

# Rating Scales to Assess Schizophrenia and Schizoaffective Disorders

Randall F. White, MD, FRCPC

Medical Director, Vancouver Community Mental Health Services

Clinical Director, BC Psychosis Program

# Faculty/Presenter Disclosure

Presenter: Randall F. White

Relationships with Commercial Sponsors:

- Honoraria: HLS Therapeutics
- Consulting Fee: Canadian Agency for Drugs and Technologies in Health
- Other: None

# Managing Potential Bias

The content was developed by Randall White and reviewed by TOP team members.

This presentation has limited content related to specific medications.

All medications are mentioned only by generic name.

No particular brand of clozapine is singled out.

# Learning Objectives

- By the end of the session, participants will be able to:
  - Describe rating scales used in the context of schizophrenia, schizoaffective disorders, and related treatments, with a focus on PANSS-SV, HoNOS, CGI-S, and CGI-I
  - Demonstrate the administration and interpretation of results using rating scales, with a focus on PANSS-SV and CGI-S
  - Discuss the role of HoNOS in monitoring severe mental health conditions
  - Identify and utilize scales to assess adherence to medication

# Rating scales in psychiatry

- Used to assess severity and response to treatment
- Self-reported
  - Rare for psychosis
  - Common in depression and anxiety (PHQ-9, Beck scales)
- Observer reported
  - May require structured interview
  - Mood and anxiety disorders
    - Yale-Brown Obsessive Compulsive scale (Y-BOCS)
    - Young Mania Rating Scale
  - Schizophrenia

# How do we know it's good?

- **Reliability**

- Measures the construct (disorder, symptoms, psychopathology) consistently
  - Time
  - Situations
  - Individuals
- Quantified by Pearson correlation, Cohen's kappa and Cronbach's alpha

- **Validity**

- Measures what is intended—the disorder, symptoms, psychopathology—and not something else
- Types include content, construct and predictive

# Treatment Response and Resistance in Psychosis (TRRIP) Working Group Consensus Guidelines

- First international expert consensus on describing criteria for response to antipsychotic therapy including ECT
- Recommendations
  - Use of standardized rating instruments such as PANSS, BPRS, SAPS, SANS, SOFAS
  - Separate assessment of positive, negative, cognitive domains
  - Document trials prospectively

Treatment resistant schizophrenia: Treatment Response and Resistance in Psychosis (TRRIP) working group consensus guidelines on diagnosis and Terminology. *Am J Psychiatry.* 2017;174:216-229.

# Rating scales for refractory psychosis

Distribution of rating scales  
in 42 clinical trials for TRS



Treatment resistant schizophrenia:  
Treatment Response and Resistance in  
Psychosis (TRRIP) working group  
consensus guidelines on diagnosis and  
Terminology. Am J Psychiatry.  
2017;174:216-229.



# Brief Psychiatric Rating Scale (BPRS)

- First widely used scale for severe mental illness
- Published in 1962 in 16-item version
- Current version has 18 items, mostly positive and general symptoms
- Does not rate negative symptoms separately
- Introduced uniform 7-point Likert scaling for all items
  - lowest score 18
  - highest score 126
- Employed in many clinical trials

Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. *Psychol Rep.* 1962;10:799–812.

# Positive and Negative Syndrome Scale—PANSS

- Published 1987, based on BPRS
- 3 subscales
  - Positive—7 items
  - Negative—7 items
  - General—16 items
- Structured interview, 30-45 minutes
- Rated 1-7 for each item, minimum score 30
- Standard scale for clinical trials

Kay SR, Fiszbein A, Opler LA. The positive and negative syndrome scale (PANSS) for schizophrenia. *Schizophr Bull.* 1987;13:261–276.

# Positive and Negative Syndrome Scale—PANSS-SV

- Positive symptoms are main target of antipsychotic meds
- PANSS-SV based on factor analysis
  - Excitement and hostility not specific for psychosis
- TOP recommended rating scale for antipsychotic trials

Short Version of the Positive and Negative Syndrome Scale (Refer to the PANSS rating descriptions on the reverse of this page)							
	Absent	Minimal	Mild	Moderate	Mod Severe	Severe	Extreme
P1 Delusions	1	2	3	4	5	6	7
P2 Conceptual disorganisation	1	2	3	4	5	6	7
P3 Hallucinatory behaviour	1	2	3	4	5	6	7
P5 Grandiosity	1	2	3	4	5	6	7
P6 Suspiciousness/persecution	1	2	3	4	5	6	7
G9 Unusual thought content	1	2	3	4	5	6	7

# Positive and Negative Syndrome Scale—PANSS-SV

- A 20% reduction would indicate treatment response
  - Non-clozapine: 6 weeks at maximally tolerated dose
  - Clozapine: 12 weeks at therapeutic blood level
  - Adherence confirmed (pill count, collateral from care givers/pharmacy, blood level)
- One item rated 6 or two rated 4 suggest treatment resistance

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# Clinical Global Impression (CGI)

- Developed for clinical trials
- CGI-Severity for cross-sectional symptoms and functional impairment
  - Considering your total clinical experience with this particular population, how ill is the patient at this time?
- CGI-Improvement to rate treatment progress
  - Compared to their condition at admission to the project, how much has the patient changed?

<b>Clinical Global Impression of Illness Severity</b>	Normal	Borderline	Mild	Moderate	Marked	Severe	Extreme
Severity compared to all others with the same diagnosis	1	2	3	4	5	6	7
<b>Clinical Global Impression of Improvement</b>	Improved			No	Worse		
Improvement from the last time this rating was made	Very much	Much	Minimal	Change	Minimal	Much	Very Much
	1	2	3	4	5	6	7

# Health of the Nation Outcome Scales—HoNOS

## BC MoH Mental Health & Addictions Minimum Reporting Requirements

Certain continuum of MHSU services (episode) require a HoNOS record. The HoNOS is a clinician rated instrument comprising 12 simple scales measuring behaviour, impairment, symptoms and social functioning. Updates may be submitted while the client is on care. When required, the **HoNOS must be completed at intervals not exceeding six months** during the delivery of a Continuum of MHSU Service in which the client is enrolled.

# Health of the Nation Outcome Scales—HoNOS

- Developed by UK Royal College of Psychiatrists
- 12 items rated 0-4
- Rating criterion: *most severe problems present during the two previous weeks*
- Rate items in 1-12 order each time
- Refer to *Glossary for HoNOS Score Sheet*

# Health of the Nation Outcome Scales—HoNOS

1	Overactive, aggressive, disruptive or agitated	0	1	2	3	4
2	Non-accidental self-injury	0	1	2	3	4
3	Problem drinking or drug-taking	0	1	2	3	4
4	Cognitive problems	0	1	2	3	4
5	Physical illness or disability problems	0	1	2	3	4
6	Problems with hallucinations and delusions	0	1	2	3	4
7	Problems with depressed mood	0	1	2	3	4
8	Other mental and behavioural problems	0	1	2	3	4
	(specify disorder A, B, C, D, E, F, G, H, I, or J)					
9	Problems with relationships	0	1	2	3	4
10	Problems with activities of daily living	0	1	2	3	4
11	Problems with living conditions	0	1	2	3	4
12	Problems with occupation and activities	0	1	2	3	4



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# Psychosis item in HoNOS

## 6. Problems associated with hallucinations and delusions

- *Include hallucinations and delusions irrespective of diagnosis.*
- *Include odd and bizarre behaviour associated with hallucinations or delusions.*
- *Do not include aggressive, destructive or overactive behaviours attributed to hallucinations or delusions, rated at Scale 1.*

0 No evidence of hallucinations or delusions during the period rated.

1 Somewhat odd or eccentric beliefs not in keeping with cultural norms.

2 Delusions or hallucinations (e.g. voices, visions) are present, but there is little distress to patient or manifestation in bizarre behaviours, i.e. clinically present but mild.

3 Marked preoccupation with delusions or hallucinations, causing much distress and/or manifested in obviously bizarre behaviour, i.e. moderately severe clinical problem.

4 Mental state and behaviour is seriously and adversely affected by delusions or hallucinations, with severe impact on patient

# Medication Adherence

- Objective Adherence Measures
  - Pill counts
  - Technology-Assisted Monitoring
  - Pharmacy Refill Records
  - Biologic Measures (blood level)
- Self and Interviewer Rating Measures of Adherence
  - Adherence Attitude Assessments
    - Drug Attitude Inventory (DAI)
  - Self and Interviewer Reports of Adherence Behavior
    - Brief Adherence Rating Scale (BARS)

# Brief Adherence Rating Scale (BARS)

- Longer version used in Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study
- Self-report to clinician
- 3 questions about previous month
  - Ask about daily pill dose
  - Ask about days of no adherence
  - Ask about days of partial adherence
- Rater estimates adherence as percentage for prior month
- Cronbach's alpha 0.92

# BARS may predict response to LAI

- 176 adult outpatients with schizophrenia or schizoaffective disorder
- Large trial of long-acting injectable antipsychotics
- BARS assessment at baseline of medication trial
- OR for treatment response = 3.464: ≤66% BARS adherence rating compared with >66% rating
  - 95% CI = 1.604 to 7.480,  $p = 0.001$

Nakonezny PA, et al. A single assessment with the Brief Adherence Rating Scale (BARS) discriminates responders to long-acting injectable antipsychotic treatment in patients with schizophrenia. *Schizophr Res.* 2020 Jun;220:92-97.