



## ANTIPSYCHOTIC QUALITY MEASURES: METABOLIC MONITORING IN CHILDREN TAKING ANTIPSYCHOTICS

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### INTRODUCTION

- Increasing concerns regarding obesity and diabetes emergence in younger populations<sup>1</sup> are heightened for youth prescribed antipsychotic medications due to adverse metabolic and other physical effects.
- A multi-year study of youth enrolled in three health maintenance organizations found that exposure to atypical antipsychotics was associated with a fourfold risk of diabetes in the following year, compared to children not prescribed psychotropic medication<sup>2</sup>.
- Monitoring of metabolic indices is important to ensure the appropriate management of side effect risks, especially in children and adolescents.
- In 2013, the National Collaborative for Innovation in Quality Measurement (NCINQ) proposed that a measure of metabolic monitoring for children taking APs be considered for use in Medicaid and CHIP programs.

### OBJECTIVE

To evaluate how the MS Medicaid program performs on the NCINQ proposed quality measure for metabolic monitoring of children on Antipsychotics

### METHODS

- A retrospective analysis was conducted using Mississippi Medicaid medical and pharmacy claims data and beneficiary eligibility data for July 2013 through June 2014.
- Both fee-for-service (FFS) and managed care claims were used for the analysis.
- This measure addresses “the percentage of children 0 to 20 years of age on any antipsychotic who had metabolic screening documented during the measurement year”.

**Denominator:** The denominator contains beneficiaries between ages 0 and 21 as of June 30, 2014, who were continuously enrolled for at least 3 months with medical and pharmacy benefits and were on any antipsychotic medication.

The recommended measure included three numerators.

**Numerator 1:** Children and adolescents who had at least one test for blood glucose during measurement year (HbA1c test for children with diabetes and either HbA1c or blood glucose for children without diabetes).

**Numerator 2:** Children and adolescents who had at least one cholesterol test during the measurement year.

**Numerator 3:** Children and adolescents who had both a test for blood glucose and cholesterol during the measurement year.

### RESULTS

Health plans included in the analysis are Mississippi Medicaid fee for service (FFS) (N = 6,163) and the two coordinated care plans; United Health Care (UHC) (N = 1,101) and Magnolia (N= 1,648). The percentage of beneficiaries receiving the metabolic monitoring tests doesn't seem to differ much across the health plans. For the overall population, 30% had a blood glucose test, 14% had a cholesterol test, and only 13% had both tests (Table 1).

**Table 1: Metabolic Monitoring in Children Taking Antipsychotics**

	Total Number of Beneficiaries (N= 8,912)	
	No of Beneficiaries	Percentage of Beneficiaries
Blood glucose test	2669	29.9%
Cholesterol test	1261	14.1%
Both tests	1162	13.0%

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Table 2 shows performance rates on the three metabolic monitoring measures by health plan. The performance rates on the three measures do not meaningfully differ across the three plans in the Mississippi Medicaid program. This indicates that our current level of performance is primarily a factor of how practitioners in the state manage these patients rather than policies or procedures of the individual health plans.

Age was found to be associated with metabolic monitoring. Children between ages 12 to 20 had higher percentage of metabolic monitoring compared to children 11 years and younger.

**Table 2 : Percent of Children Taking Antipsychotics Receiving Metabolic Monitoring**

Measure	FFS (Denominator = 6,163)		UHC (Denominator = 1,101)		Magnolia (Denominator = 1,648)	
	Beneficiaries Having Test		Beneficiaries Having Test		Beneficiaries Having Test	
Blood glucose test	1,867	30.3%	311	28.3%	491	29.8%
Cholesterol test	892	14.5%	138	12.5%	231	14.0%
Both tests	824	13.4%	126	11.4%	212	12.9%

In the NCINQ call for comments, preliminary results for the proposed quality measure were provided based on performance for 11 states using the Medicaid Analytic Extract files from 2008. The preliminary results for the metabolic monitoring measure are reported in Table 3. Based on the rates provided by NCINQ, The Mississippi Medicaid program is currently performing just above the 25th percentile on this quality measure.

**Table 3: Preliminary Results From NCINQ Analysis of 11 State Medicaid Programs (2008 data)**

Measure	Overall Performance	Distribution Across 11 States					
		Minimum	25th Percentile	Median	Mean	75th Percentile	Max
Blood glucose test	34.3%	11.8%	29.6%	36.8%	33.1%	38.0%	42.1%
Cholesterol test	18.9%	7.3%	13.3%	17.9%	18.2%	19.3%	33.8%
Both tests	17.5%	3.9%	12.6%	17.0%	16.4%	17.8%	32.7%

### CONCLUSION

Based on the performance ratings for the last year, the Mississippi Medicaid program currently has a performance rating on metabolic monitoring for children taking antipsychotic medications that is barely above the 25th percentile for Medicaid programs. Since this is an important quality of care measure being developed by CMS, it was determined that some action was needed to improve our performance on this measure.

Although a hard clinical edit using electronic prior authorization in the pharmacy point-of-sale (POS) system could assure compliance, this was not considered to be a viable approach due the potential for causing breaks in therapy for a critical mental health condition. Since metabolic monitoring can occur at any time during the year, the only practical way to achieve improvement in performance on this quality measure will be through provider education. A provider education program was implemented in March 2015.

#### References:

- Eisenmann JC. Secular trends in variables associated with the metabolic syndrome of North American children and adolescents: a review and synthesis. *Am J Hum Biol.* 2003 Nov-Dec;15(6):786-94.
- Andrade S, Lo J, Roblin D, Fouyazi H, Connor D, Penfold R, Chandra M, Reed G, Gurwitz J. (2011) antipsychotic medication use among children and risk of diabetes mellitus. *Pediatrics*, 128, 1135-1141.