* 2005; 13: 1739–1748.
25. McCormick, D.P., Ramirez, M., Caldwell, S., et al. YMCA program for childhood obesity: A case series. *Clinical Pediatrics* 2008; 47(7): 693–697.
26. Ritchie, L.D., Sharma, S., Ikeda, J.P., et al. Taking Action Together: a YMCA-based protocol to prevent type-2 diabetes in high-BMI inner-city African American children. *Trials*, 2010; 11:60.