



Healthcare Expenditures for Children with Disruptive Behavior Disorders in Medicaid/CHIP







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Introduction

 Medicaid/CHIP is the largest source of healthcare for Children in the US.

- Medicaid/CHIP covers primarily low-income children throughout the US
- Few studies that have examined the associated health expenditures for children on Medicaid/CHIP with Disruptive Behavior Disorders.



Introduction

- Disruptive Behavior Disorders (DBDs)
 - Conduct Disorder (CD)
 - Oppositional Defiant Disorder (ODD)
 - Attention Deficit Hyperactivity Disorder (ADHD)
- These conditions can become a large burden on both familial and healthcare resources and significantly limit the educational experiences of children diagnosed.
- Many children diagnosed with DBDs experience impairment that persists into adulthood.



Study Aims

 To assess disease prevalence and expenditures for treatment for disruptive behavior disorders among Medicaid/CHIP beneficiaries utilizing healthcare claims data.

 To examine the prevalence and expenditures for pharmacological treatment for children diagnosed with DBDs.



Data Source

- Medicaid Analytic eXtract (MAX)
 - A set of person-level and claim-level data files compiled annually.
 - MAX files contain Medicaid eligibility, service utilization, and program payment information derived from state reporting.
- Eligibility files were combined with healthcare claims from Inpatient, Long-term Care, Other, and Prescription Drug treatment claims.



Data Source

 Medicaid eligibility and service packages are largely determined by the states.

- Medicaid claims data is very useful in examining national trends and intra-state healthcare policies.
- Comparisons between individual states is not recommended due to differences in benefits and data quality.



Data Source

- Overall Prevalence and Expenditures
 - 46 states and DC
 - CA & NY analysis is still underway due to difficulty analyzing such large samples
 - ME & AL excluded due to data inconsistencies
- Prescription Drug Prevalence and Expenditures
 - 49 states and DC
 - ME excluded due to data inconsistencies



Methods

- Sample
 - Medicaid or CHIP Beneficiaries
 - 2006-2009
 - Under age 20
 - With at least one diagnosis in a health service claim for CD, ODD and/or ADHD
- Outcomes were analyzed by:
 - Sex
 - Age
 - Race/Ethnicity
 - State

Delivery type (Fee-For-Service [FFS] and Managed Care Organization [MCO]).

Methods

Outcome Measurements

- Prevalence
 - Total Number of Medicaid Beneficiaries (under 20 years old)
 - Total Number of Medicaid Beneficiaries with a DBD
 - Prevalence Rate of DBD among Medicaid Beneficiaries
- Expenditures
 - Total Medicaid Payment for Beneficiaries (under 20 years old)
 - Total Medicaid Payment for DBD Beneficiaries
 - Total Medicaid Payment for DBD treatment
 - Per Beneficiary Per Year Payment (PBPY)



Overall Prevalence and Expenditures

Table 1. DBD General Prevalence and Expenditures (2006 to 2009) in 46 states and DC											
Year	Total Number of Medicaid Beneficiaries*	Total Number of Medicaid Beneficiaries with a DBD*	Prevalence Rate of DBD among Medicaid Beneficiaries		Total Medicaid Payment*	Total Medicaid Payment For Beneficiaries with a DBD*	Total Medicaid Payment For DBD Treatment*	Proportion of DBD Treatment	Proportion of DBD Payment to all Payments		
	A	В	(B/A)*100		с	D	E	(E/D)*100	(D/C)*100		
2006	24.82	1.16	4.7%		\$55,150.59	\$8,222.05	\$2,273.13	27.65%	14.9%		
2007	24.70	1.21	4.9%		\$59,147.02	\$8,720.38	\$2,339.84	26.83%	14.7%		
2008	25.29	1.30	5.1%		\$64,174.49	\$9,297.02	\$2,239.96	24.09%	14.5%		
2009 * in m	27.72 hillions	1.46	5.3%		\$72,278.89	\$10,212.86	\$2,334.23	22.86%	14.1%		

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Overall Prevalence and Expenditures

Figure 1. Trend of Medicaid Paid Amount

Figure 2. Trend of Proportion of Paid Amounts







Overall Prevalence and Expenditures

Figure 3. Prevalence Rates by Racial Group from 2006 to 2009





Results

- The overall prevalence and expenditures for Medicaid/CHIP enrolled children with a DBD increased from 2006-2009.
- While the payments devoted to DBD treatment have remained relatively stable, the overall healthcare expenditures for this group have increased, which results in a slight decrease in the proportion of expenditures devoted to mental health.
- White and Hispanic/Latino children were more than twice as likely as children of other racial groups to be diagnosed with a DBD.



Prescription Drug Prevalence

		Total Number of							
		Medicaid		DBD					
	Total Medicaid	Beneficiaries	Any Rx	Prevalence	Rx use		Total Rx MPA	PBPY	PBPY
Year	Beneficiaries*	with a DBD*	use*	with Rx use	rate	Total PDFN*	(in billions)	MPA	PDFN
2006	33.3	1.31	1.17	3.95%	88.7%	19.5	\$1.62	\$1,392	16.8
2007	33.3	1.37	1.20	4.11%	87.6%	20.1	\$1.75	\$1,466	16.8
2008	24.2	1.40	1 20	4.28%	00.00	21.7	¢1.00	Ċ1 E1E	16.9
2008	34.2	1.46	1.30	4.28%	88.6%	21.7	\$1.96	\$1,515	16.8
2009	36.2	1.64	1.46	1 52%	89.1%	2/1 9	\$2.09	\$1 <i>1</i> 78	17.0
2009	50.2	1.04	1.40	4.5270	09.470	24.5	\$2.05	Ş1,420	17.0
Change			+25.6						
(06-09)	+8.8%	+24.5%	%	+14.4%	+0.8%	+27.2%	+28.8%	+2.6%	+1.3%

* in millions

PDFN: Number of Medicaid covered prescription drug fills MPA: Medicaid paid amount on prescription drugs PBPY: Per beneficiary per year of PDFN and MPA

Prescription Drug Prevalence

Figure 4. Proportion of Psychotherapeutic Drugs on PDFN and MPA



Results

- Total number of prescriptions (PDFN) and Medicaid Payments (MPA) has increased from 2006 to 2009
 - (27.2% for PDFN and 28.8% for MPA)

- A large portion of drugs prescribed to children with DBDs were psychotherapeutic drugs.
 - This proportion has remained relatively stable for all beneficiaries and within racial subgroups.



Conclusions

 These results could be explained by a number of exogenous factors, including delivery system reform and state level changes to Medicaid/CHIP benefits.

 Further research should address not only the costs associated with treatment of children with DBDs, but how expenditures may vary by state regarding managed care and how those monies are allocated.



Policy Implications

- Medicaid Data is a viable source of information about the state of healthcare for vulnerable populations (e.g. low income children)
- Understanding current medical expenditures for children with these conditions is crucial to instigating changes in the healthcare system that promotes increased access to care while containing costs.
- Continued research in this area can ultimately help strengthen the quality and availability of care for children with behavior disorders.



Collaborators

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