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Mental health service utilization in autism spectrum disorders

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ABSTRACT

Purpose: The purpose of this study is to examine patterns in autism spectrum disorder (ASD) outpatient mental health services including cost and length of services, return to care rates, and dropout by the presence of commonly co-morbid mental health conditions, modality and provider type.
Methodology: This study is a longitudinal, retrospective study using administrative data from Cigna, a leading health care insurance provider in the U.S. Participants ($n = 1614$, ages 1–61) included individuals diagnosed with an ASD from 2001 to 2006, who had claims for outpatient mental health services.
Results: Across all age groups, the cost and length variables were lowest for family therapy, followed by individual therapy. Mixed therapy (combination of family and individual therapy) was significantly longer and more costly. Rates of dropout and return to care were lowest for mixed therapy. Dropout was significantly higher for children than for adults or adolescents. Among provider types, social workers had the lowest cost among adolescents and the highest return to care rates among adults and counselors had the longest service length and the lowest dropout rates among children.

1. Introduction

Healthcare expenses for autism spectrum disorders (ASD) are substantial. Annual health care costs for children with an ASD are $3020 greater than costs for children without an ASD, and there are additional costs for ASD-specific therapies (Lavelle et al., 2014). Mental/behavioral health services are among the most commonly utilized services, with 30–55% of those with an ASD in the U.S. accessing mental health services annually (Boulet, Boyle, & Schieve, 2009; Shattuck, Wagner, Narendorf, Sterzing, & Hensley, 2011). However, little research has addressed service use or expenditures. Such research is necessary to understand how to meet the needs of individuals with ASDs (Cidav, Lawer, Marcus, & Mandell, 2013). The limited research that has been completed on service use has primarily looked at public health programs such as Medicaid (i.e., Cidav, Lawer, Marcus, & Mandell, 2013), and little research has addressed service use in managed care (Ruble, Heflinger, Renfrew, & Saunders, 2005).

The current study is an assessment of mental health service utilization among individuals with an ASD in a managed care context. This study will assess differences in mental health service cost, length, dropout rates, and return to care rates by age

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and comorbid mental health conditions, and will explore if service modality or provider type can further explain differences in use. As this study examines services provided through managed care, we define mental health service as any therapy provided by a mental health professional (including marriage and family therapists, medical doctors, professional counselors, psychologists, and social workers).

1.1. Cost

The costs of ASD mental health services in the U.S. are substantial. In a 2003 nationwide study of costs for children with an ASD across multiple payers, mean outpatient psychiatric costs were $11,033 for children enrolled in Medicaid and $1207 for children enrolled in private insurance. Outpatient ASD-specific care costs were $7297 for children enrolled in Medicaid and $836 for children enrolled in private insurance (Wang, Mandell, Lawer, Cidav, & Leslie, 2013). We note that costs from claims data is frequently skewed, due to a few extreme cost outliers (Wang et al., 2013). A study of services in the United Kingdom revealed significantly lower costs; the total unit cost of community services (including visits to medical doctors, nurses, social workers, and psychologists, along with speech and language therapists) among individuals with an ASD were calculated to average 184 pounds, or approximately $303.60, over 6 months (Barrett et al., 2015).

1.2. Length of services and return to care rates

Recommended services for ASD management are generally intensive, often at least 25 h a week (Bradford, 2010; NIHM, 2011). Many services, including components of applied behavior analysis and other evidence-based models, are provided by professionals or para-professionals in education or direct care. However, a mental health provider is likely to be involved at multiple points of ASD management. Little research has assessed the actual length of therapy services received from a mental health professional.

The research that has addressed length of services has generally combined multiple types of services. For example, in a national US sample from 1997 to 2005, only 26.2% of children with an ASD had more than 9 (health and mental health care combined) office visits per year, although 54.8% saw a mental health professional at least once (Boulet et al., 2009). In a study of the Medicaid managed care system in Tennessee of services provided from 1995 to 2000, children with an ASD received an average of 20 service days per year, including residential and inpatient services, medication management, day treatment, and case management (Ruble, Heflinger, Renfrew, & Saunders, 2005). In Israel, where many public health services are available, the average weekly hours of services for a child with an ASD were 7.3, including physical therapy, occupational therapy, speech therapy, and psychological treatments (Raz, Lerner-Geva, Leon, Chodick, & Gabis, 2013).

ASDs are life-long disorders, and services to manage the disorder and provide support are expected to be necessary throughout the life (National Institute for Health and Care Excellence (NICE), 2012). However, little research has assessed whether services are continuous or occurs in several separate episodes of care, with participants returning to care after breaks.

1.3. Dropout

Psychotherapy dropout, also referred to as premature termination or attrition, is a significant obstacle for effective mental health service provision. Across all mental health diagnoses, mean psychotherapy dropout rates range from 17 to 29% (Hamilton, Moore, Crane, & Payne, 2011). Little research is available on dropout in individuals with an ASD. However, in one ten-year retrospective study from a weekly outpatient clinic in India, 67% of all children with an ASD and their families had dropped out after the first visit (Malhotra, Chakrabarti, Gupta, & Gill, 2004). The drop-out rate for individuals with ASDs was 2–3 times that of other children seen at the clinic (Malhotra et al., 2004). Though there is little research available on dropout among individuals with ASDs, particularly in the US, it may be that their dropout rates are higher than among individuals without an ASD. High dropout rates can lead to poorer outcomes (Pekarik, 1992; Stark, 1992) and higher costs from intake and therapist assignment costs, canceled appointments, and failures to attend sessions (Kazdin, 1996).

1.4. Factors influencing course of services

The modality and cost of mental health services can vary greatly by age. Young individuals with an ASD are more likely to receive family therapy (either alone or in combination with individual therapy) than older individuals, who are more likely to receive individual therapy alone. In a study of service use among children with ASDs in Medicaid systems, 13% of individuals ages 3–16 used family therapy, while only 8% of individuals ages 17–20 did (Cidav et al., 2012). However, family therapy is sometimes an appropriate intervention for adults as well. In the vast majority of cases, families continue to be the primary care givers of individuals with an ASD through adulthood (Gerhardt, 2009). NICE recommends encouraging family involvement in services provided to adults with an ASD (2012). The majority of the research on service utilization has focused on children, though services generally continue into adulthood. Little research has specifically addressed changes in mental health service length by age, but one study of Medicaid systems found that use of restrictive or long-term care increases with age (Cidav et al., 2012). In the United States across multiple types of payers, healthcare costs increase with age (Wang et al., 2013).