



Strategies for Using Psychopharmacology Data to Improve Quality Of Care in Children's Mental Health: The Maine Experience

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Medicaid Multi-State Child Antipsychotic Use Project

- 16 State collaborative project sponsored by AHRQ, NASM, NASMHPD and the Medicaid Medical Directors Network
- Data analysis covers four years 2004-2007
- Children ages 0-18 enrolled in Medicaid (not dual eligible)
- Data dictionary developed by consensus among all participating states
- Differences among states may reflect differences in eligibility, benefit design

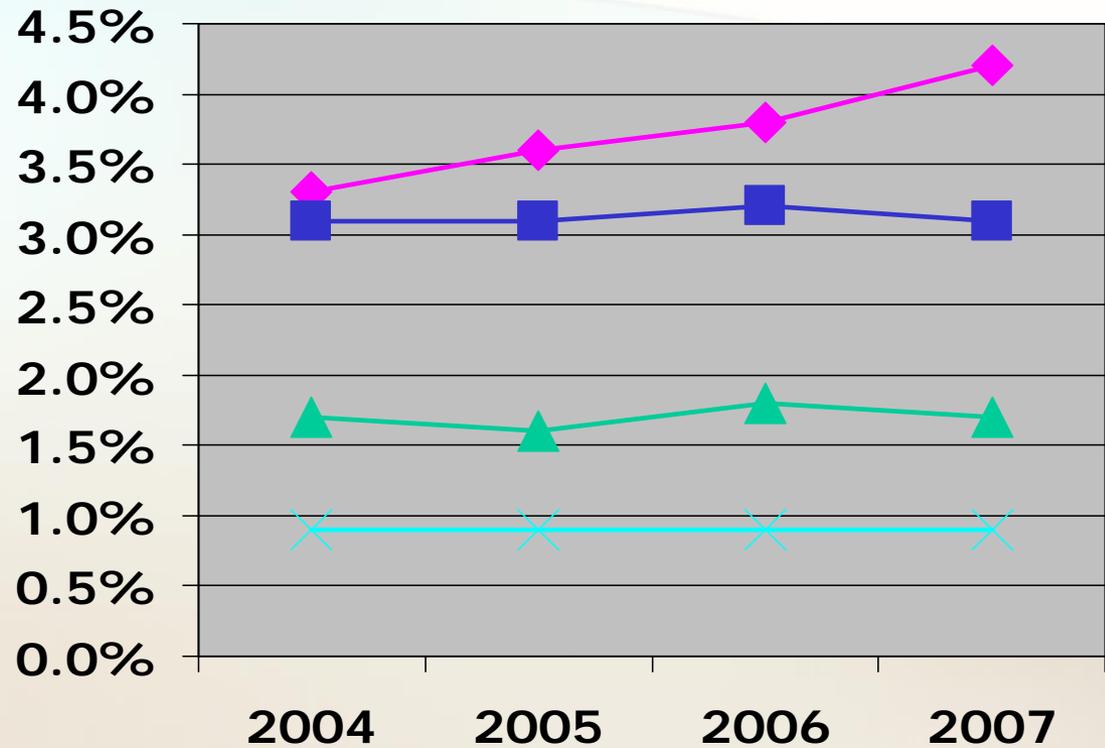
AP Use Rate 0-18 Years

Minimum one month MaineCare eligibility

**AP Use in Members Under 19
Maine Compared to All 16 States
(2004-2007)**

Maine

Year	Percentage of Population
2004	3.13%
2005	3.13%
2006	3.16%
2007	3.11%



◆ Maximum ■ Maine ▲ Median × Minimum

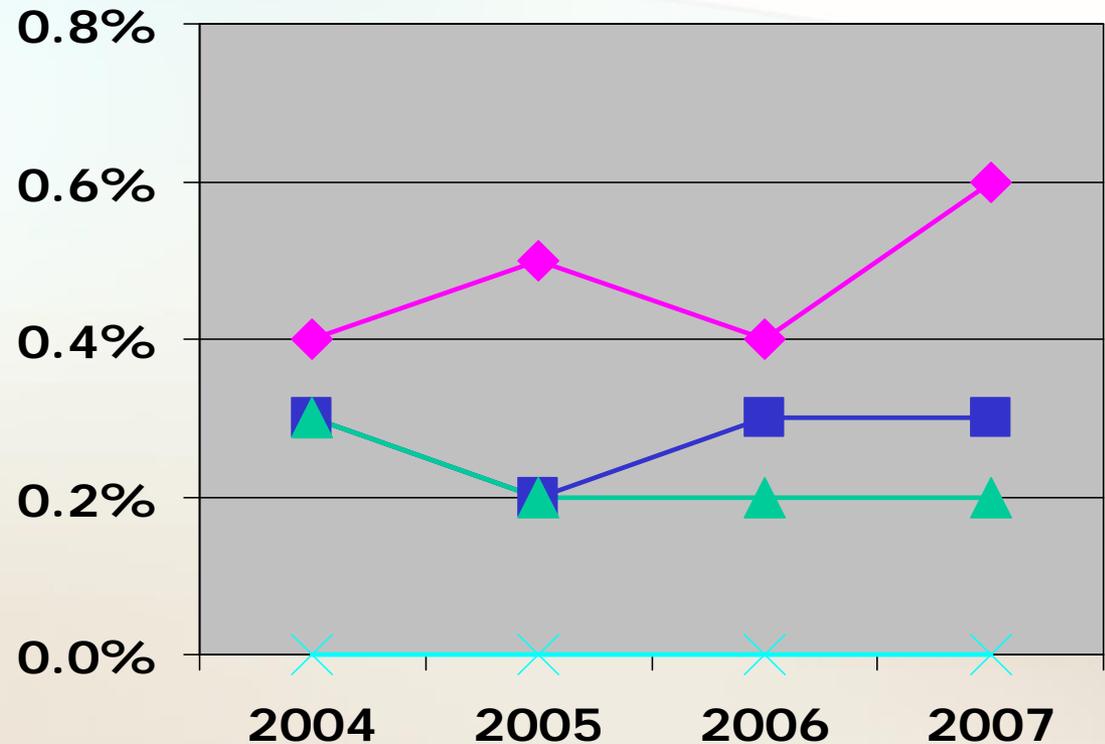
AP Use Rate <5 Years

At least one month MaineCare eligibility

**AP Use in Children Under 5
Maine Compared to All States
(2004-2007)**

Maine

Year	Percentage of Population
2004	0.27%
2005	0.21%
2006	0.25%
2007	0.27%



◆ Maximum ■ Maine ▲ Median × Minimum

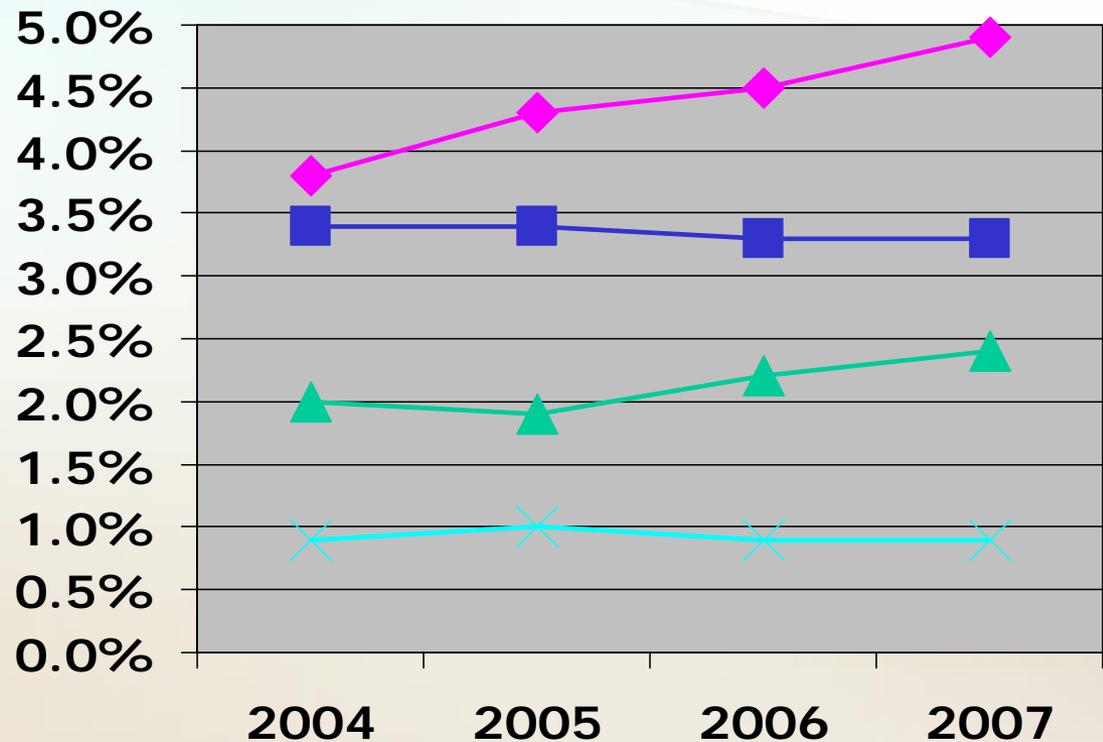
AP Use Rate 6-11 Years

At least one month MaineCare eligibility

**AP Use in Children 6-11
Maine Compared to All States
(2004-2007)**

Maine

Year	Percentage of Population
2004	3.39%
2005	3.35%
2006	3.28%
2007	3.34%



◆ Maximum ■ Maine ▲ Median × Minimum

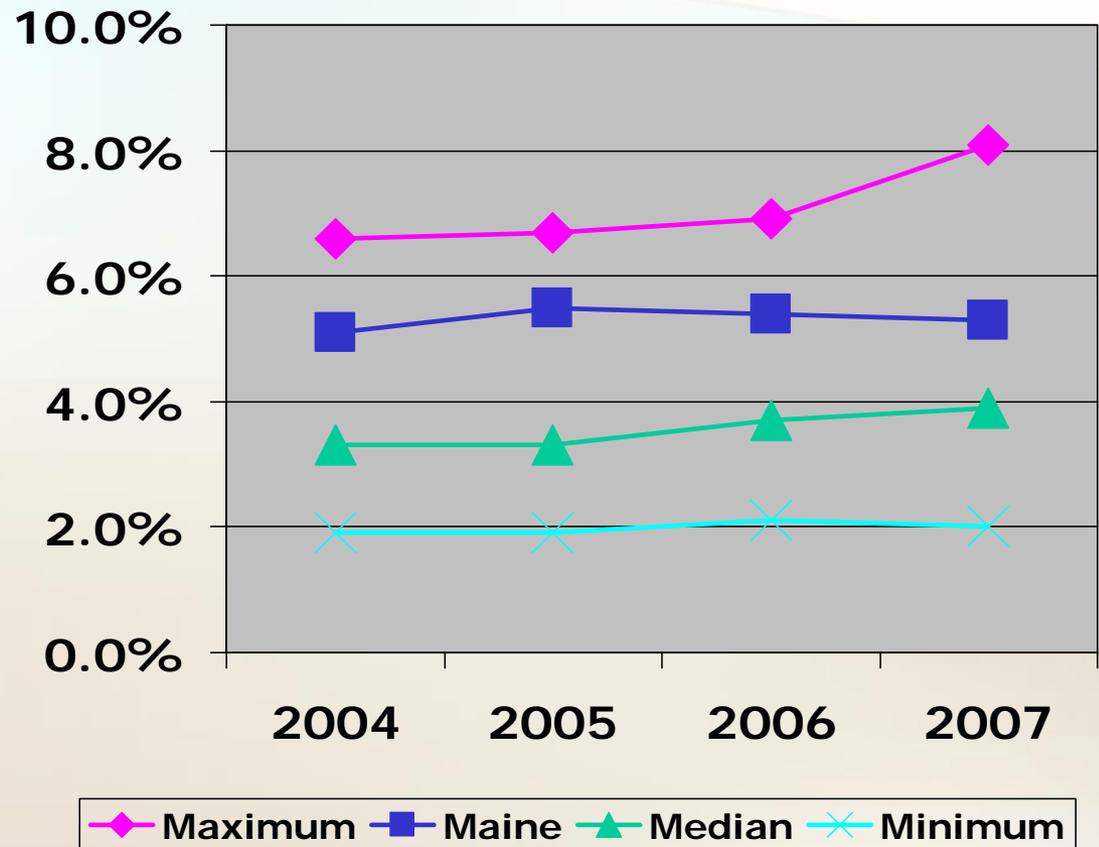
AP Use Rate 12-14 Years

At least one month MaineCare eligibility

AP Use in Children 12-14
Maine Compared to All States
(2004-2007)

Maine

Year	Percentage of Population
2004	5.14%
2005	5.45%
2006	5.38%
2007	5.26%



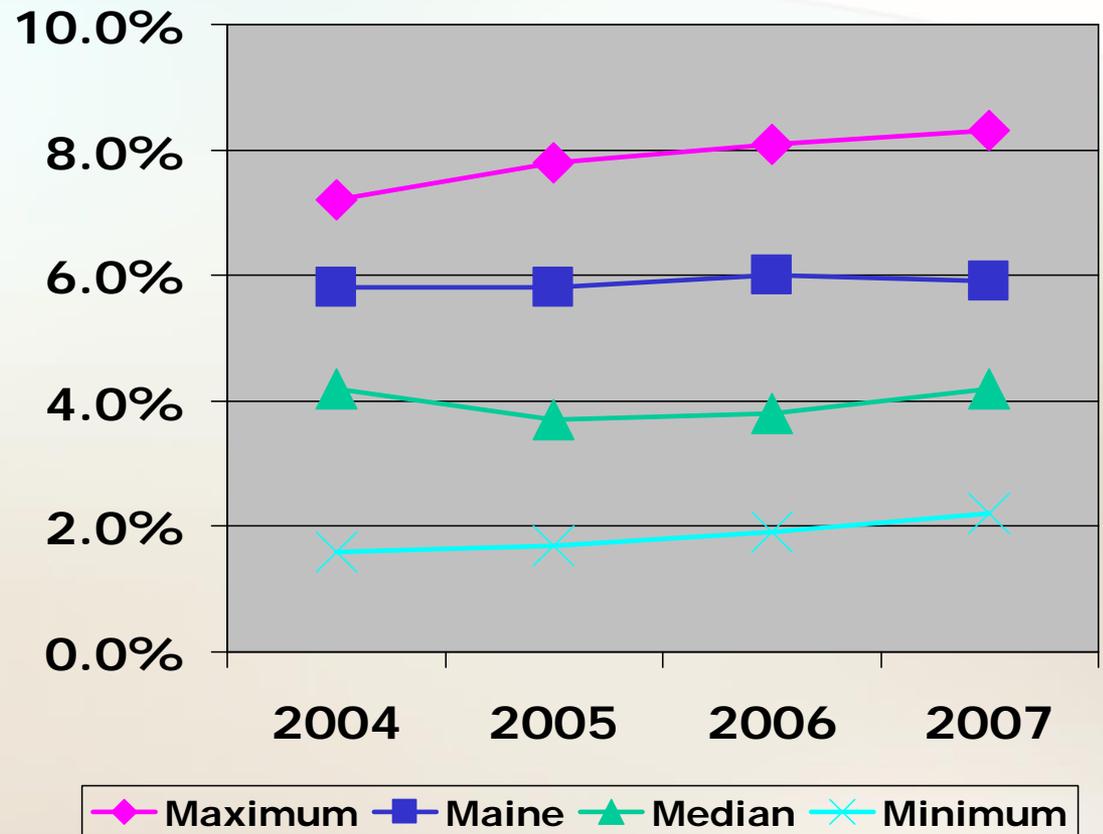
AP Use Rate 15-18 Years

At least one month MaineCare eligibility

**AP Use in Youth 15-18
Maine Compared to All States
(2004-2007)**

Maine

Year	Percentage of Population
2004	5.8%
2005	5.8%
2006	6.0%
2007	5.9%



Conclusions from Multi-State Study

Overall Use: Maine Compared to Other States

- Maine's overall use of antipsychotics is higher than the usage in at least half of the other states
- Overall use of antipsychotics is increasing among the other states, while in Maine, the rate is the same over the four years of the study
- Usage increases with age of children, with at least 1 in 20 MaineCare members ages 12-18 receiving a prescription for an antipsychotic drug
- Access does not appear to be an issue in Maine

Diagnoses Given to Maine Children on AP's in 2004 and 2007

Minimum one month eligibility

Diagnosis	2004 % of AP Users	2007 % of AP Users
Schizophrenia	2.2%	4.9%
Bipolar	10.6%	18.3%
Autism	9.7%	19.2%
Depression	12.7%	22.1%
Anxiety	6.7%	15.6%
ADHD	27.6%	47.7%
Conduct D/O	16.2%	28.8%
Other MI	57.3%	81%
Diabetes	0.2% (n=6)	0.7% (n=30)

Questions Raised by Diagnostic Data

- Why has the average number of diagnoses per child on AP's increased from 1.5 to 2.4 between 2004 and 2007?
- Why has the percentage in each diagnostic category increased, especially autism, bipolar disorder and schizophrenia, where use of AP's is accepted practice?
- Is this due to children having more co-morbidities, greater awareness of co-morbidities, increased exposure to specialty mental health services, inaccurate diagnoses or inappropriate application of diagnostic codes to justify AP prescribing?
- What are the implications of the largest diagnostic categories being ADHD, Conduct Disorder and Other?
- Is there a relationship between the increased number of youth with diabetes and long term use of atypical antipsychotics?

Multi-State Study of Variation in Quality

Quality Indicators:

Multiple AP's, high dose of AP's, gaps in prescription refills, multiple mental health drugs

Underlying assumption:

Lower rates reflect better quality

High Dose Selected AP's

< 19 years, at least one month eligibility

- High Dose thresholds based on Texas guidelines
- For children 5 or less, dose greater than or equal to Texas maximum
- For 6-18 year olds, dose greater than 2x Texas maximum

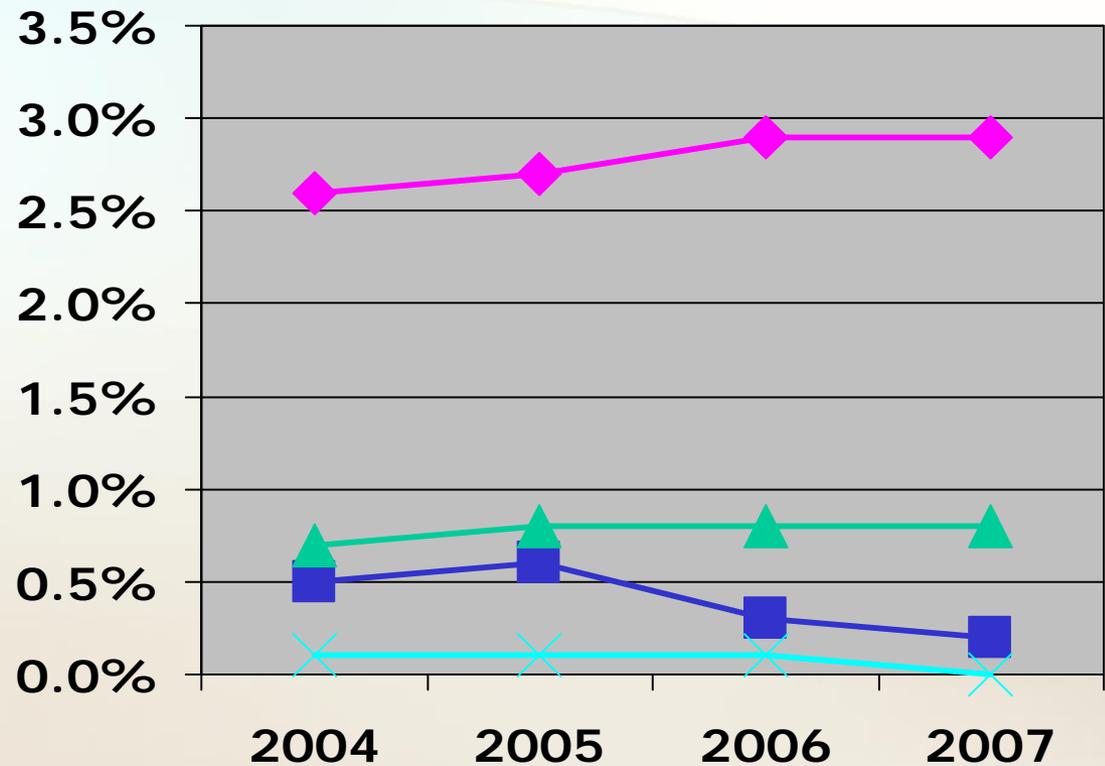
High Dose Selected AP's

< 19 years, at least one month eligibility

AP High Dose in Children Under 19
Maine Compared to All States
(2004-2007)

Maine

Year	Percentage of Population
2004	0.49%
2005	0.57%
2006	0.26%
2007	0.19%



◆ Maximum ■ Maine ▲ Median × Minimum

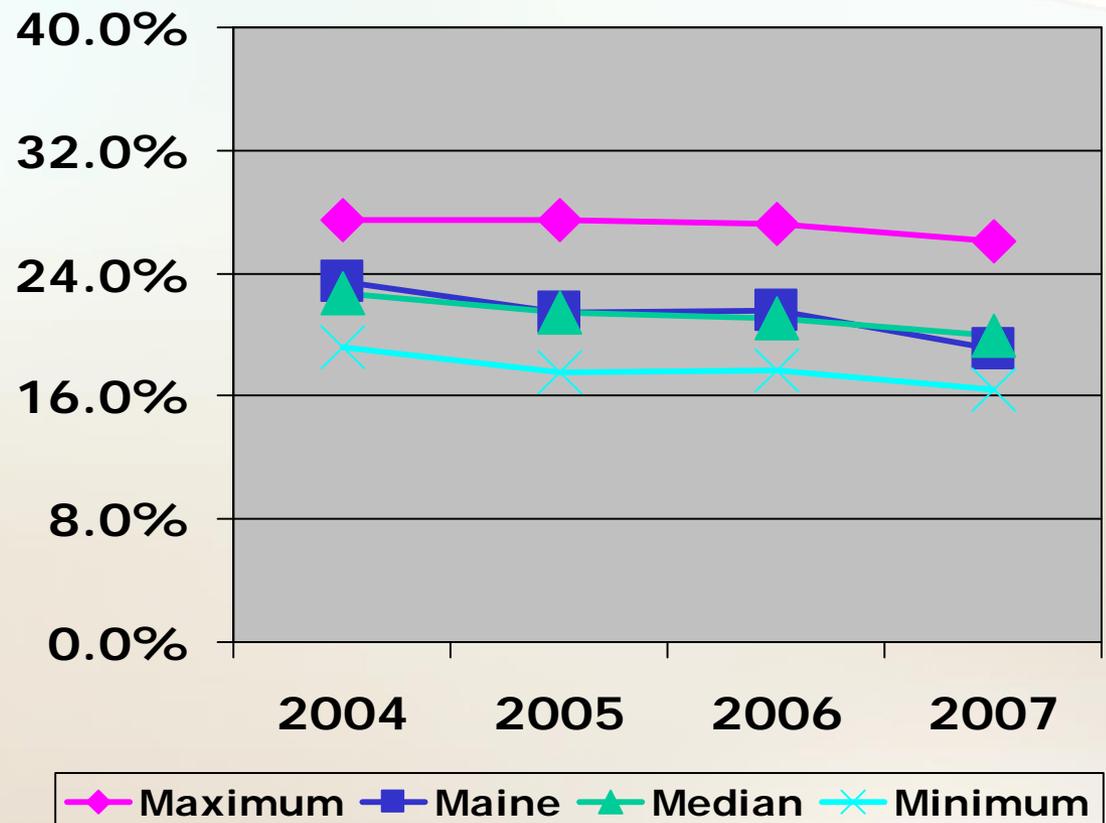
≥ 2 Antipsychotics

*< 19 years, 6 months or more eligibility
(may be non-consecutive)*

Maine

AP Multiple Antipsychotics
Kids Under 19
Maine Compared to All States
(2004-2007)

Year	Percentage of Population
2004	23.52%
2005	21.35%
2006	21.63%
2007	19.12%



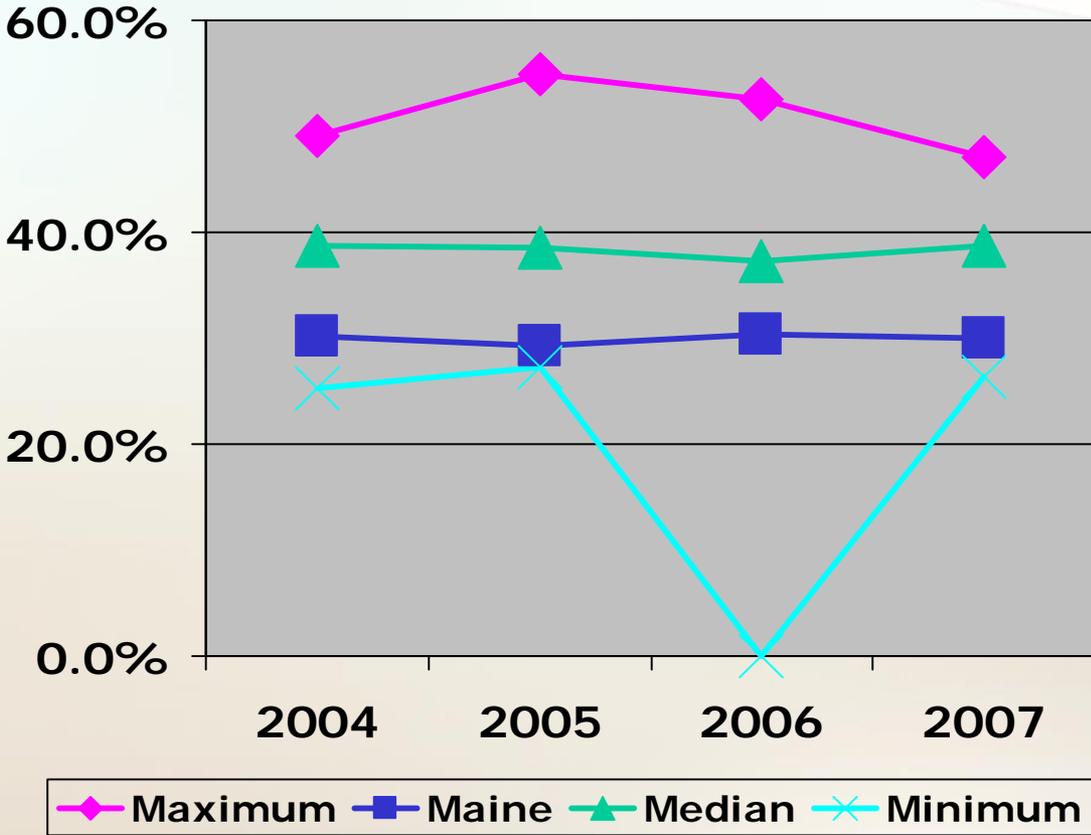
Discontinuities: >20 Day Gap in AP Usage

< 19 years, minimum 6 months continuous eligibility, any antipsychotic

Maine

Year	Percentage of Population
2004	30.22%
2005	29.26%
2006	30.25%
2007	29.99%

AP Usage >20 Day Gap
MaineCare Under 19 years
Maine Compared to All States
(2004-2007)



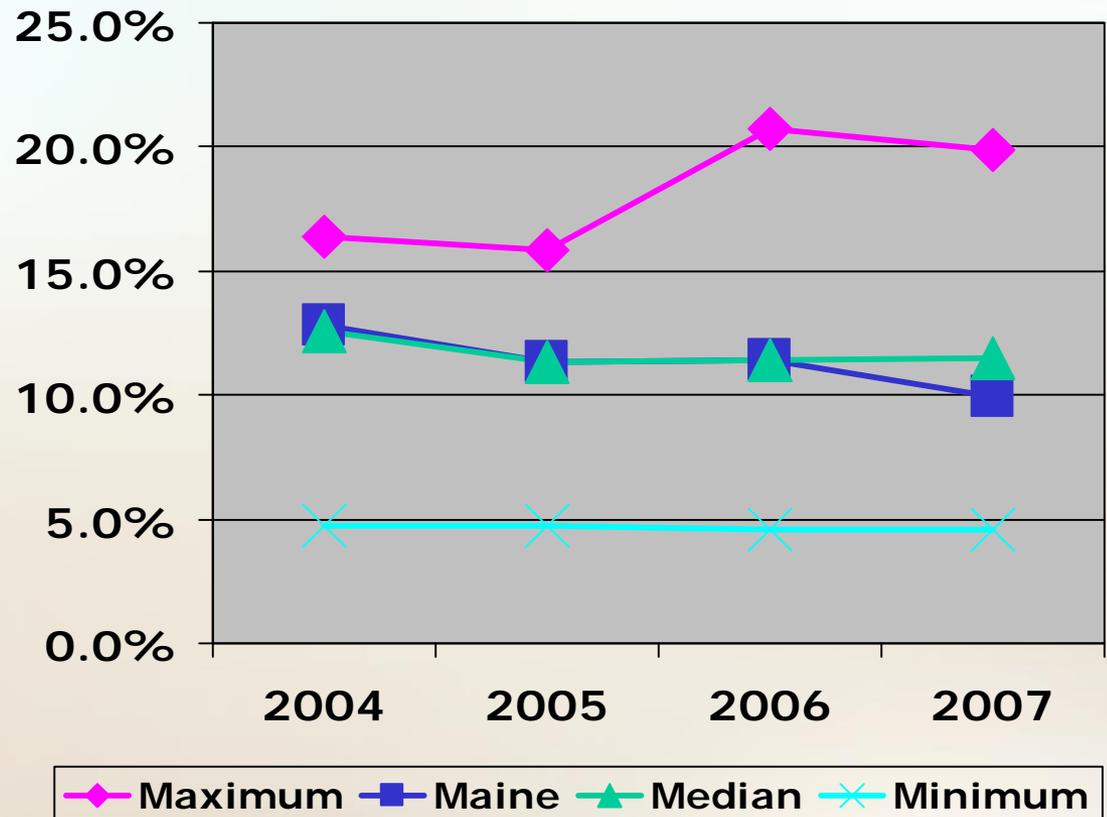
Multiple Mental Health Medications

4 meds or more, <19 years, 6 months or more eligibility
(may be non-consecutive)

Maine

Year	Percentage of Population
2004	12.8%
2005	11.3%
2006	11.4%
2007	9.9%

Multiple Mental Health Drugs
MaineCare Members Under 19
Maine Compared to All States
(2004-2007)



Conclusions from Multi-State Study

Quality Measures: Maine Compared to Other States

- Maine is at or below the median, doing better than half the other states on all quality measures: high dosages of antipsychotics, multiple antipsychotics, multiple mental health drugs and gaps in usage.
- Maine is close to the minimum for gaps in AP usage
- Maine rates are declining over time in prescribing high dosages, multiple antipsychotics and multiple mental health drugs, even as rates are flat or increasing in the other states.
- Maine's good performance on quality parallels introduction of MaineCare's initiating prior approval requirements for multiple drugs from same class and high dosages

Even Where Maine is Doing Better than Other States: There is Room for Improvement

Although we do not know what the “right” rate of usage is, perhaps it should be a cause for concern that:

- 1 in 10 MaineCare members under 19 is on 4 or more mental health medications in the course of a year
- Among children/youth prescribed antipsychotics, 30% have gaps in treatment of 20 days or more

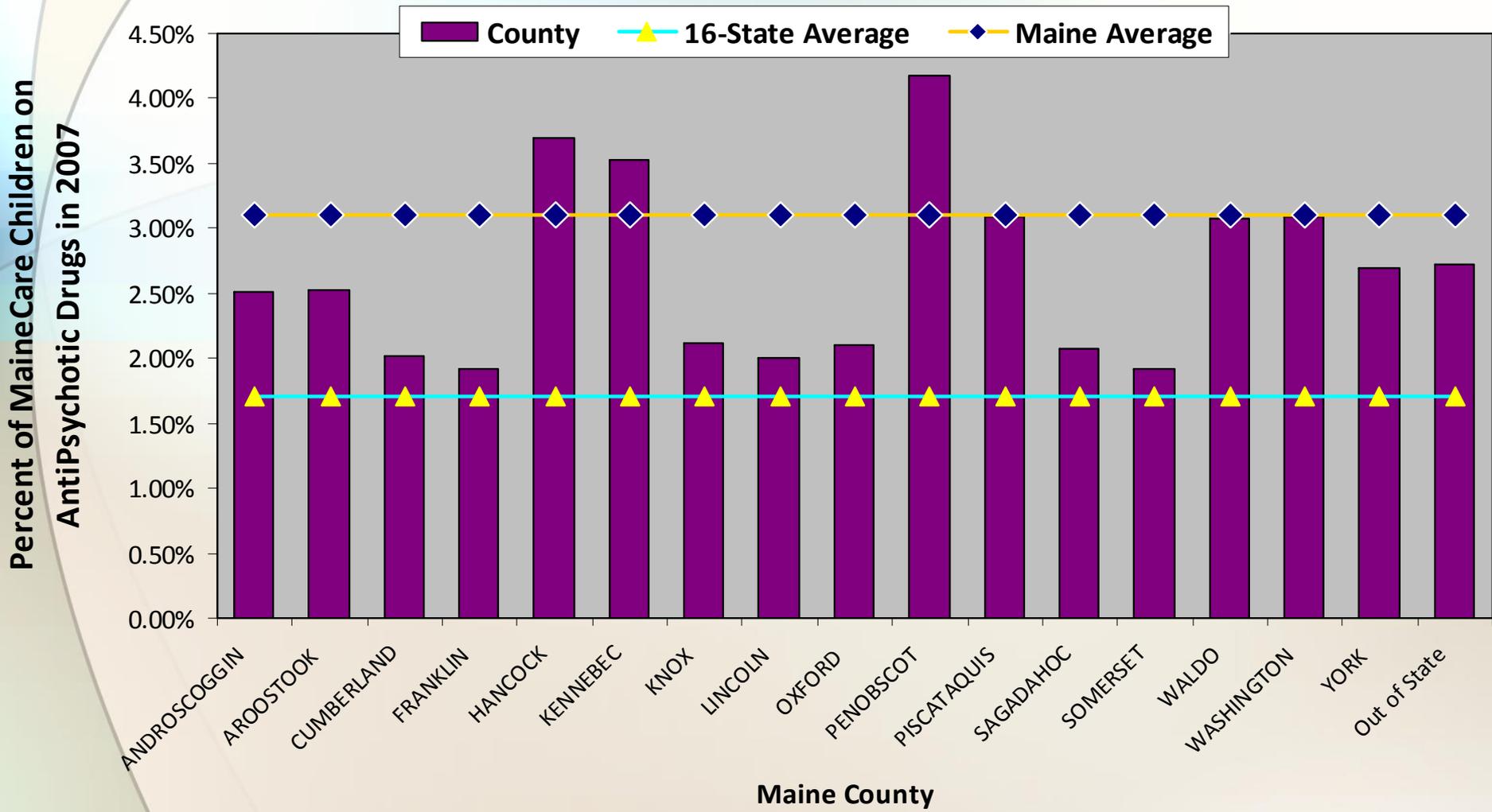
Additional Maine Analyses

- Comparisons to other states not available
- 12 months continuous eligibility for MaineCare to eliminate effect of gaps in insurance coverage
- Some changes in quality definitions, per recommendations of DHHS Psychiatry Work Group

Geographic Variation in Maine

- Maine's rate of prescribing antipsychotics varies significantly from county to county
- Seven counties are close to the 16 state study average, with relatively lower rates of AP prescribing
- Six counties are at or above the overall Maine rate, contributing significantly to Maine's overall high rate of prescribing
- What are the differences among the counties that can account for these different prescribing practices?
- Differences among children and families, in living and school environments or in prescriber practices?

Geographic Variation in Use of AntiPsychotic Drugs in MaineCare Children by County of Residence



Antipsychotic Medication Use: Comparison Foster Care and Non-Foster Care Children

- 12 months continuous eligibility for MaineCare to eliminate discontinuities in coverage as explanation for gaps in AP usage
- Foster children defined as having at least one month in foster care

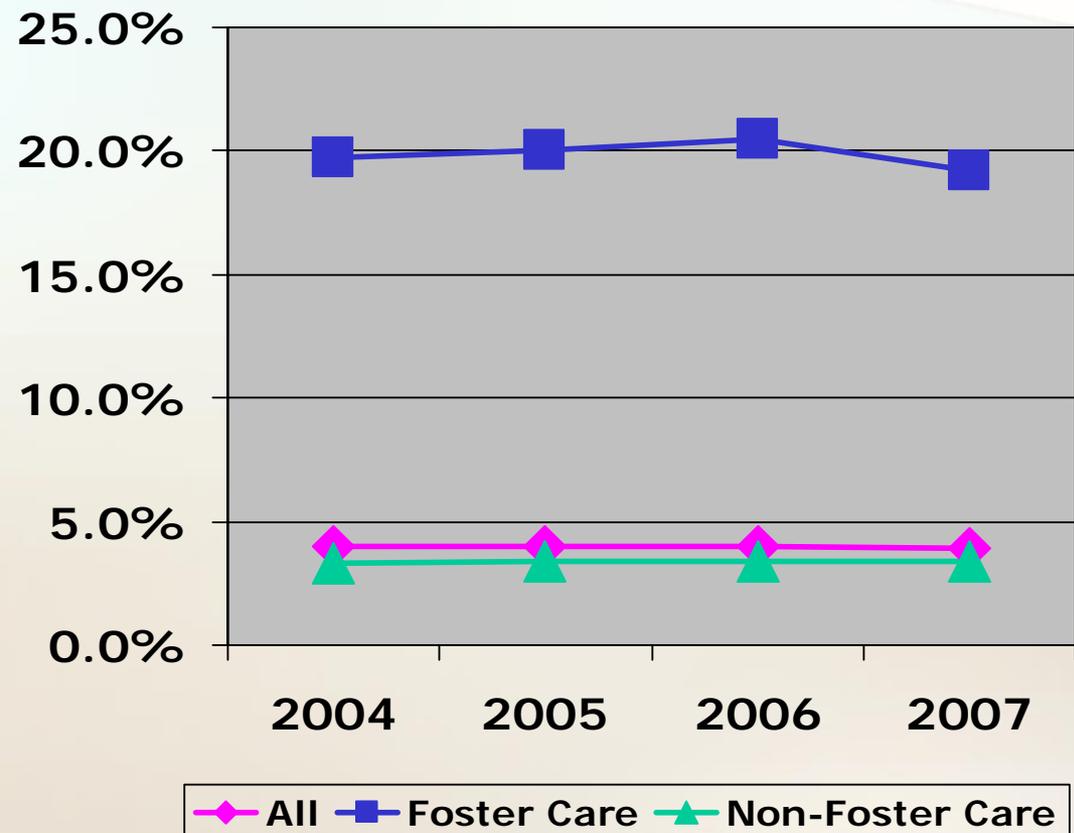
AP Use Rate 0-18 Years

*12 months continuous MaineCare eligibility,
virtually all atypical antipsychotics*

AP Use Demographics

Year	All	Foster Care	Non-Foster
2004	4.0%	19.7%	3.3%
2005	4.0%	20.0%	3.4%
2006	4.0%	20.5%	3.4%
2007	3.9%	19.2%	3.4%

AP Use in Children/Youth 0-18 Maine (2004-2007)



≥ 3 Antipsychotics*

0-18 years, 12 months continuous eligibility

3 or more AP's

Year	Foster	Non-Foster
2004	3.6%	4.6%
2005	3.9%	3.4%
2006	4.2%	3.6%
2007	3.8%	3.2%

8.0%

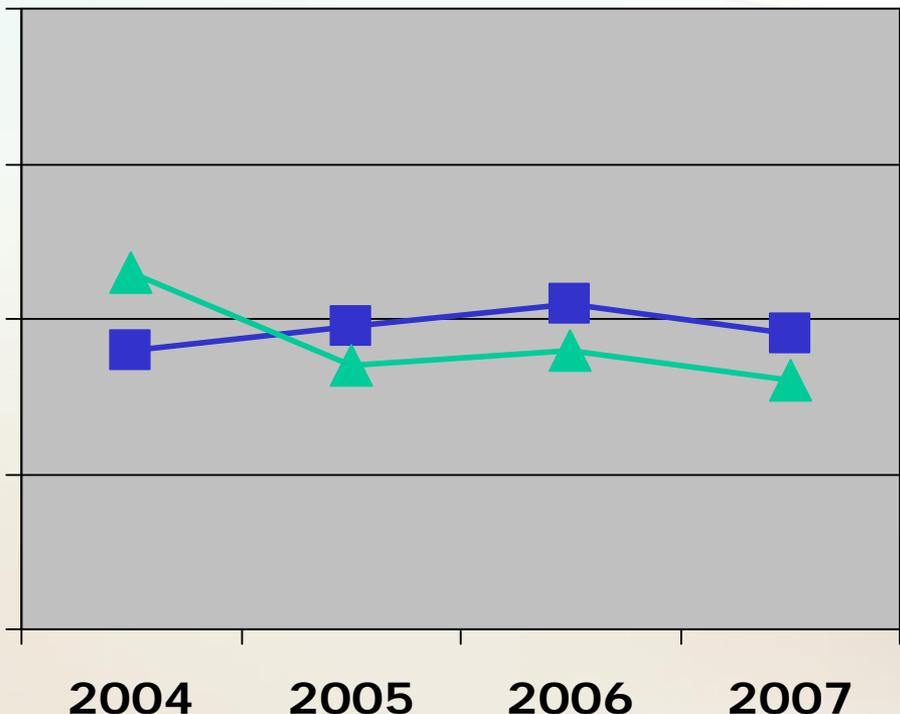
6.0%

4.0%

2.0%

0.0%

**Multiple AP Use
Children/Youth 0-18
Maine (2004-2007)**



■ Foster Care ▲ Non-Foster Care

* Different from multi-state study

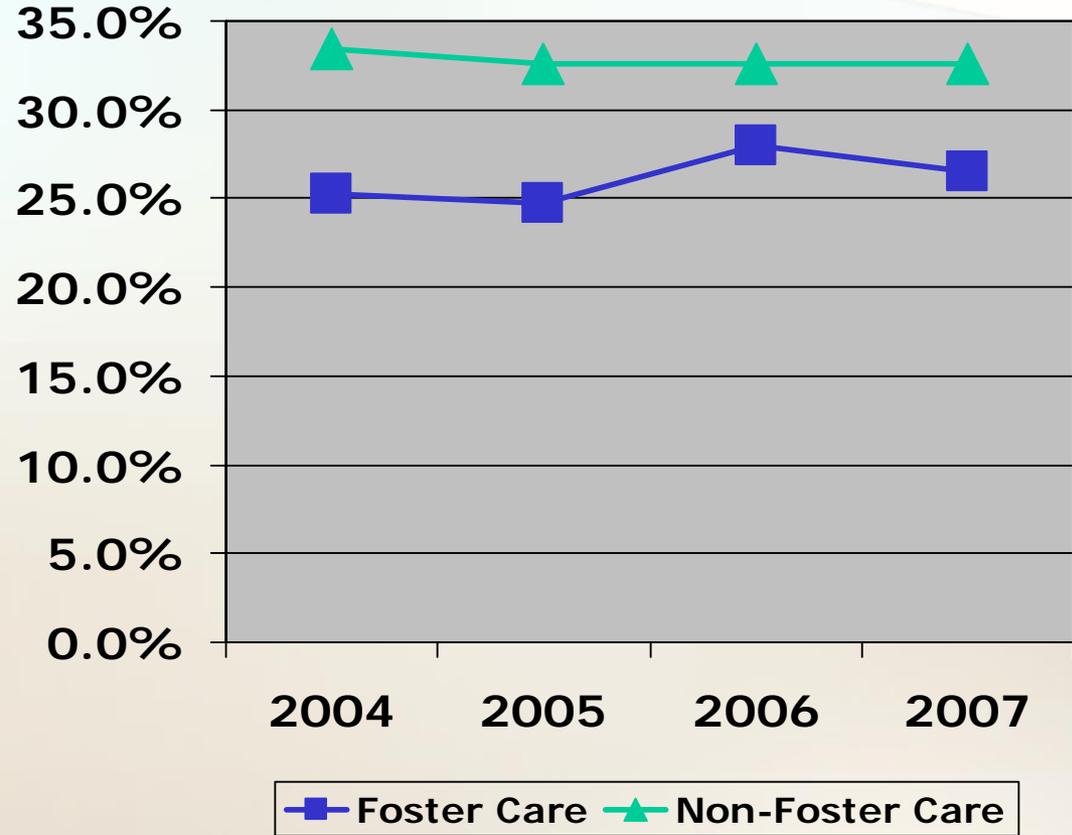
Discontinuities: >20 Day Gap in AP Usage

0-18 years, 12 months continuous eligibility

>20 Day Gap

Year	Foster	Non-Foster
2004	25.3%	33.4%
2005	24.7%	32.6%
2006	28.0%	32.6%
2007	26.5%	32.6%

>20 day gap AP use
Children/Youth 0-18
Maine (2004-2007)



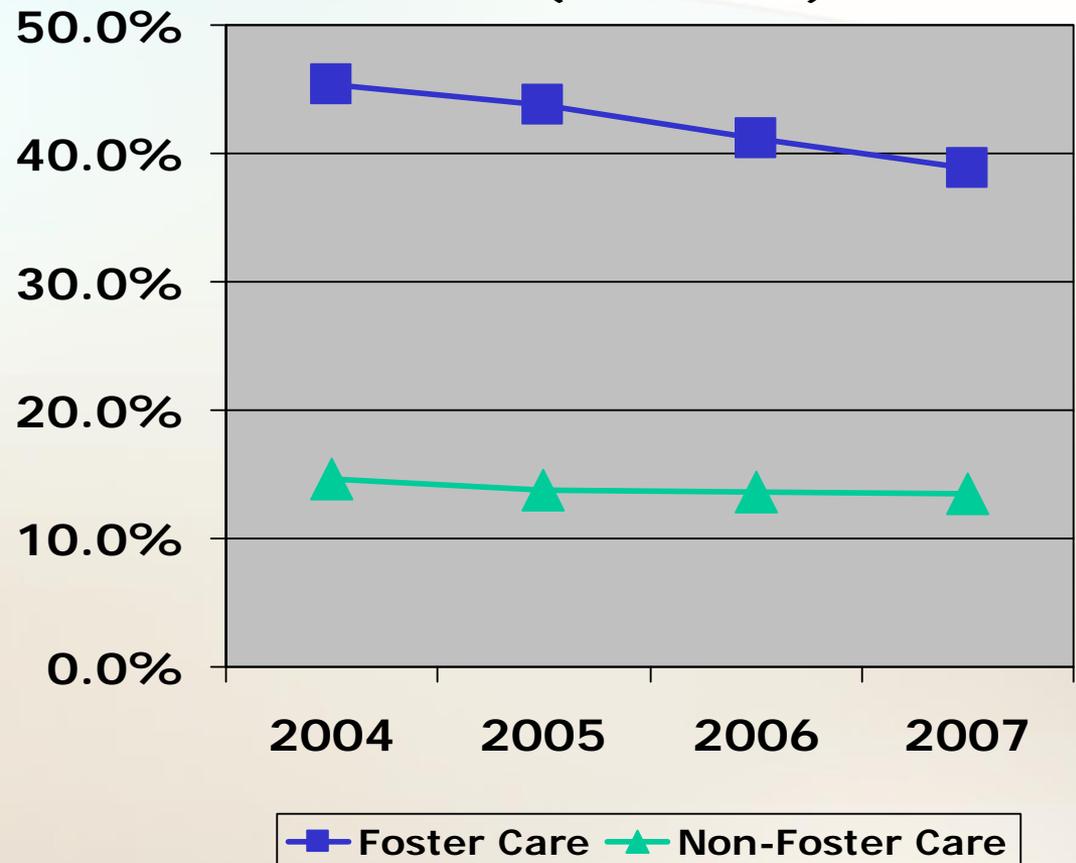
Mental Health Drug Usage

0-18 years, 12 months eligibility

MH Drug Usage

Year	Foster	Non-Foster
2004	45.3%	14.6%
2005	43.7%	13.8%
2006	41.1%	13.6%
2007	38.8%	13.5%

MH Drug Usage in Children/Youth 0-18
Maine (2004-2007)



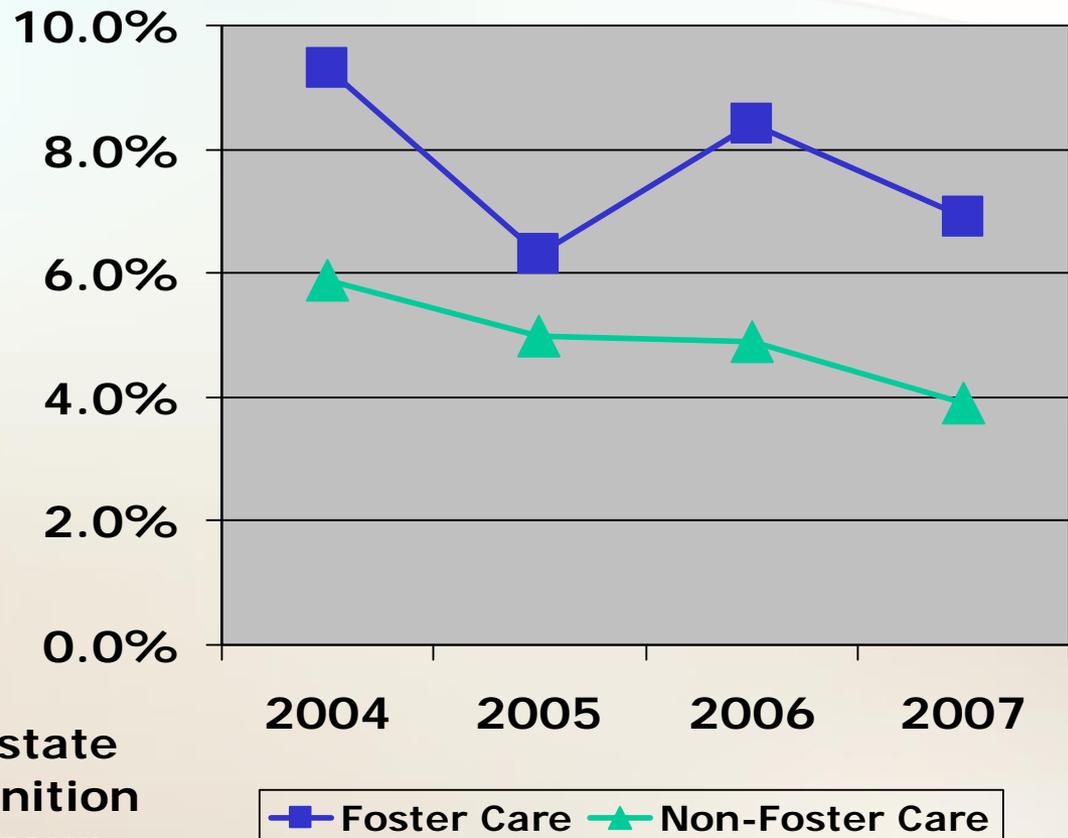
Multiple MH Drugs (5 or more*)

0-18 years, 12 months continuous eligibility

Multiple MH Drugs

Year	Foster	Non-Foster
2004	9.3%	5.9%
2005	6.3%	5.0%
2006	8.4%	4.9%
2007	6.9%	3.9%

Multiple MH Drug Usage
Children/Youth 0-18
Maine (2004-2007)



* Note: Different from multi-state comparison, 5 or more definition preferred by Psych Work Group

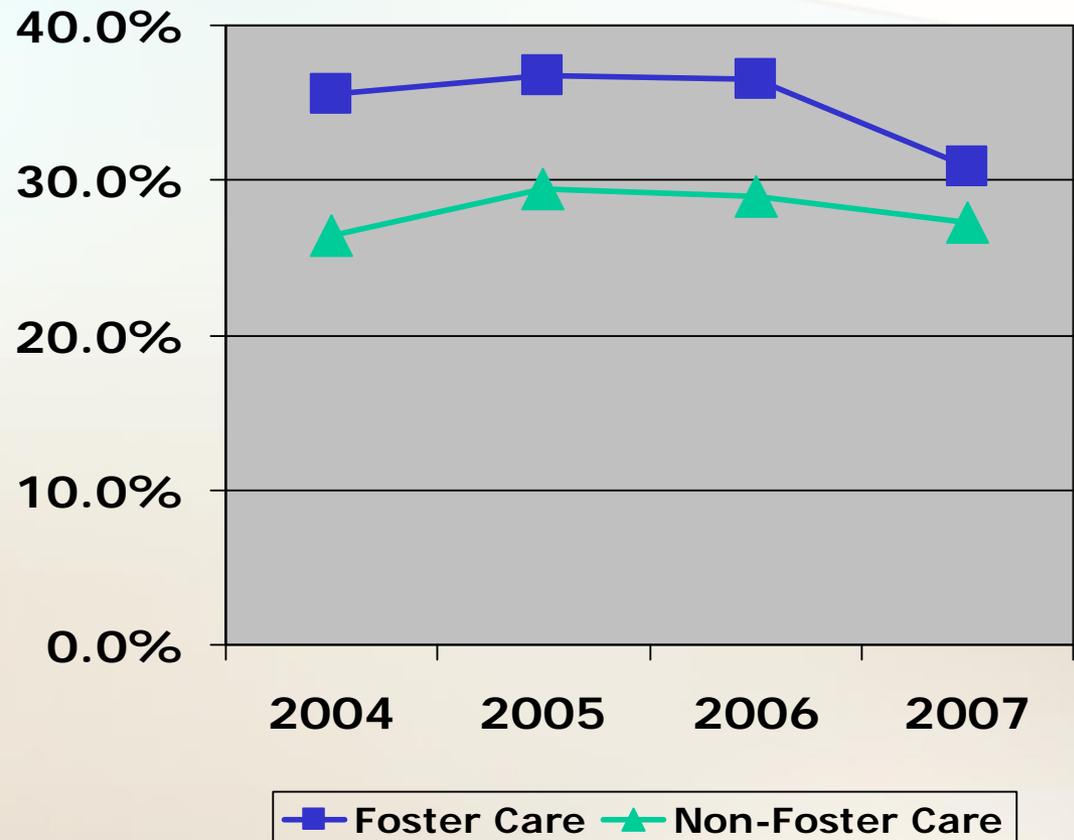
≥3 Different Prescribers of MH Drugs

0-18 years, 12 months continuous eligibility

Multiple Prescribers

Year	Foster	Non-Foster
2004	35.5%	26.4%
2005	36.7%	29.4%
2006	36.5%	28.9%
2007	30.9%	27.3%

Multiple Prescribers for
Children/Youth 0-18
(2004-2007)



Summary:

Maine Foster and Non-Foster Children

- 1 in 5 foster children are on antipsychotics, 4x times the rate of usage in non-foster children
- 2 in 5 foster children are on mental health drugs, 3x the rate of non-foster children
- Foster children are about the same as non-foster children in prescribing of multiple antipsychotics
- Foster children are more likely to have multiple mental health drugs and multiple prescribers
- Foster children are doing better with regard to discontinuities/gaps

Questions Raised by Variation Among Foster and Non-Foster Children

- Are differences due to personal differences, due to higher rates of psychiatric illness, behavioral dyscontrol, developmental disabilities, brain injury, trauma, etc.?
- Are there differences in access/utilization for evidence based mental health therapies?
- Differences in prescriber's practice or access to information?
- Differences in living situation or educational placement?
- Differences in youth, parental or guardian participation in shared decision making?

Next Steps

- DHHS Office of Child and Family Services has convened a multi-stakeholder advisory group to identify strategies to address quality of psychotropic prescribing among foster children and youth

Some Potential Strategies

- Integrated data systems with regular reports on all aspects of medical, pharmacy, mental health and social service system use in the foster population
- Electronic personal health/mental health/social service record accessible across the system of care
- Identification of high risk groups with development of multi-disciplinary review processes
- Identification/dissemination of guidelines for assessment and evidence based treatments for specific mental disorders.
- Development and implementation of prescribing guidelines
- Workforce/consumer training in shared decision making



Department of Health
and Human Services

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Safe, Healthy and Productive Lives*

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