Disparities in Special Education Placement among Children with Attention Deficit Disorder

David S. Mandell, ScD
Jasmine K. Davis
Katherine B. Bevans, PhD
James P. Guevara, MD, MPH

Children with ADHD often have special education needs

- Attention problems affect learning
- Impulsivity and hyperactivity affect classroom performance
- More likely to have learning disabilities
- ½ to ⅔ served through special education system
- Many children in special education have ADHD
  - 65% in OHI category
  - 25-65% in ED category
  - 16-31% in LD category

Not much known about how special education placement decisions are made

- Most have impairments that could qualify them for multiple categories
  - Difficulty attending ⇨ OHI
  - Skill-specific disability ⇨ LD
  - Disruptive behavior ⇨ ED
- Race and ethnicity also implicated
  - AA children more likely to be in special education, in ED, and in MR
  - Related studies have little information on behavioral and cognitive profiles

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Special education placement may play a role in educational outcomes

- Educational practices for students with LD more effective than those for ED
  - Best practices underutilized in ED settings
  - ED teachers most likely to say they are unprepared to work with their students
- Stigma greatest for ED
- Students in ED less likely than those in LD or OHI to be in inclusive settings
- Children in ED have worse outcomes

Goal: to examine disparities in special education placement among students diagnosed with ADHD

Data Sources and Sample

- Philadelphia Medicaid claims and Special Education records for CY2002
- Children ages 6 to 18 years
- Had at least 5 ADHD-related claims

Variables

- Special education: LD, ED, MR, other
- Clinical characteristics: other diagnoses, services received
  - Psychotropic medication use
  - Wraparound
  - Case management
  - Inpatient
  - Partial hospitalization
- Demographics: age, sex, race/ethnicity

Analyses

- Descriptive: means and frequencies
- ANOVA and chi-square to test bivariate differences
- 2 binary logistic regression models
  - Predicting any special education placement
  - Predicting ED placement
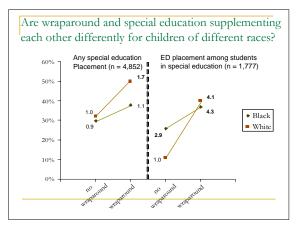- Results almost identical to multinomial regression

Demographics and placement

	Black (n = 3,031)	Latino (n = 383)	White (n = 820)	Other (n = 618)	Sig.
Age [yrs (SD)]	10.6 (2.6)	10.9 (2.7)	10.8 (2.8)	10.5 (2.7)	0.105
Male (%)	78%	75%	79%	79%	0.406
Any placement	36%	39%	41%	35%	0.018
LD	47%	64%	46%	60%	
ED	33%	21%	27%	20%	
MR	9%	10%	10%	9%	<0.001
Other	11%	5%	17%	11%	

Other diagnoses received

	Black (n = 3,031)	Latino (n = 383)	White (n = 820)	Other (n = 618)	Sig.
Any	36%	26%	32%	27%	<0.001
Disruptive	27%	14%	19%	17%	<0.001
Adjustment	10%	6%	8%	7%	0.012
Affective	8%	11%	14%	12%	<0.001
Schizophrenia	3%	1%	2%	2%	0.053
PDD	1%	1%	3%	1%	0.004

Use of behavioral healthcare

	Black (n = 3,031)	Latino (n = 383)	White (n = 820)	Other (n = 618)	Sig.
Case manag.	37%	20%	28%	18%	<0.001
Wraparound	63%	27%	42%	28%	<0.001
Inpatient	11%	6%	11%	8%	0.007
Partial hosp.	17%	5%	10%	8%	<0.001
Office-based	84%	96%	89%	97%	<0.001
Medication	69%	82%	82%	83%	<0.001

Logistic regression predicting placement

	Any special education placement (n = 4,852)		ED placement among those in special education (n = 1,777)	
	Odds ratio	95% CI	Odds ratio	95% CI
Age (years)	1.10	0.95, 1.28	1.06	1.01, 1.12
Male	1.14	1.11, 1.17	1.81	1.34, 2.43
Black	0.78	0.66, 0.93	1.40	1.04, 1.89
Latino	0.98	0.76, 1.26	0.86	0.52, 1.43
Other	0.86	0.68, 1.07	0.89	0.58, 1.38
Disruptive disorder	0.87	0.75, 1.02	1.16	0.89, 1.51
Adjustment disorder	0.70	0.56, 0.88	0.92	0.61, 1.38
Affective disorder	0.86	0.69, 1.08	1.13	0.76, 1.68
Schizophrenia	0.75	0.50, 1.13	4.52	2.13, 9.59
PDD	2.52	1.50, 4.22	0.59	0.28, 1.24
Case management	1.60	1.38, 1.86	1.66	1.30, 2.12
Wraparound	1.36	1.17, 1.58	2.10	1.59, 2.75
Inpatient stay	0.99	0.78, 1.25	0.91	0.62, 1.35
Partial hospitalization	0.89	0.74, 1.07	1.13	0.81, 1.58
Stimulants	1.28	1.12, 1.45	1.21	0.95, 1.53
Anti-psychotics	1.28	1.08, 1.53	1.86	1.40, 2.46
Mood stabilizer	1.14	0.90, 1.43	1.55	1.09, 2.22

Are wraparound and special education supplementing each other differently for children of different races?

Summary: among children with ADHD…

- Black students less likely than white students to be placed in special education
  - Differs from previous studies, but we focused on one diagnosis
  - In line with findings that black students with ADHD less likely to be diagnosed with a learning disorder
- Once in special education, black students more likely to be placed in ED
  - Disruptive behavior identified as primary contributor to school problems more for black students
  - Several studies find teachers rate the same behavior as more disruptive in black students

The interaction of special education and wraparound suggests…

- Threshold for wrap is lower for black students
  - 1.5x more likely to use it
  - White students who use wrap may be more severely affected
- White parents more effective advocates for obtaining services in multiple systems
- Education system more likely to ID disruptive behavior as main problem for black students
  - Even when MH service use doesn't suggest it
  - Could result from under-treatment

Limitations

- ADHD diagnosis in MA claims not validated
  - Studies find highest concordance with research dx of all childhood psychiatric disorders
  - We used stringent selection criteria
- No information on special ed services or need
- No information on treatment in primary care
  - But Philly has MH carve-out
- Data are cross-sectional

Implications

- Results suggest that black students with ADHD are less likely than their peers to receive appropriate MH and education care
  - Concern about lack of medication use and ED placements
- Begs question of whether more appropriate MH care would reduce ED placements
- Need standardized, culturally sensitive and independent special education evaluation process
- ED placement of clinically complex students (sz dx, inpatient stays), suggests critical need for information sharing