



Predictors of Medication Status and Perceived Benefits: Analysis of Phase 4 Data

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Christine Walrath, PhD
Macro International Inc.

Thomas Pavkov, PhD
Purdue University/Calumet





Introduction

- ▶ This presentation is the third in a series of analyses using System of Care data to explore the role of psychotropic medication in the context of community-based systems
- ▶ This is important because...
 - Medication treatment methods are becoming an important factor in community-based mental health programs (Pumariega et al. 2002)
 - We don't know much about the role of medication and community psychiatry





Introduction

- ▶ The context...
 - Community based system of care programs are responding to children's mental health needs by providing accessible, effective, and comprehensive multidimensional services (CMHS, 2001)
 - Advances in psychopharmacological treatment is an important addition to these service approaches (Jensen et al. 1996)
 - Inclusion of family members in this process is paramount (Pumariega et al. 2002; Bussing et al. 2003)





Introduction

- ▶ Characteristics...
 - Most commonly used medications include stimulants and antidepressants (Rawal, 2004)
 - More likely to receive medication with diagnoses of ADHD or a psychotic disorder (Hallfors, 1998)
 - Younger children (Hallfors, 1998) more likely use medications
 - Males more likely to use medications (Goodwin et al. 2001)





Introduction

- ▶ Characteristics...
 - Females more likely to be treated with antidepressants (Shireman et al. 2002)
 - Males more likely to be treated with stimulants (Guevera et al. 2002)
 - Children and youth from minority populations less likely to use medications (Pavkov and Walrath, 2008; Leslie et al. 2003)





Introduction

- ▶ Characteristics...
 - Youth referred by non-clinical youth serving systems are less likely to use medications (Pavkov and Walrath, 2008; Zima et al. 1999)
 - Those having access to medicaid or private insurance more likely to access medication (Pavkov and Walrath, 2008; Warner et al. 2005; Hoagwood et al. 2000)



Study Objectives



- ➔ To investigate the predictors of medication use during the first 6 months of service among children who enter services medication free.
- ± To investigate the predictors of perceived beneficial and negative effect of medication use during the first six months of service.

Data Source and Sample

- ▶ **Data:** collected as a part of the Phase IV National Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program
 - Collected between 2004 and 2007
 - Collected from 26 communities funded in between 2000 and 2002*
- ▶ **Sample:** 850 medication free children enrolled in the Outcome Study component of the National Evaluation with complete data on medication usage in the 6-months following entry into service, as well as predictors of interest.

*three Phase IV funded communities are not represented in this study sample



Study Sample Comparison

Available Outcome Study Data: 2,559

Medication Free Study Sample: 850



	Selected (n=850)	Not Selected (n=2,559)
Male	64.4%	66.8%
White***	28.2%	51.7%
Age***	M=12.1	M=11.6
Medicaid Eligibility**	62.4%	67.4%
Referral Source***		
MH	16.2%	29.3%
SCH	35.9%	24.8%
JJ	9.8%	7.6%
CW	6.4%	10.8%
FAM	16.1%	13.1%
OTH	3.9%	10.8%

***p<.05, **p<.01, ***p<.001

Predictors of Interest



Variable	Source of Information	Description
Demographic Information	Caregiver Report	Gender, Race/Ethnicity
Referral Source	Record Review	Referred for system-of-care services by mental health, schools, justice, child welfare, family or other
Economic Indicators	Caregiver Report	Medicaid eligibility, family income
Child and Family Characteristics	Caregiver Report	Child history of suicide attempt, family history of mental illness, education of the caregiver.
Child Behavioral Checklist - CBCL (Achenbach & Rescorla, 2000)	Caregiver Report	▶ Total Problem Score
Columbia Impairment Scale - CIS (Bird, et al., 1993)	Caregiver Report	▶ Total Score
Caregiver Strain Questionnaire - CGSQ (Brannan, et al., 1997)	Caregiver Report	▶ Global Strain Score

Objective 1

To investigate the predictors of medication use during the first 6 months of service among children who enter service medication free.

Dependent Variable
=
Has child taken medication for behavioral or emotional symptoms in the last 6 months?
(As assessed at 6-month follow-up)



Objective 1 Sample Characteristics

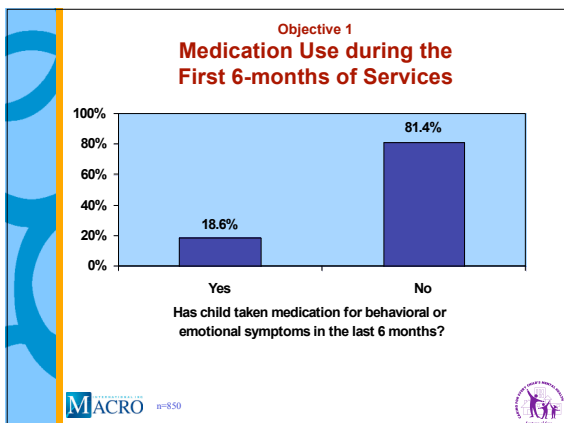
▶ 64.4% Male
▶ 62.4% Medicaid Eligible
▶ Average Age = 12.1

Referral Source

Race/Ethnicity*

*race/ethnicity categories are not mutually exclusive; n=850



Objective 1
Analyses

- ▶ **Logistic Regression**
 - Sample of children that were medication free when they entered service (n=850)
 - Identify baseline predictors of medication use in the first six months of services

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Objective 1
Findings

- ▶ **Significant (marginally) predictors of medication use during the first six of service:**

Predictor	OR	Sig. Level
White	2.0	.02
American Indian – Alaskan Native	.39	.10
Referral (reference MH) – Justice	.39	.03
Referral (reference MH) – Family	.44	.02
Referral (reference MH) – Other	.49	.03
CIS Total	1.04	.01

•Age and sex not significant predictors
•Family and child history not significant predictors
•Economic indicators not significant predictors
•Global strain and total problems not significant predictors

MACRO n=850

Summary/Conclusions

- ▶ Increased impairment increases likelihood of medication use at 6-month follow-up
 - Would expect that increases in symptomology would result in the introduction of medications
- ▶ Issues of race emerge as whites are most likely to access medication upon becoming involved in community-based programs
- ▶ Most non-clinical factors predicting medication at the initiation of system-of-care services do not predict the initiation of medication during first 6-months of service

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Objective 1
Summary/Conclusions

- ▶ Consistent with previous findings, Native American youth less likely to use medication (Walrath and Pavkov, 2007)
 - Suggests potential access issues related to medication and/or psychiatry
 - Need to assess potential cultural and/or referral source explanations
- ▶ Referral source such as non-clinical youth serving systems also influences medication use at 6-month follow-up
 - Need to assess the degree to which these youth initiate medication use at points beyond 6-months

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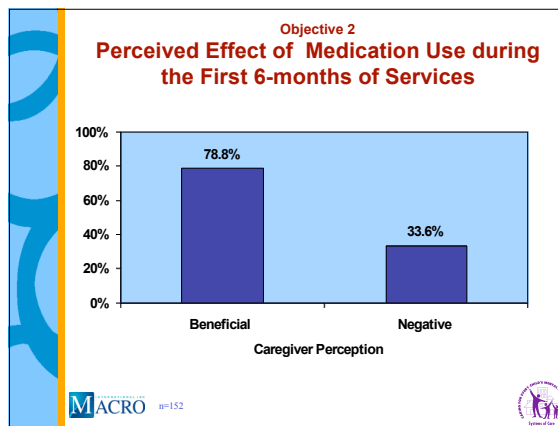
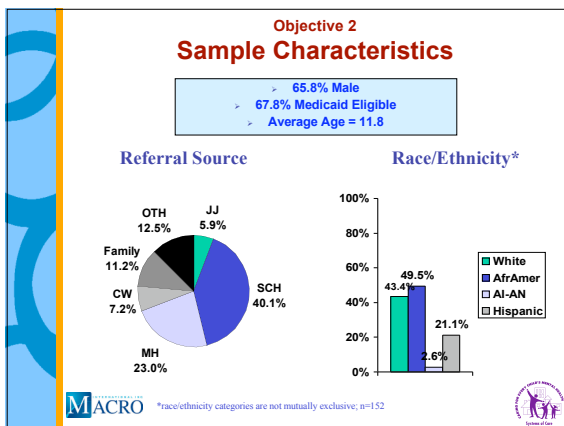
Objective 2

To investigate the predictors of perceived beneficial and negative effect of medication use during the first six months of service.

Dependent Variables
=

Any beneficial effects from taking emotional/behavioral medications?
Any negative effects from taking emotional/behavioral medications?

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Objective 2 Analyses

- ▶ **Logistic Regressions**
 - Sample of children that were medication free when they entered service and then used medications during their first 6 months of care (n=152)
 - Identify baseline predictors of caregiver reported positive and negative effects of those medications.

Objective 2 Findings

- ▶ Significant (marginally) predictors of perceived beneficial effect of medication use in first six months of service:

Predictor	OR	Sig. Level
Referral (reference MH) – School	3.7	.03
Referral (reference MH) – Family	4.7	.09
CGSQ Global Strain	.80	.09

- Demographics not significant predictors
- Family and child history not significant predictors
- Economic indicators not significant predictors
- Total problems and total impairment not significant predictors

Objective 2 Findings

- ▶ Significant predictors of perceived negative effect of medication use in first six months of service:

Predictor	OR	Sig. Level
Referral (reference MH) – School	3.1	.03
CBCL total problems	1.1	.04



- Demographics not significant predictors
- Family and child history not significant predictors
- Economic indicators not significant predictors
- Caregiver strain and total impairment not significant predictors

Objective 2 Summary & Conclusions

- ▶ Perceived benefits are realized most for those referred from either the school or family.
 - Perception is reality--this shows the positive role that medication use plays in addressing mental health need in a community context
 - Perception is reality--increases in medication without corresponding decreases in symptomology results in less perceived benefits of medication
- ▶ How can we interpret the CBCL and perceived negative effect finding?
 - And what does it mean that it is not related to perceived positive impact?



Overall Summary/Conclusion

- ▶ Medication use is related to race
- ▶ Referral source plays an important role...
 - Related to initiation of medication use
 - Related to perception of benefits
- ▶ Initiation of use and perceived benefits of medication use is related to increases/decreases in symptomology





Implications

- ▶ In this series of analyses...
 - Access is related to race across all three of these analyses
 - Of primary interest is access to medications by Native American children
 - Findings consistent with previous research indicating that non-clinical service systems tend to attenuate the likelihood of medication use
 - ♦ Particularly the case for juvenile justice referrals



Next Steps

- ▶ Need a larger dataset to pursue the question of perceptions related to medication use
- ▶ More work is needed to understand medication use among Native Americans
 - Possible cultural explanations
 - Possible access to psychiatry issues
- ▶ More work is needed to understand the role of race and generalized access to medication



Contact Information

Christine Walrath, PhD
cwalrath@macrointernational.com

Thomas Pavkov, PhD
tpavkov@calumet.purdue.edu

