

Prevalence of STIs in Privately Insured Adults with I/DD

Elizabeth K. Schmidt*, MOT, OTR/L, Brittany N. Hand*, PhD, OTR/L, Kit N. Simpson, DrPh, Amy R. Darragh, PhD, OTR/L, FAOTA

*These authors contributed equally to this work

BACKGROUND

Intellectual Disability must occur by the age of 18 years and is characterized by significant limitations in both:

- Intellectual functioning
- Adaptive Behavior

Developmental Disability must occur by the age of 22 years and encompasses a diverse, chronic conditions that cause:

- Mental or physical impairments
- And may impact language, mobility, learning, self-help and independent living

Individuals with intellectual and developmental disabilities may be at higher risk for sexually transmitted infections:

- Increased incidence of STIs¹
- Increased incidence of sexual abuse²⁻⁴
- Decreased access to sexual health education⁵
- Decreased knowledge of sexual health topics⁶

OBJECTIVE

To compare the prevalence of and testing for sexually transmitted infections in individuals with and without intellectual and developmental disability (I/DD)

METHODS

Design: Cross-sectional analysis

Data source: Thompson Reuters MarketScan® Commercial Claims Encounters databases

- Coverage years 2014-2015
- National sample
- Privately insured individuals

REFERENCES

• Mandell DS, Eley CC, Cederbaum JA, et al. Sexually transmitted infection among adolescents receiving special education services. *Journal of School Health*. 2008;78(7):382-388.

• Sullivan, PM & Knutson, JF. (2000). Maltreatment and disabilities: a population-based epidemiological study. *Child abuse and neglect*, 24, 1257-1273.

• Spencer, N, Devereux, E, Wallace, A, Sundrum, R, Shenov, M, Bacchus, C & Logan, S. (2005). Disabling conditions and registration for child abuse and neglect: A population-based study. *Pediatrics*, 116, 609-613.

• Jones, L, Bellis, MA, Wood, S, Hlghees, K, McCoy, E, Eckley, L & Officer, A. (2012). Prevalence and risk of young people with intellectual disabilities and their non-disabled peers. *Lancet*, 380, 899-907.

• Barnard-Brak, L, Schmidt, M, Chesnut, S, Wei, T & Richman, D. (2014). Predictors of access to sex education for children with intellectual disabilities in public schools. *Journal of Intellectual and Developmental Disabilities*, 52(2), 85-97.

• Dukes, E & McGuire, BE. (2009). Enhancing capacity to make sexuality-related decisions with intellectual disability. *Journal of Intellectual Disability Research*, 53(8), 727-734.

METHODS CONT.

Independent Variable: Intellectual or developmental disabilities, including the following diagnoses:

- Mild intellectual disability,
- Other specified intellectual disability,
- Unspecified intellectual disability,
- Fragile X Syndrome,
- Prader Willi syndrome,
- Fetal alcohol syndrome,
- Rett syndrome,
- Spina Bifida,
- Down Syndrome,
- Cerebral Palsy,
- And Autism spectrum disorders

Outcomes: Sexually transmitted infections and testing or screening for sexually transmitted infections

Comorbidities: ADHD & Mental Health Conditions, such as:

- Schizophrenia,
- Psychosis,
- Anxiety,
- Obsessive Compulsive Disorder,
- Post-Traumatic Stress Disorder,
- Mood Disorders,
- Substance Abuse,
- Personality Disorder,
- Or Delusional Disorder

SUBJECTS

I/DD Cohort: n=25,193

- 61.2% males, 28.8% females
- Largest age category: 15-19 and 20-24 years
- Primary diagnoses: Cerebral Palsy and Autism Spectrum Disorder
- 29.8% had a mental health comorbidity
- 10.1% had an ADHD comorbidity

Control Cohort: n=25,193

- Identified using group frequency matching for age category, sex and geographic region of residence
- 36.1% had a mental health comorbidity
- 20.1% had an ADHD comorbidity

ANALYSES

Prevalence: Total number of STI cases or STI tests divided by the total study population

Multivariable logistic regression: Assessed the association between the primary predictor variable (I/DD) and the primary study outcome variables (STIs and STI testing/screening)

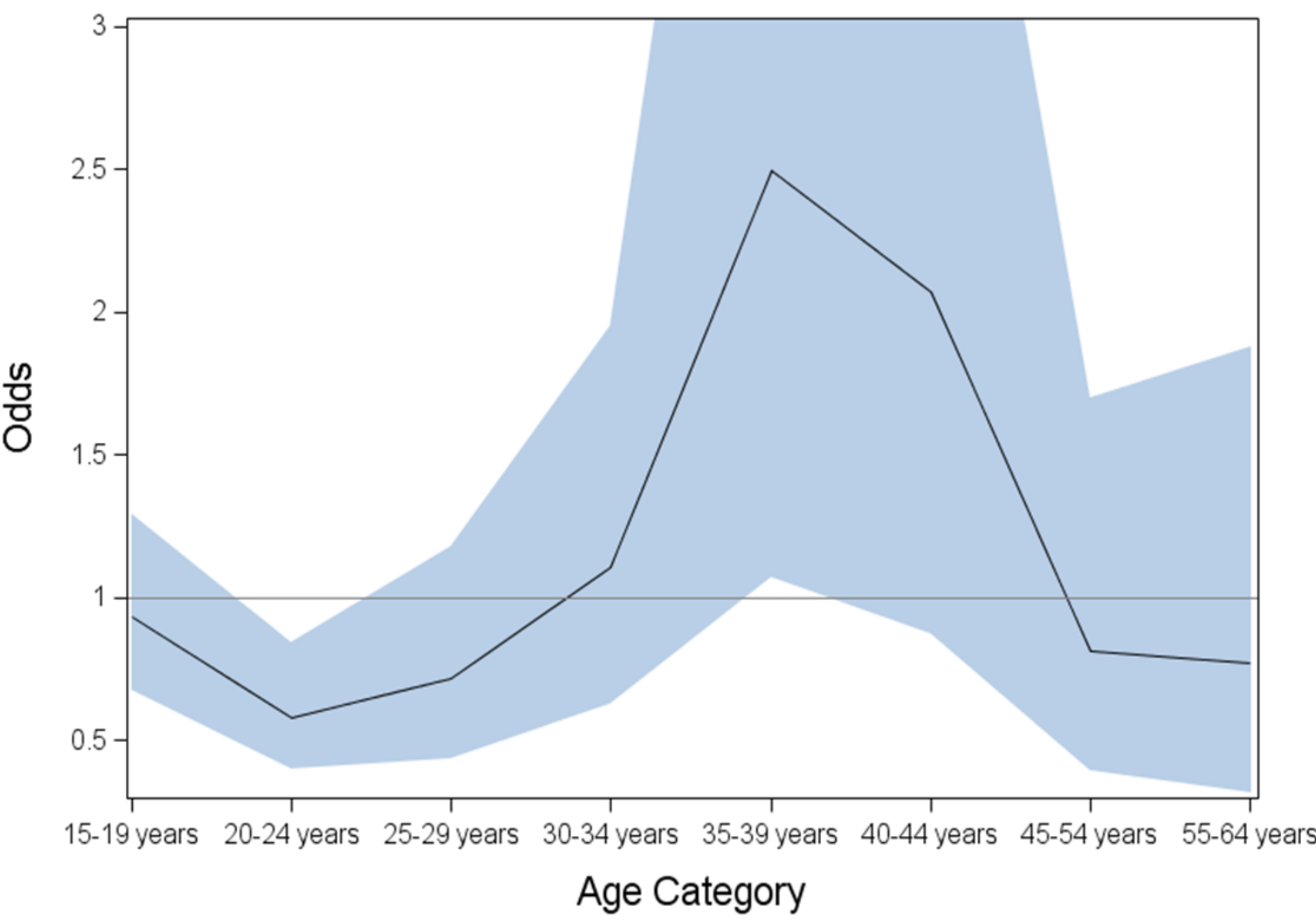
- Identified using backwards stepwise regression
- Controlled for the following:
 - age category,
 - sex,
 - US region of residence,
 - insurance plan type,
 - presence of a mental health comorbidity,
 - and presence of comorbid ADHD,
 - as well as interactions between I/DD status

RESULTS

	I/DD Cohort (n=25,193)	Control Cohort (n=25,193)	Total (n=50,386)
STI Diagnosis, n (%)			
Genital Warts	565 (2.2%)	1,051 (4.2%)	1,616 (3.2%)
Herpes	37 (0.2%)	156 (0.6%)	193 (0.4%)
HIV/AIDS	21 (0.1%)	92 (0.4%)	113 (0.2%)
Chlamydia	14 (0.1%)	58 (0.2%)	72 (0.1%)
Gonorrhea	10 (<0.1%)	49 (0.2%)	59 (0.1%)
Trichomoniasis	16 (0.1%)	25 (0.1%)	41 (0.1%)
Syphilis	0 (0.0%)	2 (<0.1%)	2 (<0.1%)
Pubic Lice	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total Cases ^a	663 (2.6%)	1,433 (5.7%)	2,096 (4.2%)
STI Test, n (%)			
Asymptomatic STI Screen	171 (0.7%)	161 (0.6%)	332 (0.7%)
Syphilis	55 (0.2%)	71 (0.3%)	126 (0.3%)
Gonorrhea	37 (0.2%)	46 (0.2%)	83 (0.2%)
HIV/AIDS	16 (0.1%)	36 (0.1%)	52 (0.1%)
Chlamydia	11 (<0.1%)	11 (<0.1%)	22 (<0.1%)
HPV	0 (0.0%)	0 (0.0%)	0 (0.0%)
Trichomoniasis	0 (0.0%)	0 (0.0%)	0 (0.0%)
Herpes	0 (0.0%)	0 (0.0%)	0 (0.0%)
Total Cases ^a	290 (1.2%)	325 (1.3%)	615 (1.2%)

RESULTS CONT.

Variable	Occurrence of any STI		Occurrence of any STI test	
	OR	95% CI	OR	95% CI
Cohort				
Control (ref)				
I/DD	0.44	0.40-0.49	0.96	0.71-1.29
Sex				
Male (ref)				
Female	0.66	0.55-0.78
Age Category (years)				
15-19 (ref)				
20-24	0.96	0.85-1.08	1.33	1.00-1.77
25-29	0.93	0.80-1.10	1.18	0.86-1.62
30-34	0.91	0.76-1.08	0.72	0.46-1.12
35-39	0.70	0.56-0.88	0.81	0.51-1.28
40-44	1.14	0.93-1.40	0.64	0.43-0.95
45-54	0.77	0.64-0.94	0.69	0.43-1.09
55-64	0.82	0.65-1.03	0.73	0.58-0.92
Geographic Region				
West (ref)				
Northeast	1.38	1.19-1.60	1.07	0.75-1.53
North Central	1.06	0.90-1.24	1.80	1.28-2.52
South	1.27	1.10-1.46	2.81	2.06-3.83
Unknown	1.41	0.61-3.25	N/A ^b	N/A
Comorbid ADHD	1.18	1.04-1.34
Mental Health Comorbidity	1.14	1.04-1.25	2.43	2.05-2.89
Interaction Term		
Control+ vs. Control-			3.23	2.53-4.12
I/DD+ vs. I/DD-			1.84	1.45-2.34
I/DD+ vs. Control +			0.79	0.56-1.10
I/DD- vs. Control -			0.98	0.43-0.69



CONCLUSIONS

- Individuals without I/DD 2.2 times greater odds of having an STI than those with I/DD
 - Reduced opportunities for sexual experiences ²⁰
 - Healthcare providers and family member biases ⁸⁻⁹
- Individuals with I/DD aged 20-24 years and with mental health co-morbidities were less likely than the matched control cohort to be tested for STIs.