

The Burden of Cognitive Impairment Associated with Schizophrenia (CIAS) on People with Lived Experience (PWLE): A National Canadian Survey

R. Milan¹, S.J. Seung², G. Babe¹, A. Wong², S. Tiggelaar¹, N. Ship¹, J. Wang³, C. Summerville⁴, D.J. Robinson⁵, R. Zipursky⁶, O. Agid⁶, H.E. McNeely^{7,8}

¹Boehringer Ingelheim Canada Ltd, Ontario, Canada; ²HOPE Research Centre, Sunnybrook Research Institute, Ontario, Canada; ³Boehringer Ingelheim Pharmaceutical Inc, Connecticut, United States of America; ⁴Schizophrenia Society of Canada, Manitoba, Canada; ⁵Canadian Mental Health Association, Ontario, Canada; ⁶The Centre for Addiction and Mental Health (CAMH), Ontario, Canada; ⁷Department of Psychiatry and Behavioural Neurosciences, McMaster University, Hamilton, Ontario, Canada; ⁸Schizophrenia and Community Integration Service, St. Joseph's Healthcare, Hamilton, Ontario, Canada

Introduction

- Schizophrenia is a chronic psychiatric disorder affecting 0.4% to 1% of the Canadian population and is associated with nearly \$10 billion CAD in direct and indirect costs^{1,2}
- Cognitive impairment associated with schizophrenia (CIAS) is a core symptom of schizophrenia and is associated with poor outcomes, including inability to live independently, reduced quality of life (QoL), and higher healthcare use^{3,4}
- Despite its clinical impact, CIAS remains under-recognized and overlooked in routine clinical care and is underrepresented in research^{5,6}
- Additionally, Canadian-specific data on the impact of CIAS on people with lived experience (PWLE) is limited



Methods

- A cross-sectional study using electronic surveys was conducted in Canada from October to December 2024. Surveys were distributed across Canadian patient organizations, clinics specializing in psychotic disorders, and market research panels, and recruited participants through convenience sampling. All participants received a \$15 electronic gift card for completing the survey
- The survey was designed to be completed in 20–30 minutes, available in English and French, and included questions on:
 - Socio-demographic and clinical characteristics
 - CIAS severity: Assessed using the Patient Global Impression of Severity (PGI-S)⁷
 - Self-reported symptom activity (stable vs active) based on changes in antipsychotics or hospital/emergency room (ER) visits due to worsening schizophrenia symptoms in the past 3 months
 - Support and HCRU: Health care professional (HCP) encounters, antipsychotics use, and caregiving support
 - QoL: Measured using the Schizophrenia Quality of Life Scale (SQLS)⁸
- PWLE were eligible for the survey if they:
 - Were aged ≥18 years
 - Resided in Canada
 - Could read/write English/French
 - Self-identified as a person with a confirmed diagnosis of schizophrenia
- Descriptive statistics and group comparisons were conducted according to CIAS severity and symptom activity (stable vs active) using SAS v9.4



Objectives

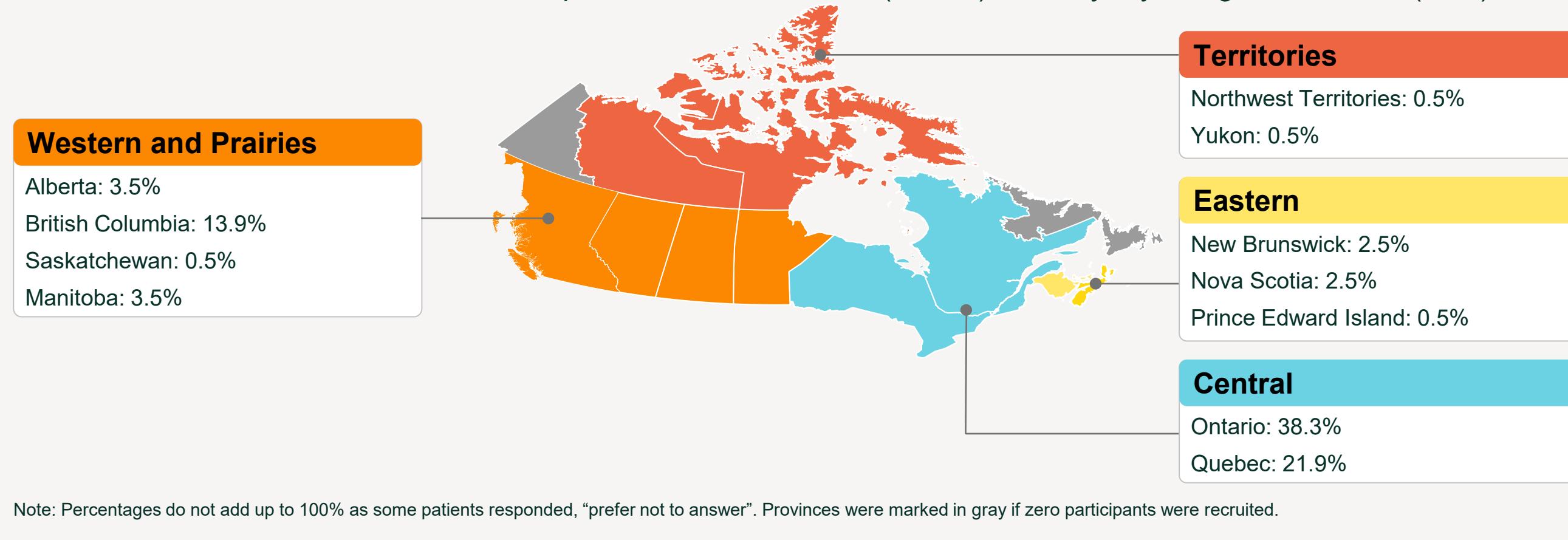


This study aimed to assess the patient characteristics and burden of CIAS among PWLE in Canada, including its impact on healthcare resource utilization (HCRU), support needs, and QoL

Results

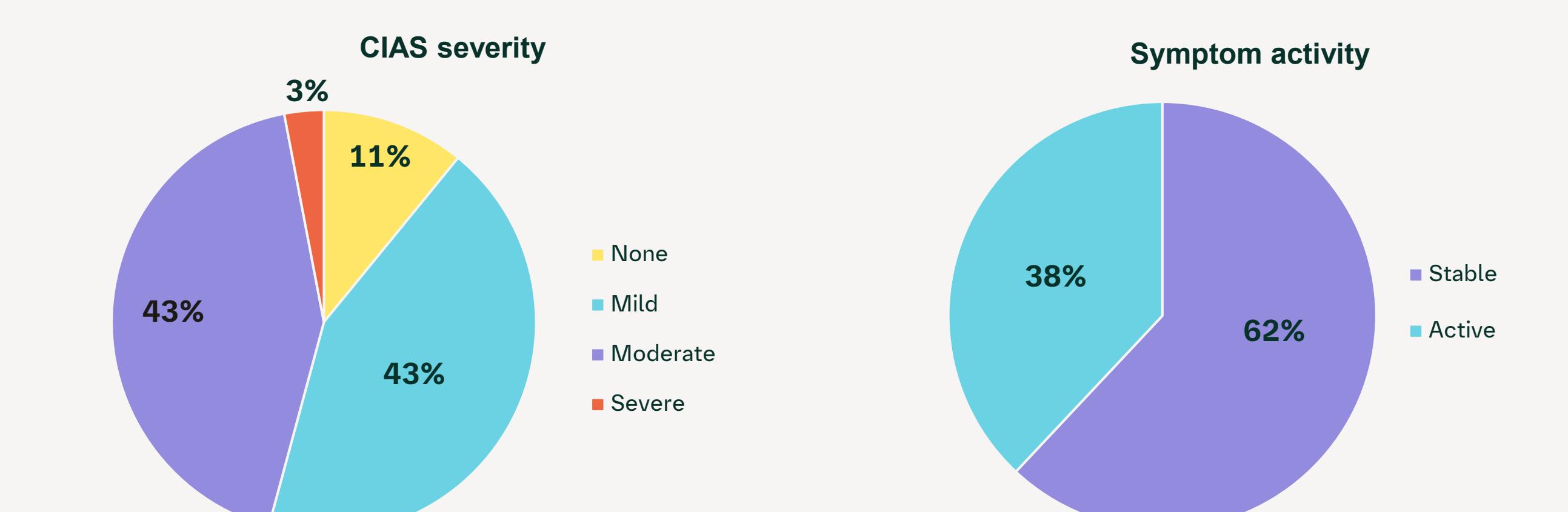
Demographics

PWLE were included from most Canadian provinces and territories (N=201); the majority being from Ontario (38%)



If CIAS symptoms improved:

- 89% of PWLE responded that they would have improved social skills
- Of those who did not complete their education or who were unemployed, 81% responded that they would resume their education, and 66% would resume their job search

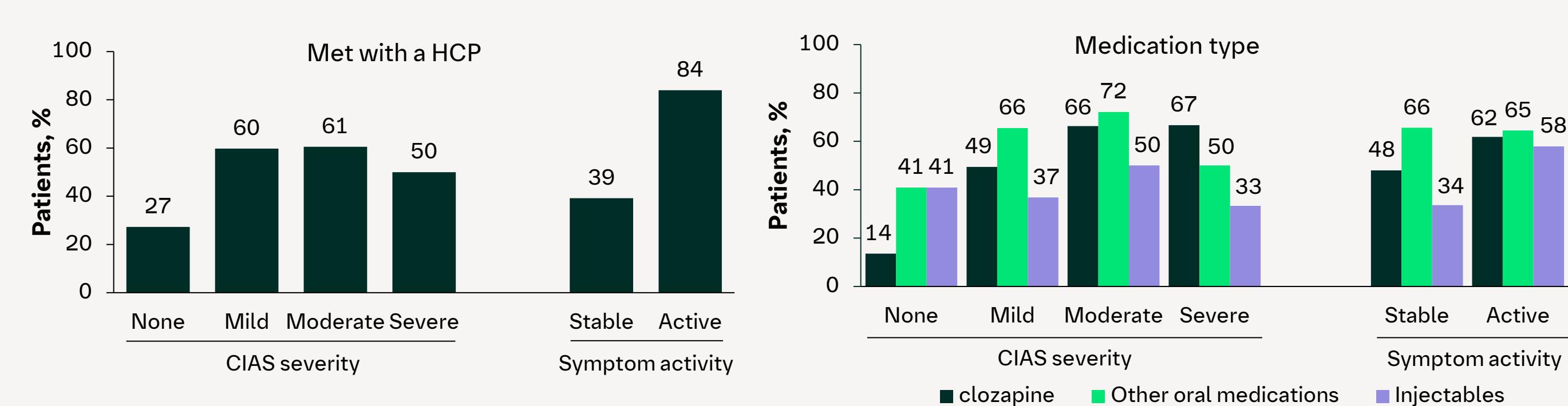


Symptoms related to schizophrenia that cause the most difficulty in the lives of PWLE

Hearing voices (66%), paranoia (44%), trouble organizing thoughts (41%), trouble paying attention (25%), feeling depressed or anxious (25%)

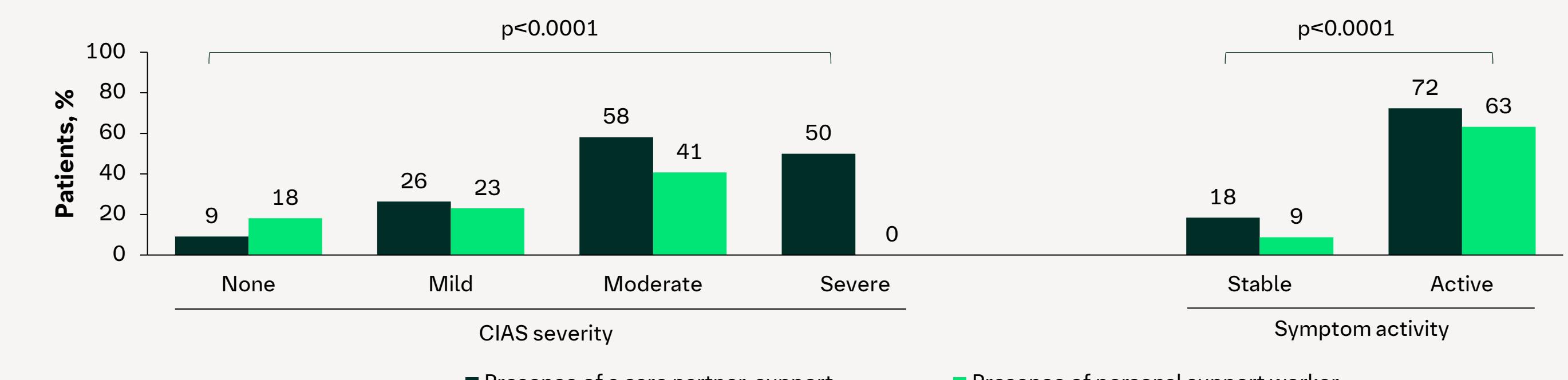
HCRU and antipsychotics use

- Overall, among PWLE:
 - 56% reported having met ≥1 HCP encounter in the past month
 - 26% had a hospital/ER room visit in the past 3 months because their symptoms got worse
 - 91% received antipsychotic medication(s): clozapine (53%), other oral antipsychotic medications (65%), and injectable antipsychotic medications (43%)
 - 38% had changes in antipsychotic medications in the past 3 months because their symptoms got worse
- HCP encounters and clozapine use increased with CIAS severity and were higher in those with active than stable symptoms



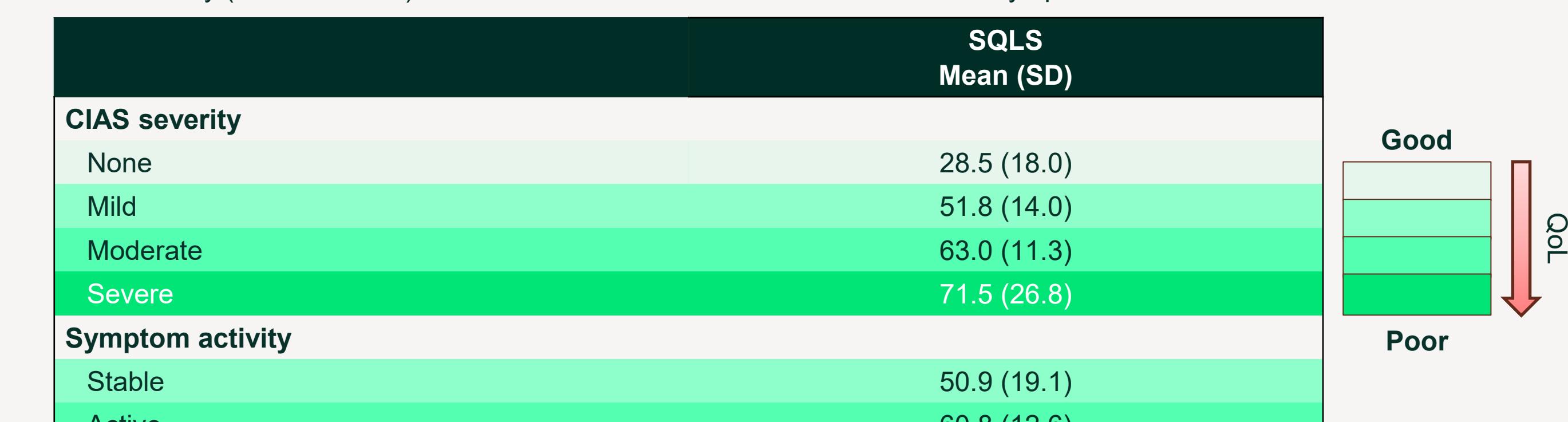
Caregiving support

- Overall, most PWLE did not receive support from a care partner (61%) or personal support worker (68%) in daily activities
- Caregiving support among PWLE increased with CIAS severity and was higher in those with active than stable symptoms



QoL

- Overall, PWLE reported poor QoL (mean [SD] SQLS total score: 54.6 [17.6]), which worsened significantly with increasing CIAS severity (mild to severe) and was worse in those with active than stable symptoms



When asked about their life aspirations, 70% of PWLE selected to lead an independent life to the best of their ability, followed by coping better with stress and mental health symptoms (57%) and feeling accepted and included in society (40%)

Conclusions

- This national survey revealed that the clinical burden, including mild to moderate CIAS, was common among PWLE, with over one-third experiencing active symptoms
- CIAS and active symptoms in PWLE were associated with increased healthcare use, and significantly greater support needs and lower QoL
- Findings from this study underscore the need to address CIAS as a critical part of schizophrenia management to improve clinical, functional, and QoL outcomes and reduce the overall burden (HCRU, costs) on PWLE

Limitations

- Recall bias due to self-reported data
- Generalizability beyond the Canadian population

Abbreviations
CAD, Canadian dollars; CIAS, cognitive impairment associated with schizophrenia; ER, emergency room; HCP, Healthcare professional; HCRU, healthcare resource utilization; PGI-S, Patient Global Impression of Severity; PWLE, people with lived experience; QoL, quality of life; SD, standard deviation; SQLS, Schizophrenia Quality of Life Scale.

Presented at: The International Society for Health Economics and Outcomes Research (ISPOR) Europe 2025, Glasgow, Scotland, United Kingdom; November 9–12, 2025.

Presenter: Raymond Milan, Boehringer Ingelheim Canada Ltd, Ontario, Canada; email: raymond.milan@boehringer-ingelheim.com

References
1. Canadian Chronic Disease Surveillance System (CCDSS) data. Available from: <https://health-infobase.canada.ca/ccdss/data.html?Comp7C=35&V=5&N=1>

2. Lecomte T, et al. *Can J Psychiatry*. 2022;67(3):172–175.

3. Kadakia A, et al. *Schizophr Res Cogn*. 2021;28:100233.

4. McCutcheon RA, et al. *Mol Psychiatry*. 2023;28(5):1902–1918.

5. Vita A, et al. *Front Psychiatry*. 2024;15:145182.

6. Sumiyoshi T, et al. *BMC Psych*. 2022;22(1):1–574.

7. Lysaker PH, et al. *Schizophr Res Cogn*. 2025;42:100375.

8. Wilkinson G, et al. *BJPsych*. 2000;177(1):42–46.

Disclosures
The study was supported and funded by Boehringer Ingelheim. The authors met the criteria for authorship as recommended by the International Committee of Medical Journal Editors (ICMJE) and were fully responsible for all content and editorial decisions, were involved at all stages of poster development, and have approved the final version. The authors did not receive payment related to the development of the poster.

Acknowledgments
Janet Oommen, PharmD, and Aru Singh, PhD, CMPP™, of Indegene Ltd., Bengaluru, India, provided medical writing support, which was contracted and funded by Boehringer Ingelheim.

The authors would like to acknowledge the following:
Schizophrenia Society of Canada, British Columbia Schizophrenia Society, Mental Health Recovery Partners, Schizophrenia Society of Alberta, Schizophrenia Society of Alberta Support Group, Schizophrenia Society of Canada, Schizophrenia Society of Saskatchewan Family Support Group, Institute for Advancements for Mental Health, IAM Support Group, Société québécoise de la schizophrénie, Schizophrenia Society of New Brunswick, Hope for Mental Health, Schizophrenia Society of Newfoundland/Labrador, The Royal at Ottawa, CAP santé mentale, Thunder Bay Regional Health Sciences, Center for Addiction & Mental Health, CAMH, Sunnybrook Health Sciences Centre, William Osler Health System, St. Joseph's Healthcare Hamilton, Western University Research – Parkwood, Alberta Hospital Edmonton, REACH BC, and Ami Quebec.

Boehringer Ingelheim

SSC SCHIZOPHRENIA SOCIETY OF CANADA