# PREDICTORS FOR PHARMACOLOGICAL AND PSYCHOTHERAPEUTIC TREATMENT IN CHILDREN NEWLY DIAGNOSED WITH ADHD



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Conflict of interest: None related to this study



## **BACKGROUND**

- Predictors for the use of evidence-based treatments in routine care of children newly diagnosed with attentiondeficit/hyperactivity disorder (ADHD) are unknown
- In Germany, equal access to ADHD medication and psychotherapy (PT) is given as both are reimbursed for children by the statutory health insurance providers (SHIs)

#### **OBJECTIVE**

 To investigate predictors for use of medication and PT within five years after a first ADHD diagnosis based on German SHI data

#### **METHODS**

- Cohort study based on the German Pharmacoepidemiological Research Database [1]
- Treatment-naïve children aged 5–12 years with a 1-year-incident ADHD diagnosis (ICD-10 codes F90/F98.8) in 2010 and a minimum follow-up of five years
- Categorized into treatment groups based upon dispensations of ADHD drugs and billed codes for PT
- Psychiatric comorbidities selected based on clinical relevance
- Multivariable logistic regression to estimate associations between children's characteristics at the first diagnosis and the treatment

## **RESULTS**

- 12,250 cohort members
- 72% boys; age 5–6 years: 20%, 7–9 years: 52%, 10–12 years: 28%; diagnosis "with hyperactivity": 78%; specialty of the diagnosing person — pediatrician: 55%, child and adolescent psychiatrist: 23%, general practitioner: 13%, physician in inpatient unit: 2.6%, psychotherapist: 2%, other/unknown: 4.4%.
- Most frequent psychiatric comorbidities: specific developmental disorders (48%), conduct disorders (18%), emotional disorders (11%), any depression (8%)
- 52% received no treatment within five years; 11% received only PT; 37% received medication, of whom less than 1/3 had additional PT (Figure)
- Several characteristics at the first ADHD diagnosis were associated with the received treatment (Figure)

#### CONCLUSIONS

- Based on routine data, this study found characteristics predicting whether a child newly diagnosed with ADHD receives pharmacological and/or psychotherapeutic treatment
- Patients with externalizing symptoms were more prone to receive any of the studied treatments than the average child diagnosed with ADHD; internalizing symptoms were predictors for PT

Medication vs. no treatment			10% Med + P		Medication and psychotherapy vs.  only medication	
Characteristic  Male sex	AOR (95% CI) 1.41 (1.28–1.55)	070/			Characteristic	AOR (95% CI)
Age (ref.: 5–6 years)	1.41 (1.20-1.33)	37% Med		27%	Age (ref.: 5–6 years)	
7–9 years	1.52 (1.66–1.70)			Only medication	10–12 years	0.73 (0.59–0.90)
10–12 years	1.53 (1.35–1.73)			Tiredication	Specialty of the diagnost person (ref.: CAP)	sing
Specialty of the diagnos person (ref.: CAP)	sing	11%			Pediatrician	1.30 (1.10–1.53)
Pediatrician	0.73 (0.66–0.81)	Only PT	Only psychotherapy	y vs. no treatment	GP	1.29 (1.01–1.66)
GP	0.56 (0.48–0.65)		Characteristic	AOR (95% CI)	Psychotherapist	34.5 (15.6–76.1)
	· ·		Male sex	1.18 (1.02–1.35)	Any depression	1.41 (1.13–1.77)
Psychotherapist  Diagnosis "with hyperactivity"	7.61 (3.95–14.68) 5.64 (4.94–6.44)	F.00/	Specialty of the diagnosing person (ref.: CAP)		Neurotic and somatoform disorders	1.31 (1.02–1.68)
Any depression	1.20 (1.03–1.40)	52% No	<ul><li>Psychotherapist</li><li>Neurotic and</li></ul>	66.3 (35.4–124.3)	Mental retardation	0.48 (0.28–0.83)
Specific developmental	,	treatment	Neurotic and 1.38 (1.12–1.70) somatoform disorders	Conduct disorders	1.52 (1.29–1.78)	
disorders	1.12 (1.03-1.21)		Conduct disorders	1.45 (1.23–1.71)	Emotional disorders	1.48 (1.21–1.81)
Conduct disorders	1.35 (1.21–1.51)		<b>Emotional disorders</b>	1.60 (1.33–1.92)		



Association of children's characteristics and received treatment (group A vs. B)

Figure: Received treatments and associated factors. AOR=Adjusted odds ratio; CAP=child and adolescent psychiatrist; GP=General practitioner; Med=Medication; PT=Psychotherapy.

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