

WEB MATERIAL

Comparison of 2 Case Definitions for Ascertaining the Prevalence of Autism Spectrum Disorder Among 8-Year-Old Children

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Web Table 1. Findings that trigger record abstraction—The Autism and Developmental Disabilities Monitoring Network considered the presence of any of these items to be potentially indicative of autism, requiring abstraction of all information and clinical review. There have been slight revisions over time—these correspond to surveillance year 2014.

<p>A. Diagnosis or Suspicion of Autism Spectrum Disorder (ASD)</p>	<p>The diagnosis or suspicion of ASD must be:</p> <ul style="list-style-type: none"> ✓ clearly directed at the child being evaluated AND ✓ stated or mentioned by a qualified professional AND ✓ included in the report of a comprehensive evaluation
<p>B. Autism Special Education Classification</p>	<p>Child deemed eligible for special education or placed in “Autism” category at any time.</p>
<p>C. An Autism Test Was Administered</p>	<p>Child received one or more of 57 different autism tests</p>
<p>D. Social Behavioral Triggers</p>	<ol style="list-style-type: none"> 1. Overly-clingy to certain people 2. Not cuddly or affectionate with familiar people; aversion to physical contact 3. Does not respond to his or her name 4. Ignores or disregards other people 5. Stares blankly at other people 6. Prefers objects over people; focuses on objects when people are around and available to interact 7. Interacts with people only to get things; not just to play, share, or interact 8. Does not participate in group or organized activity 9. Does not understand personal space boundaries 10. Unaware of appropriate social behavior 11. Prefers to play alone or engage in solitary activities 12. Interactions are one-sided 13. Does not notice another’s distress; unaware of another’s emotional state or expression 14. Impaired awareness of or oblivious to other people
<p>E. Social Gestures and Expressions</p>	<ol style="list-style-type: none"> 15. Inappropriate affect/emotional expression (expression does not fit the situation) 16. Laughs or smiles at inappropriate times or to self for no apparent reason 17. Limited or unusual use of facial expressions or gestures (does not point, clap, wave, etc.) 18. Limited, inconsistent, poor, variable, or no eye contact 19. Uses other’s hand to get desired objects
<p>F. Friends (forming relationships)</p>	<ol style="list-style-type: none"> 20. No interest in other children (peers) or friendships 21. Only engages in parallel play 22. Limited or no interaction with other children 23. Walks through children/looks through children; decreased awareness of children 24. Interest in peers, but tries to interact in unusual ways
<p>G. Joint Attention Problems</p>	<ol style="list-style-type: none"> 25. Does not initiate interactions with others 26. Does not ask for help, but get things for him or herself when help would be easier 27. Lack of showing, bringing, or pointing out objects of interest to other people 28. Never offers to share food or objects with others 29. Does not do things to please others 30. No reaction to praise or positive attention
<p>H. Social Use of Communication</p>	<ol style="list-style-type: none"> 31. Inability to use words and gestures together to communicate 32. Talks to self rather than to another person

Web Table 2. Variability in case classification among children with sufficient behavioral symptoms to meet criteria for previous case definition but who did not meet new case definition, 2014 ADDM Network

Description	Total	Arkansas	Georgia	Maryland	Minnesota	North Carolina	New Jersey	Tennessee	Wisconsin
Based on clinician review, number of children with sufficient behavioral symptoms to meet DSM-V criteria	951	172	149	63	48	219	177	53	70
Based on clinician review, total number of children with sufficient behavioral symptoms to meet DSM-V criteria <u>and</u> clinician determined was a case under previous definition.	515	49	91	21	25	71	163	48	47
Based on clinician review, % of children with sufficient behavioral symptoms to meet DSM-V criteria and determined to be a case under previous definition, among all children with sufficient behavioral symptoms for DSM-V.	54.2%	28.5%	61.1%	33.3%	52.1%	32.4%	92.1%	90.6%	67.1%

Abbreviations:

ADDM Network, Autism and Developmental Disabilities Monitoring Network

DSM-V, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*

Web Table 3. Comparison of prevalence estimates (and 95% confidence intervals) per 1,000 eight-year-old children based on previous (ADDM DSM-V) case definition, previous (ADDM DSM-IV-TR) case definition, and new case definition, 2014 ADDM Network

ADDM Site	Previous (DSM-IV-TR) Case Definition Prevalence (95% CI)	Previous (DSM-V) Case Definition Prevalence (95% CI)	New Case Definition Prevalence (95% CI)
Arkansas	13.1 (12.0-14.2)	13.8 (12.7-15.0)	15.2 (14.0-16.5)
Georgia	16.9 (15.9-18.1)	16.8 (15.7-18.0)	17.9 (16.8-19.1)
Maryland	20.0 (17.4-23.0)	19.6 (17.0-22.5)	19.5 (16.9-22.4)
Minnesota	23.9 (21.0-27.1)	22.5 (19.7-25.7)	23.2 (20.4-26.5)
New Jersey	29.3 (27.5-31.2)	26.5 (24.8-28.3)	22.5 (21.0-24.2)
North Carolina	17.4 (16.0-19.0)	16.4 (15.1-18.0)	14.8 (13.5-16.2)
Tennessee	15.5 (14.0-17.1)	14.8 (13.4-16.4)	16.5 (15.0-18.2)
Wisconsin	14.1 (12.9-15.4)	13.6 (12.4-14.9)	13.7 (12.5-15.0)
Overall	17.9 (17.4-18.5)	17.3 (16.8-17.8)	17.2 (16.7-17.7)

Abbreviations:

ADDM Network, Autism and Developmental Disabilities Monitoring Network

DSM-V, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*

DSM-IV-TR, *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*

Web Table 4. Range of possible ASD prevalence estimates using new case definition at the three 2014 ADDM Network sites that applied the DSM-V case definition for only a portion of their overall study area

Description	Arizona	Colorado	Missouri
Previous (DSM-V) prevalence	17.1	12.1	16.1
Lower bound: New prevalence	17.0	10.3	17.2
Upper bound: New prevalence	17.2	16.8	18.9

Note: For children that were not abstracted, but had ASD ICD codes or ASD special education classification, we could not determine whether the child lived in the DSM-V study area (we do know they lived in the DSM-IV study area). Therefore, the lower bound includes none of these children, and the upper bound includes all of them.

Abbreviations:

ADDM Network, Autism and Developmental Disabilities Monitoring Network

DSM-V, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*

ICD, *International Classification of Diseases*

WEB APPENDIX

Explanation of Residency Problem for Applying New Case Definition at the Three Sites

The ADDM sites determined whether each child lived within the overall surveillance area (in County A/B vs outside County A/B). For children with abstracted evaluations, the ADDM sites determined which lived in the DSM-V (County B) study area. However, children that did not have abstracted information—including children with autism ICD codes or autism special education classifications, we could confirm that the child lived in the overall study area (County A or B) but did not know whether it was County A or County B. Therefore, the estimates were presented as a range—all children meeting ASD case status and known to live in County B were included for the “low” estimate, and included all children known to live in County A. For the “high” estimate, all children known to live in County B are included, all children known to live in County A are excluded, but the children that might live in either County A or B are included.

Web Figure 1. Explanation of residency problem for applying new case definition at the three sites

