# NetSCID: an automated web-based adaptive version of the SCID

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Administer the 'gold standard' for mental health diagnosis online

NetSCID-5 is the first comprehensive web-based version of the SCID-Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders.

#### Features include:

- Fully customizable interviews
- Automatic logic calculations and branching
- Appropriate prompts automatically presented based on previous answers
- Evaluation of multiple episodes (e.g., past history)
- Item and entire interview level open-ended notes feature
- On-screen summary of all items administered
- Real-time Diagnosis Tracking
- Instant navigation through the interview, both forwards and backwards
- Ability to resume interviews at any time
- Comprehensive diagnostic reporting including ICD-9 and ICD-10 codes
- Encrypted database with downloadable item-level data
- Secure remote access via geo-redundant HIPAA-compliant cloud databases
- Option of paper SCID administration followed by rapid data entry with mouseless feature
- NetSCID-5 Research Version (RV) and Clinical Trials (CT) available now!
- Clinician (CV) and Personality Disorders (PD) versions coming soon!

# Background

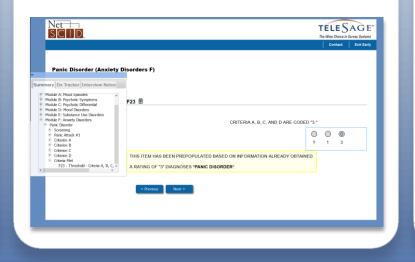
The Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (SCID-DSM) is the 'gold standard' for research-based mental health diagnoses<sup>1,2</sup>. Clinical trials have depended upon it for over 20 years. It is the most widely used comprehensive tool for assessing DSM diagnoses. The SCID's direct adherence to DSM criteria provides strong test-retest and high inter-rater reliability<sup>3,4</sup>. However, administration of the full research version averages two hours and requires considerable clinician training, making it impractical for many protocols<sup>5,6</sup>.

## Objective and Methods

To develop and validate a highly configurable and secure webbased version of the SCID that retains its diagnostic rigor while reducing training burden, data entry time, and interview errors.

Twenty-four paired clinicians administered interviews with both the paper SCID and the NetSCID to 230 outpatient participants. Branching algorithms across 43 SCID diagnoses were tested to determine the strength of the tools test-re-test and inter-rater reliability. Data-entry errors, branching errors, and clinician satisfaction were quantified.

## Sample Screenshot



## Results

Ninety-seven percent of interview errors occurred among clinicians administering the paper SCID; all errors that occurred when utilizing the NetSCID were subsequently corrected by our engineering team.\*\*

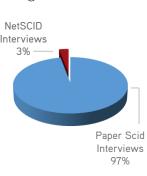
Administration time was reduced by over 30%. Clinicians found it easier to administer (p < 0.05), easier to navigate (p < 0.05), and simpler to score (p < 0.01). Ninety percent of clinicians preferred the NetSCID to its paper counterpart<sup>7</sup>. "Working with the NetSCID has been great. It's efficient and easy to use; the features are simple and practical. Additionally, the staff at TeleSage have been responsive and friendly whenever we have a question. I am very glad that NIMH made it possible for the NetSCID to be developed."

- Samantha Meilman Research Program Coordinator, Psychiatry & Behavioral Science Johns Hopkins University

"I participated in the development, validation, and end user testing of the NetSCID. The NetSCID is faithful to the content of the paper SCID, and at least as reliable and valid."

- Michael B. First, MD Professor of Clinical Psychiatry Columbia University

#### Diagnostic Errors\*\*



After the success of the initial validation of the NetSCID, it was released to academic research groups for beta testing. Over 8000 NetSCID interviews were conducted by 75 different university research teams in the United States, Canada, UK, South Africa, and Australia.

Feedback from researchers confirmed the results of the validation study: diagnostic errors were eliminated, clinicians found it easier to use, and administration time was reduced by over 30% in comparison to the paper SCID.

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# Conclusion

The NetSCID facilitates a rigorous characterization of patient populations and assists with the identification of sub-groups who have the potential for a robust response to interventions.

The NetSCID's structured format with its direct adherence to DSM-5 criteria accounts for its strong test-re-test and interrater reliability. The NetSCID-5 is fully licensed by the American Psychiatric Association; it strictly follows the text, branching and calculations of the SCID-5, and offers complete data parity. Adoption of this tool has been shown to improve diagnostic accuracy and has great potential to increase the power of CNS clinical trials worldwide.

#### Citations

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<sup>2</sup>Eack, S. M., Greeno, C. G., & Lee, B. (2006). Limitations of the patient health questionnaire in identifying anxiety and depression in community mental health: Many cases are undetected. *Research on Social Work Practice, 16* (6), 625-631.

<sup>3</sup>First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. (2002). *Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Research Version, Patient Edition. (SCID-I/P).* New York: Biometrics Research, New York State Psychiatric Institute.

<sup>4</sup>Hammer, E. M., Häcker, S., Hautzinger, M., Meyer, T. D., & Kübler, A. (2008). Validity of the ALS-Depression-Inventory (ADI-12) - A new screening instrument for depressive disorders in patients with amyotrophic lateral sclerosis. *Journal of Affective Disorders*  <sup>5</sup>Haworth, J. E., Moniz-Cook, E., Clark, A. L., Wang, M., & Cleland, J. G. F. (2007). An evaluation of two selfreport screening measures for mood in an out-patient chronic heart failure population. *International Journal of Geriatric Psychiatry, 22*, 1147-1153.

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<sup>7</sup>Brodey, B. B., First, M., Linthicum, J., Haman, K., Sasiela, J. W., & Ayer, D. (2016). Validation of the NetSCID: an automated web-based adaptive version of the SCID. *Comprehensive Psychiatry, 66*, 67-70.

Disclosure: The DSM-5 versions of the NetSCID are sold by TeleSage, Inc. for profit. Dr. Brodey is Chief Executive Officer of TeleSage, Inc. and Lisa Zweede is employed by the company as a clinical research specialist.