Development of a Paying for Quality (P4Q) Approach for Schizophrenia Care in Ontario, Canada

May 30, 2024
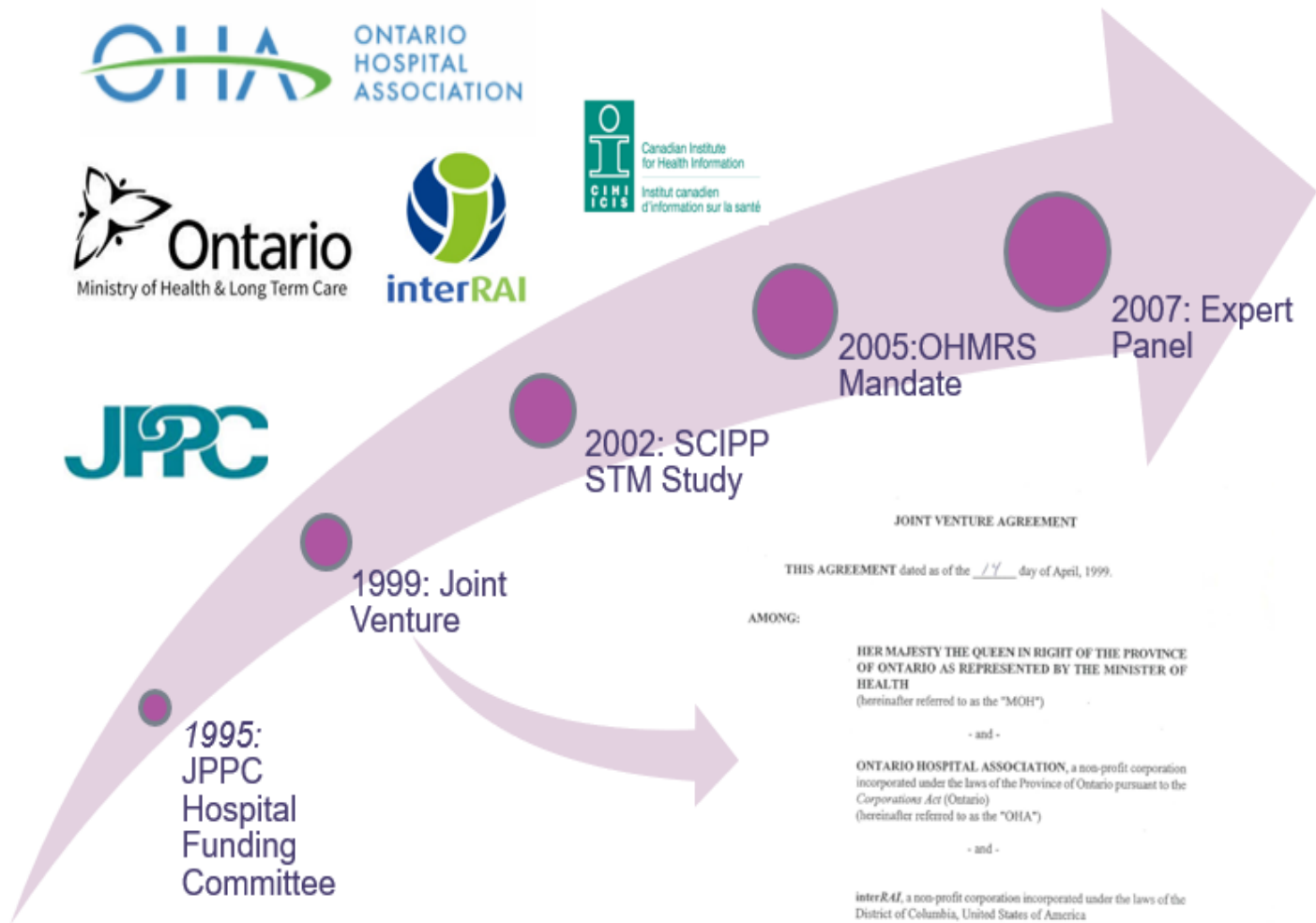
Patient Classification Systems International Conference

Slovenia

Background

Evolution of Ontario's Mental Health Patient Classification System and its associated weights

Exploration of Ontario's Inpatient Mental Health Funding

Ontario cost data does not differentiate resource use across case-mix groups (Technical Working Grp)

Case-mix grouping and related weights should help differentiate resource use (i.e. mean total costs, CMI weights) across groups.
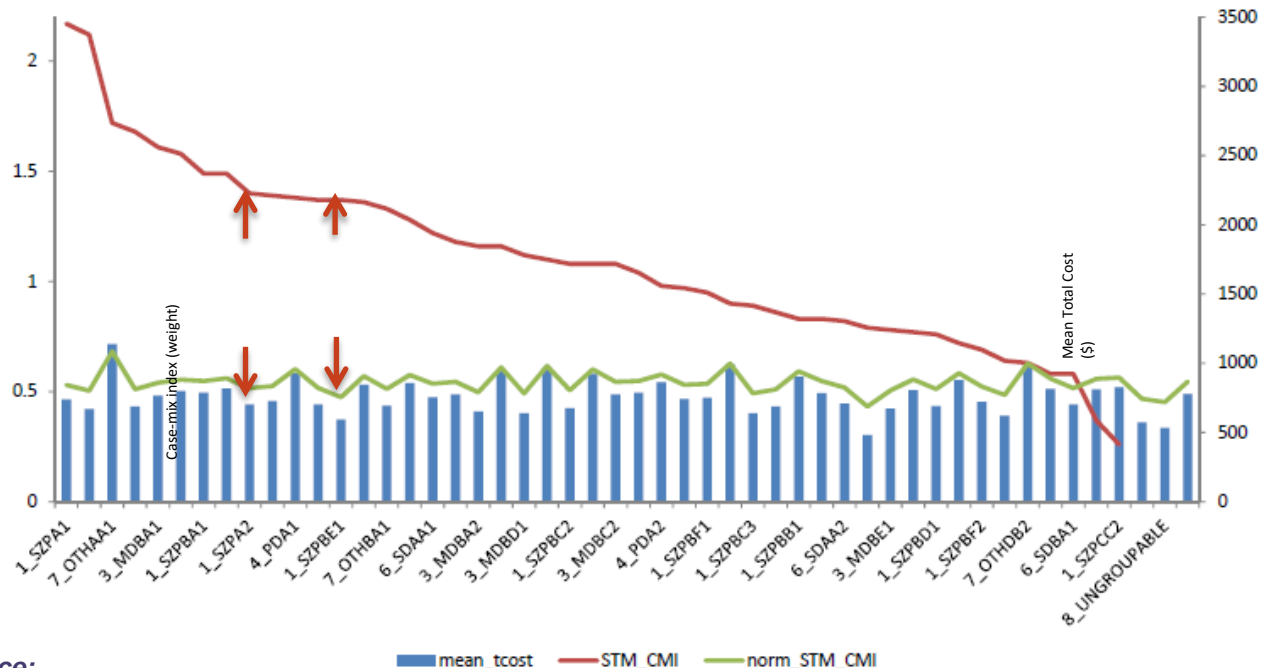
- The original STM study CMI would suggest a relative CMI difference 0.7 (from 2.2 to 1.5 = ~40%) [red line]
- Actual resource utilization from reported data suggests no relative difference between the two groups [green line]
- Expected STM results are different from reported data across all SCIPP groups

OHA's 2018 Improving Quality of Care for Mental Health Patients through Funding Methodologies conference

Please click on this link to access the PDF version of the proceedings.

Movement to Focus on Improvement and Value

Why focus on Schizophrenia Care?

Patients diagnosed with schizophrenia

- Schizophrenia, schizotypal and delusional disorders were listed as **top 10** high-volume inpatient hospitalizations with the longest average length of stay
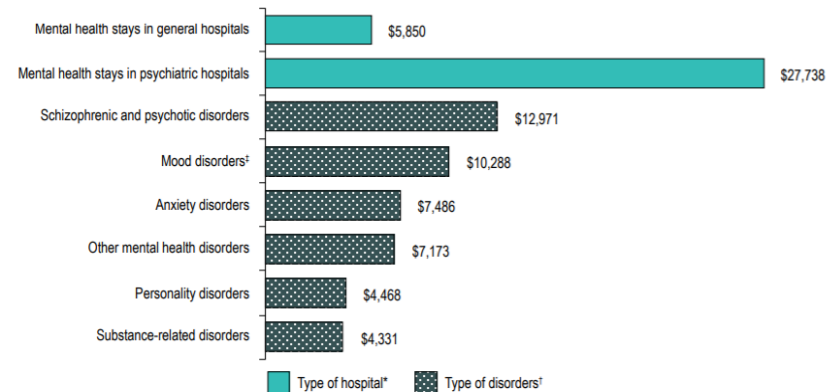
Province	Rank	Most responsible diagnosis for inpatient hospitalizations in 2020–2021	Number of inpatient hospitalizations in 2020–2021	Percentage* of inpatient hospitalizations in 2020–2021	Average acute† length of stay of inpatient hospitalizations in 2020–2021
Ont.	1	Giving birth	131,753	13.2	1.9
	2	Heart failure	24,790	2.5	8.3
	3	Acute myocardial infarction	23,009	2.3	4.4
	4	Osteoarthritis of the knee	19,931	2.0	1.8
	5	Mood (affective) disorders	19,810	2.0	10.7
	6	COVID-19	18,506	1.9	10.8
	7	Schizophrenia, schizotypal and delusional disorders	17,342	1.7	14.3
	8	Neurocognitive disorders	17,198	1.7	13.6
	9	Other medical care (e.g., palliative care, chemotherapy)	15,720	1.6	7.7
	10	COPD and bronchitis	15,239	1.5	6.4

- **50%** of cost for hospital stays related to mental health are for services that help patients with schizophrenia and psychotic disorders.

Estimated average cost of hospital stays by type of hospital and disorders (2017–2018)

Mental health stays in general hospitals	$5,850
Mental health stays in psychiatric hospitals	$27,738
Schizophrenic and psychotic disorders	$12,971
Mood disorders‡	$10,288
Anxiety disorders	$7,486
Other mental health disorders	$7,173
Personality disorders	$4,468
Substance-related disorders	$4,331

Type of hospital*   Type of disorders†

- This mental health condition was also **third** most prevalent for age group 18-64 in Canada

Age group	Rank	Most responsible diagnosis for inpatient hospitalizations in 2020–2021	Number of inpatient hospitalizations in 2020–2021	Percentage* of inpatient hospitalizations in 2020–2021	Average acute length of stay of inpatient hospitalizations in 2020–2021
18–64	1	Giving birth	342,775	25.1	2.1
	2	Substance use disorders	47,509	3.5	4.9
	3	Schizophrenia, schizotypal and delusional disorders	39,311	2.9	16.4
	4	Mood (affective) disorders	33,485	2.5	11.3
	5	Diseases of the appendix	27,136	2.0	2.0

Schizophrenia Care in Hospitals, FY 2023-2024 (Q1, Q2)

Ontario facilities
69

Discharge assessments
20404

Schizophrenia assessments
4289

- Age 25-44: 52%
- Average Age: 42
- Male: 63%
- Employed: 9%

- Homeless: 9%
- Discharged to private residence: 75%
- Median LOS: 17 days
- Average LOS: 34 days

10

CIHI

30-day ED department re-visits for Schizophrenia

- In August 2020, over 45 ED patients per 100 in Ontario return after 30-days for schizophrenia care.

- In August 2023, the rate is now 39 ED patients per 100

Monthly trends in 30-day mental health and addictions-related emergency department re-visits per 100 emergency department visits by individuals aged 0 to 105 years, by diagnosis, in Ontario
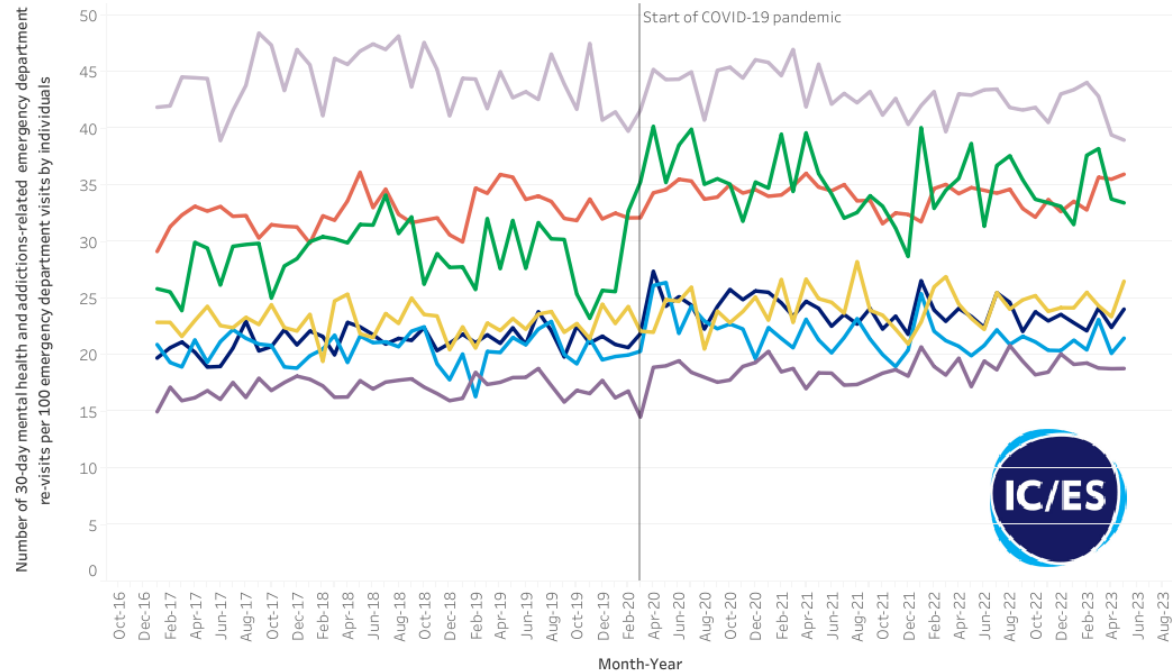
1. The vertical line indicates the month when the World Health Organization declared COVID-19 a pandemic.
2. Obsessive compulsive and related disorders category was not presented due to small cells.

Schizophrenia Readmissions

- Approximately 17% of Schizophrenia Patients are readmitted within 30-days.

- In July 2023, readmissions is 15%.

- One of the highest readmissions for MHA related hospital readmissions

Monthly trends in 30-day mental health and addictions-related hospital readmissions per 100 hospital discharges aged 0 to 105 years, overall and by diagnosis, in Ontario
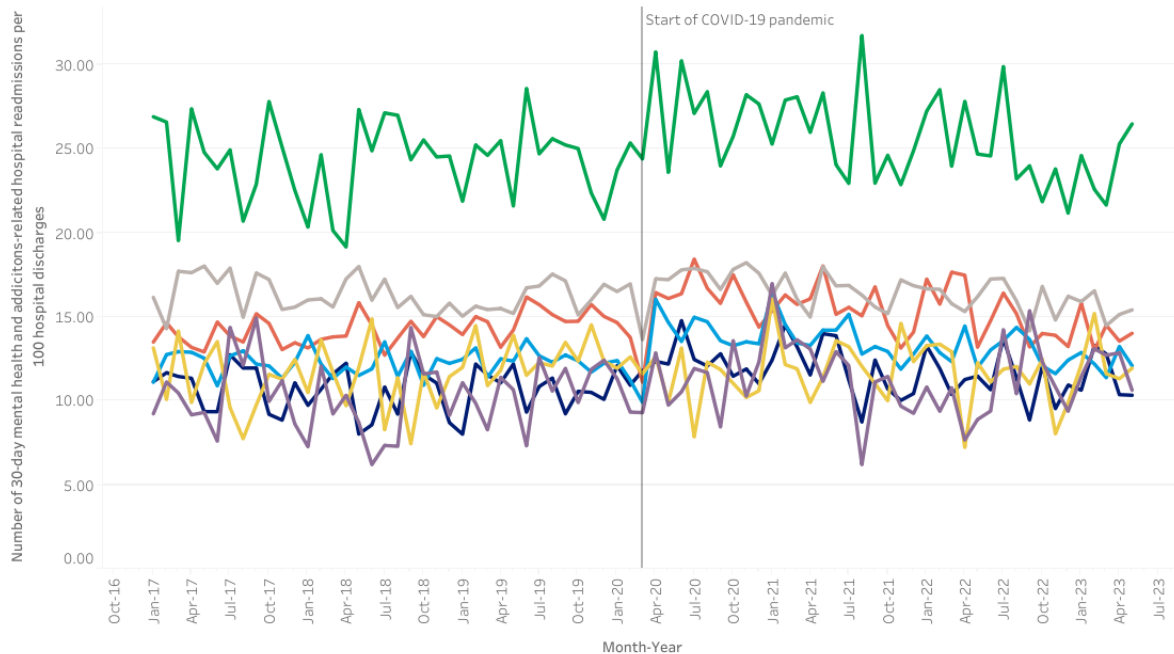
1. Obsessive compulsive and related disorders were suppressed due to small cells or sparse data.
2. The vertical line indicates the month when the World Health Organization declared COVID-19 a pandemic.

Exploring how to link quality to funding in MHA

Evolution of funding approaches: from volume to value-based healthcare

Quality-Based Procedures 30%

Global Funding 30%

HBAM 40%

Patient-Based Funding

From Volume To Value: Better Ways To Pay For Health Care

Providers would be better able to reduce costs and improve quality under episode-of-care and comprehensive care payment systems.
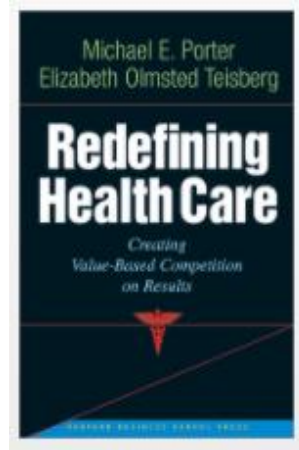
by Harold D. Miller

Michael E. Porter
Elizabeth Olmsted Teisberg

Redefining Health Care

Creating Value-Based Competition on Results

Miller HD. From volume to value: better ways to pay for health care. Health Aff (Millwood). 2009 Sep-Oct;28(5):1418-28. doi: 10.1377/hlthaff.28.5.1418. PMID: 19738259.
*"Aligning Outcomes And Spending: Canadian Experiences with Value-Based Healthcare" Canadian Foundation for Healthcare Improvement, August 2018

Global and Other Funding

Patient Based Funding

Performance Based

Activity Based

Un-targeted Targeted Targeted

Global **Volume** **Value**

The P4Q Approach for Schizophrenia

1. Performance Score

x #%

Ranked relative to hospitals

2. Improvement Score

x #%

Ranked relative to hospitals

3. % Relative Performance Score

3. % Relative Improvement Score

3. Combined Weighted Score

4. Adjustment to indicators

5. Funding Score (combining Adjusted scores for ALL indicators)

6. Funding calculation
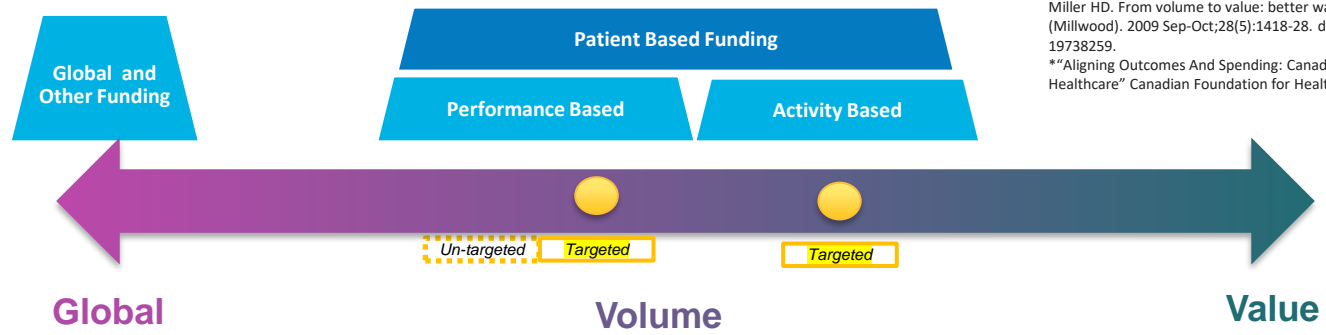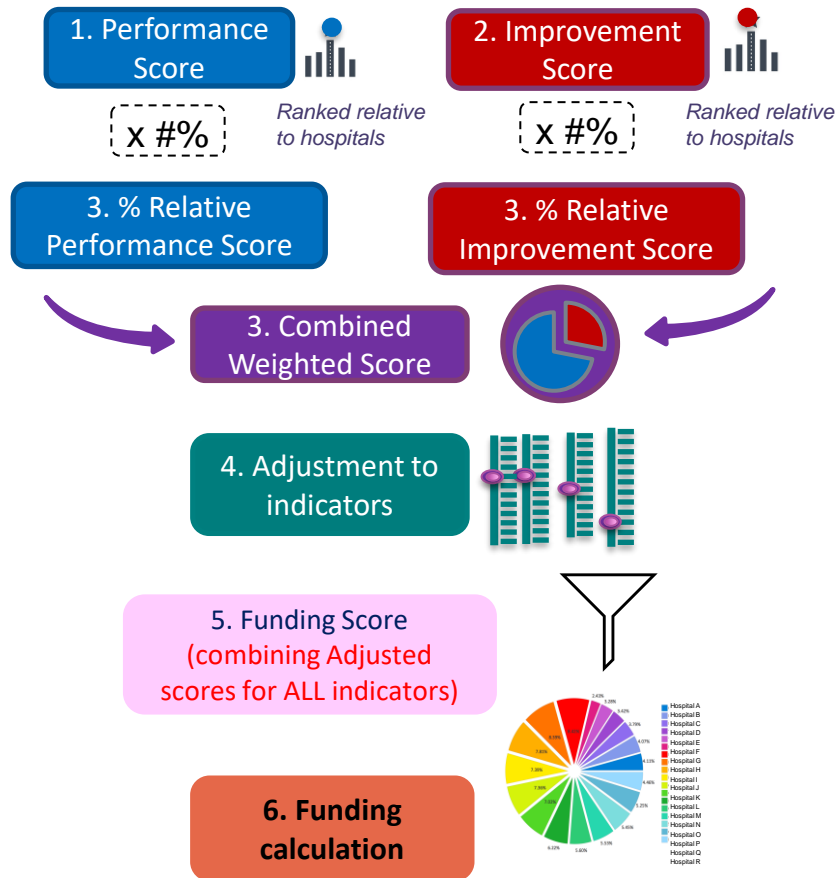
✓ Links funding to quality

✓ A funding approach to incentive quality improvement in the mental health and addictions sector, a first for Ontario

✓ Uses quality statement developed by Ontario experts based on consensus of opinion and best practice evidence.

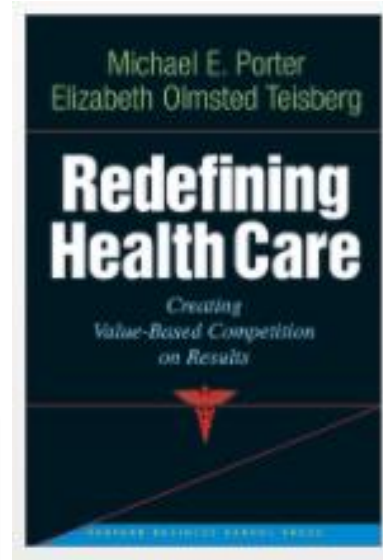✓ Learnings can be scaled to other chronic diseases with similar or less severity and complexity

Supporting Value and Improving Patient Outcomes

Value* **=** $\dfrac{\textbf{Outcomes that Matter to Patients}}{\textbf{Costs Throughout the Patient Journey}}$

- Measurement of outcomes needs to be connected to a strong quality improvement approach.

- If an Integrated Care Funding Model is to improve patient outcomes, funding for quality of care requires a strong **performance management** infrastructure that includes:

  - **Reporting**
  - **Benchmarking**
  - **Targeted Management**
  - **Prioritizing change ideas** for improvement and providing coaching, if required
  - **Audit and Feedback**

The process will be an iterative and phased approach to incorporate lessons learned.

Michael E. Porter
Elizabeth Olmsted Teisberg

Redefining Health Care

Creating Value-Based Competition on Results

* "lays out a breakthrough framework for redefining health care competition based on patient value"

*"Aligning Outcomes And Spending: Canadian Experiences with Value-Based Healthcare" Canadian Foundation for Healthcare Improvement, August 2018

Ontario Health Quality Standards for mental health and addictions

Development of measurement for Schizophrenia Integrated Care

Performance management

- Modified-Delphi process to gain consensus of a few quality statements

Prioritize quality statements

Performance measurement

- Select Quality Standard indicators
- Feasibility of data
- Identify SMART measures

- Explore outcome measurement
- Plan for evaluation
- Test and iterate based on learnings

Testing and Evaluation

Implementation and considerations

- Report on findings and share considerations for implementation

Implementation and evaluation

O+H+A

The development of the MHA Pay for Quality (P4Q) funding methodology

We conducted a modified Delphi process to select quality statements and its indicators to measure performance to be used in MHA P4Q funding approach

11 quality statements, 22 indicators

4 quality statements, 8 indicators

4 quality statements, 4 indicators
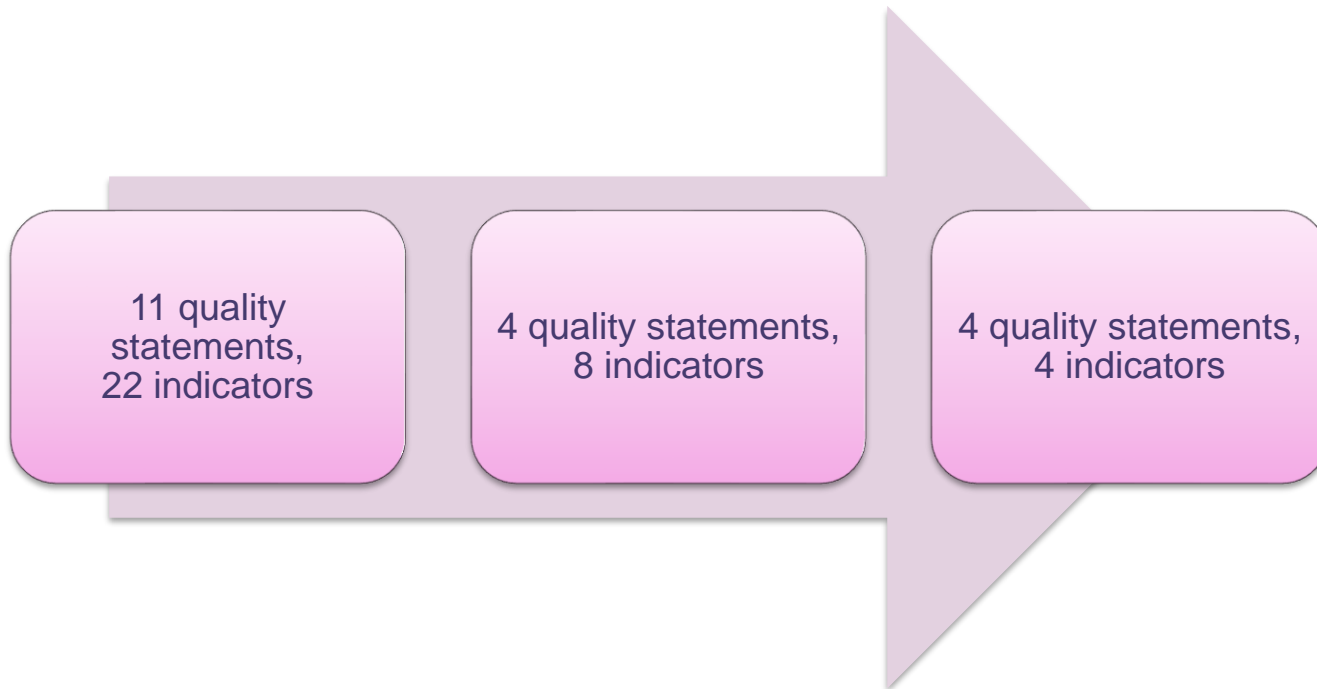
Schizophrenia Care **in Hospital** - Quality Statements (in brief)

Quality Statement 1: Comprehensive Interprofessional Assessment
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia undergo a comprehensive interprofessional assessment that informs their care plan.

Quality Statement 2: Screening for Substance Use
Adults who present to an emergency department or in an inpatient setting with a primary diagnosis of schizophrenia are assessed for substance use and, if appropriate, offered treatment for concurrent disorders.

Quality Statement 3: Physical Health Assessment
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia undergo a physical health assessment focusing on conditions common in people with schizophrenia. This assessment informs their care plan.

Quality Statement 4: Promoting Physical Activity and Healthy Eating
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia are offered interventions that promote both physical activity and healthy eating.

Quality Statement 5: Promoting Smoking Cessation
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia are offered behavioural and pharmacological interventions to alleviate nicotine-withdrawal symptoms and to help them reduce or stop smoking tobacco.

Quality Statement 6: Treatment With Clozapine
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia who have failed to respond to previous adequate trials of treatment with two antipsychotic medications are offered clozapine.

Quality Statement 7: Treatment With Long-Acting Injectable Antipsychotic Medication
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia are offered the option of a long-acting injectable antipsychotic medication.

Quality Statement 8: Cognitive Behavioural Therapy
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia are offered individual cognitive behavioural therapy for psychosis either in the inpatient setting or as part of a post-discharge care plan.

Quality Statement 9: Family Intervention
Adults who are admitted to an inpatient setting with a primary diagnosis of schizophrenia are offered family intervention.

Quality Statement 10: Follow-Up Appointment After Discharge
Adults with a primary diagnosis of schizophrenia who are discharged from an inpatient setting have a follow-up appointment within 7 days.

Quality Statement 11: Transitions in Care
Adults with a primary diagnosis of schizophrenia who are discharged from an inpatient setting have a team or provider who is accountable for communication and the coordination and delivery of a care plan that is tailored to their needs

Quality Statement 6: Treatment With Clozapine	☒ 6-1 Clozapine offered ☑ **6-2 Clozapine received** • Recommended by panel of pharmacy experts • Primary data collection until standardized data mechanism available
Quality Statement 7: Treatment With Long-Acting Injectable Antipsychotic Medication	☒ 7-1 LAI offered ☑ **7-2 LAI received** • Recommended by panel of pharmacy experts • Primary data collection until standardized data mechanism available
Quality Statement 10: Follow-Up Appointment After Discharge	☒ 10-1 Follow-up with any care provider (to be monitored) ○ Potential future indicator when community data available ☑ **10-2 Follow-up with physician** • Proceed with IC/ES consultation
Quality Statement 11: Transitions in Care	☑ **11-1 Care plan made available** • Primary data collection until standardized data mechanism available ☒ 11-2 Homelessness (to be monitored)

Changes to reporting for hospitals with inpatient mental health activity

- Clozapine and LAI indicators will be calculated using record level data

Quality Statement 6: Treatment With Clozapine	☒ 6-1 Clozapine offered ☑ **6-2 Clozapine received** • Recommended by panel of pharmacy experts • Primary data collection until standardized data mechanism available
Quality Statement 7: Treatment With Long-Acting Injectable Antipsychotic Medication	☒ 7-1 LAI offered ☑ **7-2 LAI received** • Recommended by panel of pharmacy experts • Primary data collection until standardized data mechanism available
Quality Statement 10: Follow-Up Appointment After Discharge	☒ 10-1 Follow-up with any care provider (to be monitored) ○ Potential future indicator when community data available ☑ **10-2 Follow-up with physician** • Proceed with IC/ES consultation
Quality Statement 11: Transitions in Care	☑ **11-1 Care plan made available** • Primary data collection until standardized data mechanism available ☒ 11-2 Homelessness (to be monitored)

Ontario 🏵️

Health Data Branch Service Announcement

Ontario Mental Health Reporting System (OMHRS) - Resident Assessment Instrument – Mental Health (RAI-MH) Update

With more than one million Ontarians experiencing mental health and addictions challenges each year, the government has prioritized these population to be served under the integrated care agenda. As such, there is a crucial need to support measurement-based care, quality improvement and performance measurement for mental health and addictions.

The Ministry of Health, Ontario Hospital Association (OHA) and Canadian Institute for Health Information (CIHI), in consultation with the Chairs of the Hospital Advisory Committee's Mental Health Funding initiative, have been collaborating to collect manually information from mental health facilities on the following quality standards (incorporating the Health Quality Ontario Quality Statements based on the Quality Standard –Schizophrenia: Care for Adults in Hospitals):
- Statement 6: Treatment with Clozapine
- Statement 7: Treatment with Long-Acting Injectable Antipsychotic Medication
- Statement 10: Follow-Up Appointment After Discharge
- Statement 11: Transitions in Care

The Ministry has worked with CIHI to integrate the collection of 5 new data elements into the existing Ontario Mental Health Reporting System (OMHRS) to standardize the collection of this important quality of care information. OMHRS is a valuable tool implemented by CIHI on behalf of the Ministry to standardize the collection of mental health clinical and administrative information within a singular reporting framework.

Next steps:
- CIHI will add 5 new mandatory data elements (related to treatment for schizophrenia) to the OMHRS Discharge Assessment, Short Discharge Assessment, and Short Stay Record.
- **This change is effective April 1, 2022.** New validation rules to support this change will only apply to submissions received after this date, and submissions that reference assessments received after this date. More information on these changes will follow.

The new data elements will inform evidence-based provincial benchmarks for these interventions and support the strategies needed to ensure value-based care from hospital to community for patients with conditions related to mental health and addictions.

Please share with the relevant staff within your organization.
- For questions related to the Service Announcement, please contact AskHealthData@ontario.ca
- For questions on the Mental Health Funding initiative, please contact HSF@ontario.ca
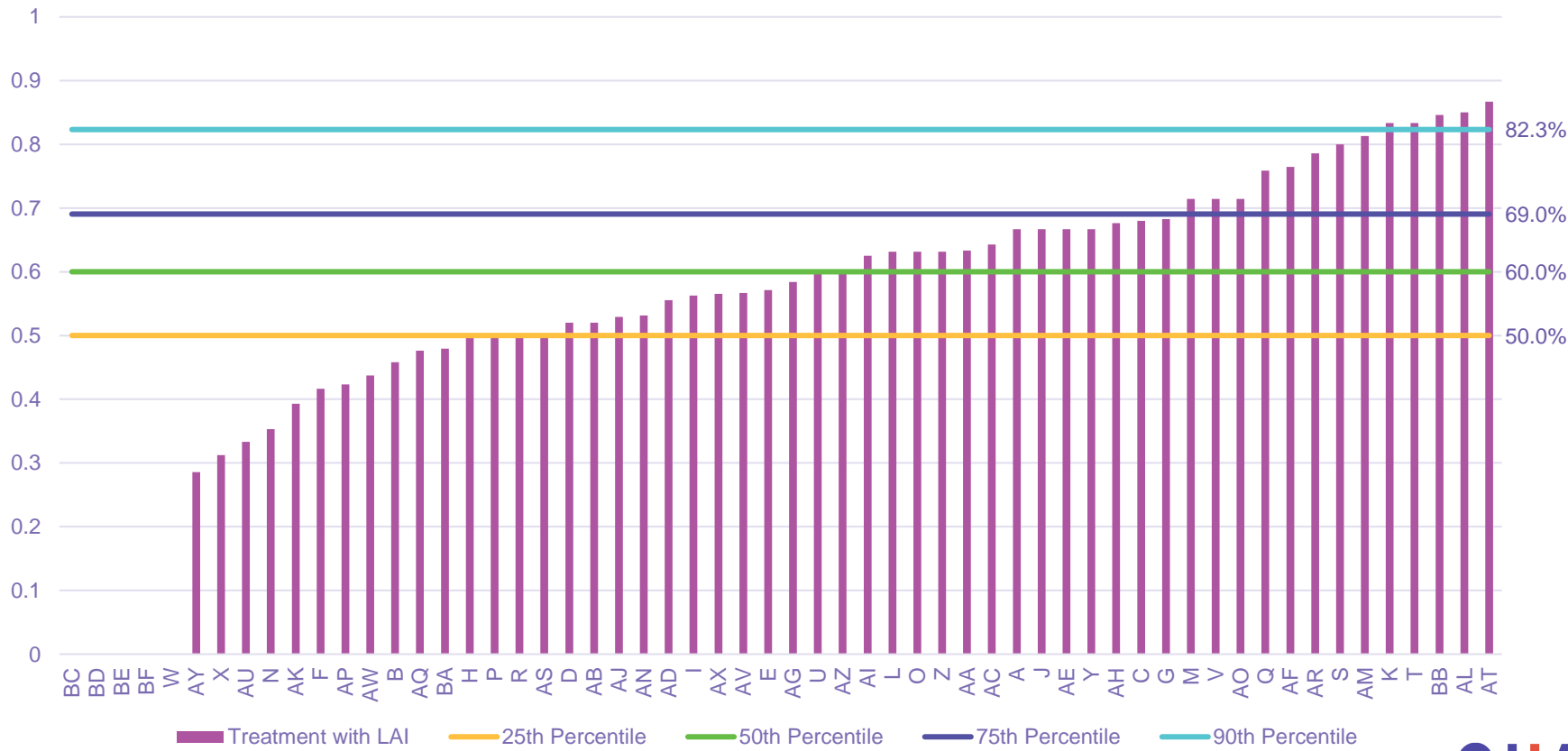- For Guidance on completing assessments, please contact specializedcare@cihi.ca

Health Data Support Team
Health Data Branch
Capacity Planning & Analytics Division
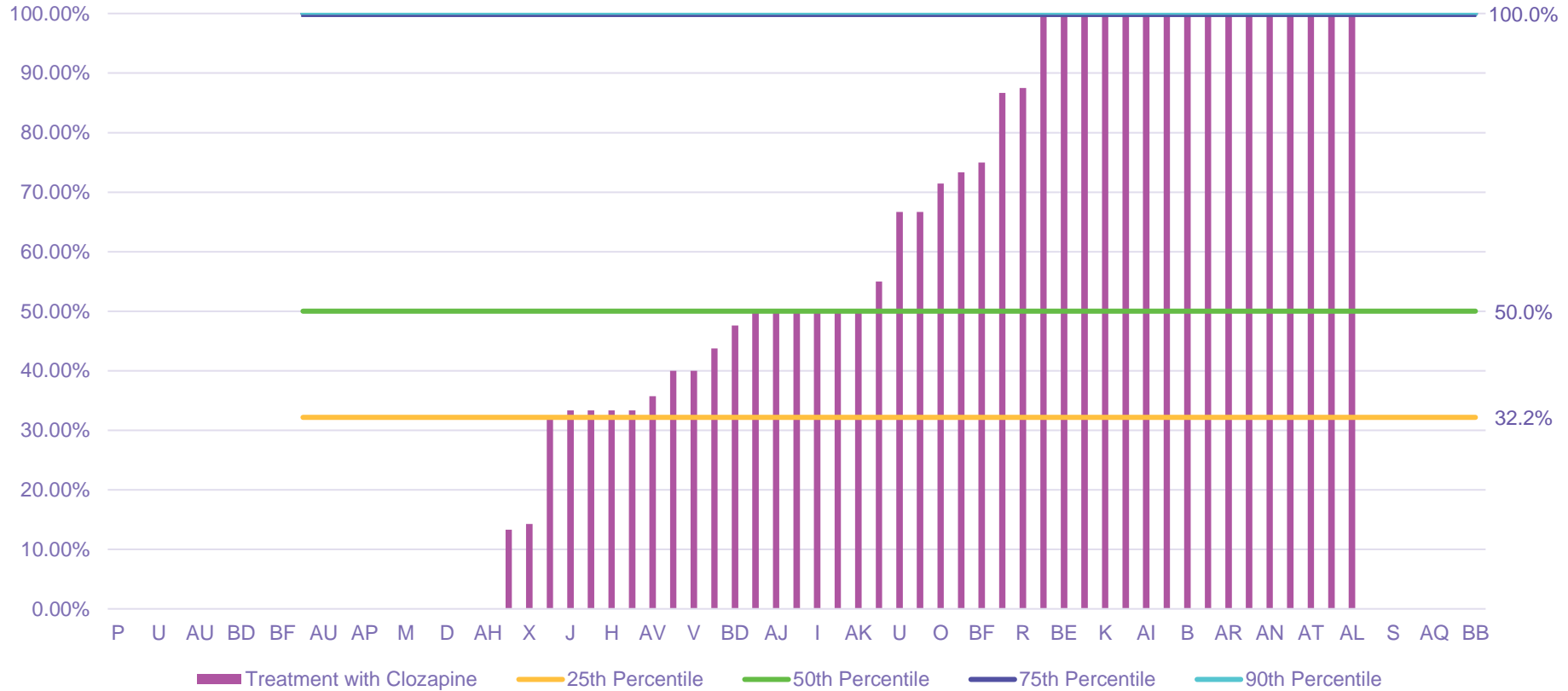Ministry of Health | Ministry of Long-Term Care

Need more information?
Contact us at: AskHealthData@ontario.ca

FY2023/24 Q1 – Treatment received with LAI antipsychotic medication

Legend: Treatment with LAI | 25th Percentile | 50th Percentile | 75th Percentile | 90th Percentile

Reference lines: 82.3%, 69.0%, 60.0%, 50.0%

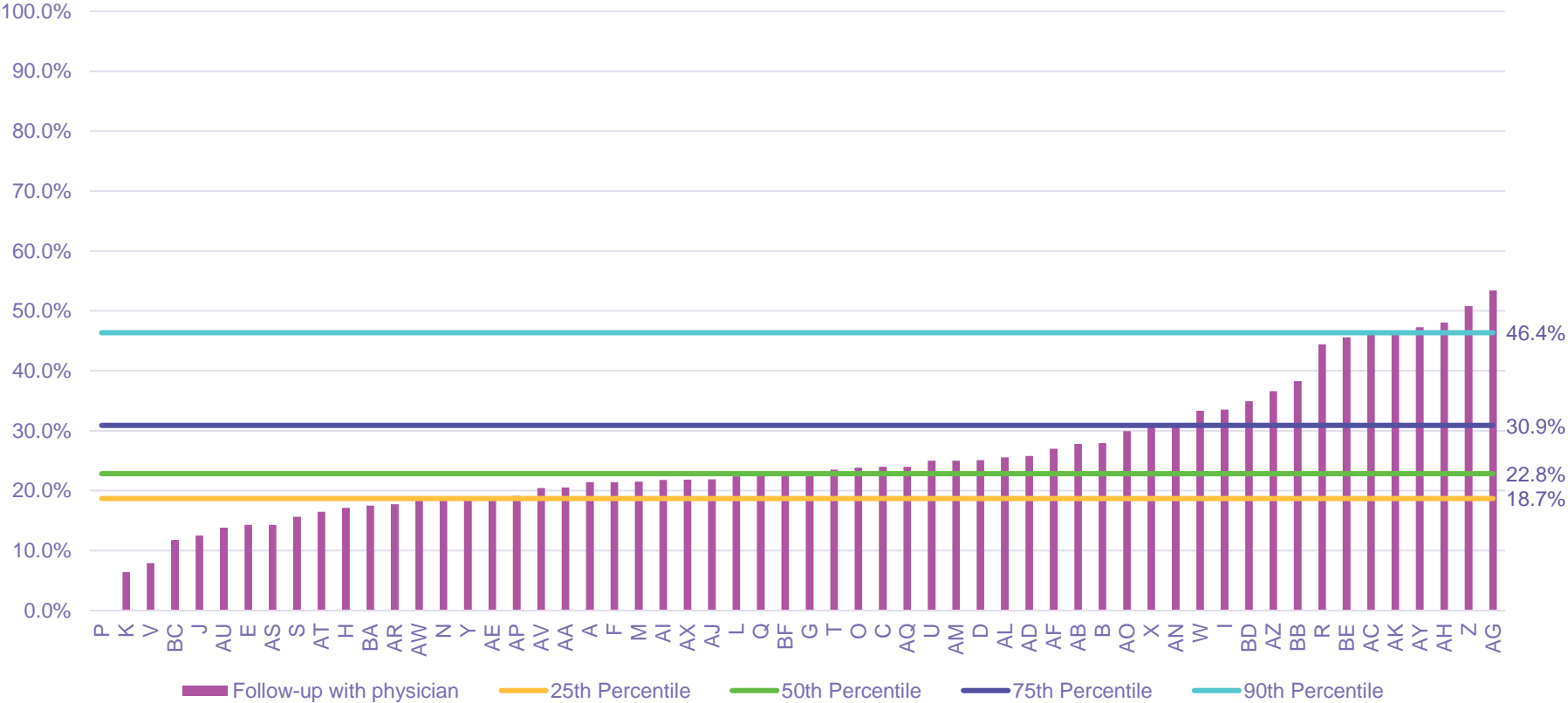# FY2023/24 Q1 – Treatment received with Clozapine

FY2023/24 Q1 – Care plan made available within 7 days of discharge from hospitalization
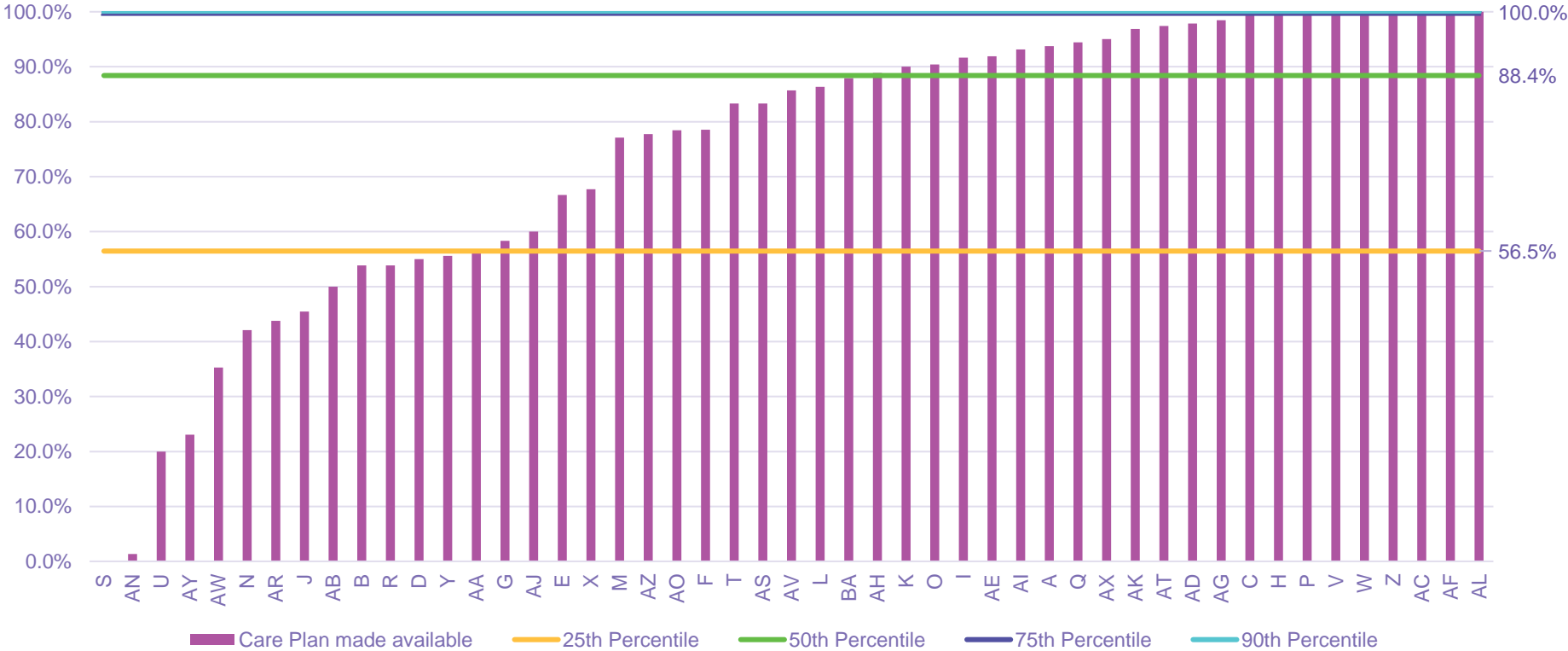
Legend: Care Plan made available | 25th Percentile | 50th Percentile | 75th Percentile | 90th Percentile

Reference lines: 100.0%, 88.4%, 56.5%

FY2021/22 – Follow-up with physician within 7 days of discharge

Reporting back: OHA Quality Standard Schizophrenia Care in Hospital Dashboard

A dashboard was developed to provide hospitals the ability to review the results of their quality measures and allow comparisons to others. This allows hospitals to connect with peers to learn about their successes on adoption of the quality statements.

https://www.oha.com/data-and-analytics/finance-tools/mental-health-and-addictions-quality-standard-schizophrenia-care-dashboard

Quality indicator results for treatment received with LAI and Clozapine
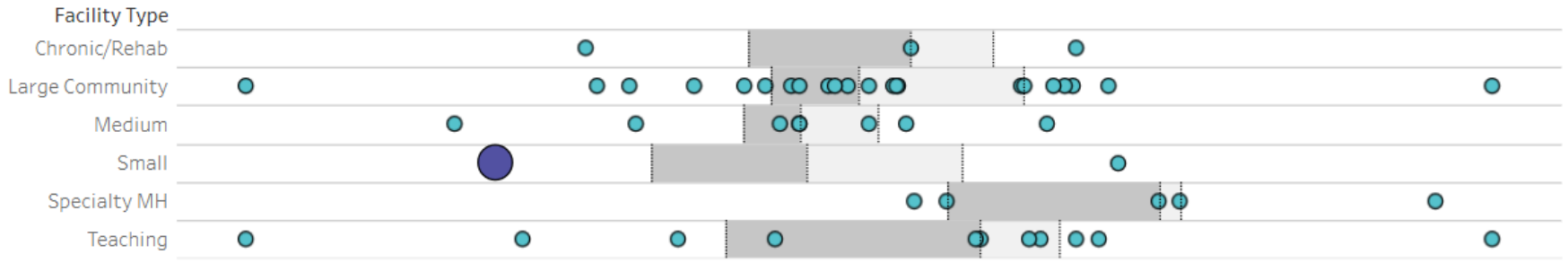
Integrated Care Initiative

Care pathway development

Hospital

Community (including primary care)

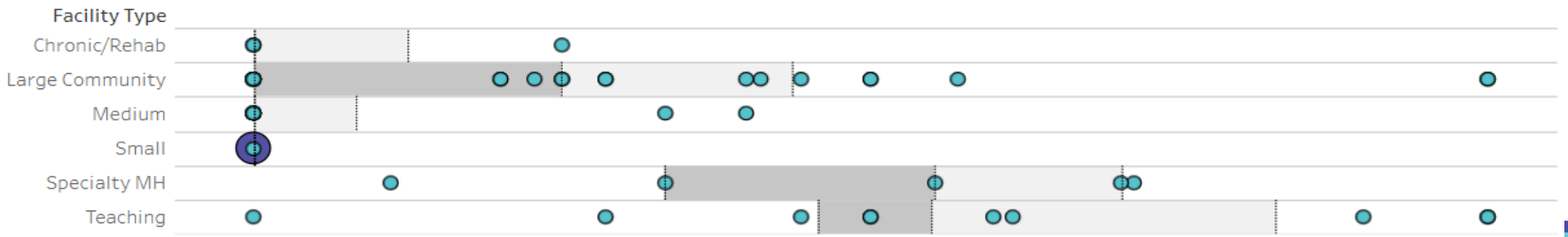**Selected quality statements (4)**

Patient's Care Pathway

Community needs assessed with a validated tool (QS1)

Diagnosis → Clinical assessment (physical and mental health) → Community needs assessment → Treatment and services decision

Care module 1

Care module 2

Up to 2 weeks from referral

Receive community-based intensive treatment services(QS5)

Continued support for chronic management

Long-acting injectable antipsychotic medication(QS8)

CBT for psychosis and other evidence-based psychosocial interventions

Cognitive Behavioural Therapy – Psychosis(QS11)

- Patient is diagnosed by a physician (psychiatrist or in collaboration with psychiatrists)

- Hospital settings may include inpatient, outpatient, mobile units

- Community settings may include mental health organizations, primary care settings, supportive housing, congregate settings

- Care modules and continued support for chronic management (i.e. LAIs) are dependent on intensive services needed, such as intensive case management, assertive community treatment, early intervention program, etc. They are offered in select care settings

Key Takeaways

- The initiative has created a significant focus on integrated schizophrenia care in Ontario's hospitals and community provider.

- Measuring performance using standardized approaches allowed providers to create a baseline for improvement and benchmark their performance.

- Based on the first six months of reporting, hospitals have demonstrated improvement and concordance to the quality standard for persons living with schizophrenia.

- P4Q approach needs strong support and collaboration at all levels but in the absence of patient classification systems, this approach should be explored.

Imtiaz Daniel, PhD, MHSc, CPA, CMA
Chief Innovation and Transformation Officer
Assistant Professor (Status Only), University of Toronto
idaniel@oha.com