Defining & Evaluating our Roster Complexity

Project Methods

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London InterCommunity Health Centre

Project Team

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Disclaimer

Please note that while replicating this complexity project may be useful for other practice settings, our approach has not been externally validated. Any use of the concepts or methods must be adapted to the local context, practice setting, and specific populations served. The LIHC team will be continuously improving upon this framework and approach for evaluating complexity.

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LIHC Background

The London InterCommunity Health Centre first began serving the London area over 30 years ago. We are an urban CHC offering many different services and programs across 4 site locations as well as in various locations throughout the community. We have three Primary Care sites and offer various more specialized programs including Health Outreach, Gender Care, Newcomer, Hep C, MyCare (integrated HIV treatment), Diabetes and Respiratory Health. We also help our clients through community programs like the Options Program, Youth Program, Seniors' WrapAround Program, HOME Program and Francophone Programs. We have 120 full and part-time staff. Our current complement of primary care providers includes 6.5 physician (MD) full-time equivalent (FTE) positions, and 7 FTE for nurse practitioners (NP). Both our MDs and NPs roster primary care clients.

Health System Context

There is increasing pressure on Primary Care models in Ontario to meet healthcare need and health system resource constraints amidst increasing costs, overcrowding of hospitals, funding freezes, and provincially driven funding cuts (LeBel, 2024). Meanwhile, there is a nationwide shortage of family physicians. The shortage is presumed to be multifactorial, including retirement, post-pandemic burnout, increasing administrative burden, lack of interest in entering the academic family medicine stream (exploring these specific challenges is beyond the scope of this project)(Canadian Medical Association [CMA], 2023). Locally, there is a large population who are unattached to a family physician in London, Ontario. This number is growing drastically with the latest reported number reaching >84,000, as estimated by the Canadian Physicians and Surgeons of Ontario [CPSO] in March of 2024.

Health professional organizations, such as the CMA and Registered Nurses of Ontario [RNAO] (2024), have, and continue to, advocate for better team-based primary care as well as the full utilization of Nurse Practitioners' (NPs) expanded scope, including their rostering capacity, to help fill the primary care shortage. With the continuous legal expansion of controlled acts authorized to NPs, there is an ever-narrowing gap between NP and MD scope of practice. This has resulted in a lack of clarity on role differentiation between MDs and NPs within the primary care sector despite persistent stark differences in pay.

It becomes critical that as a Community Health Centre (CHC), seen as sector leaders in delivering accessible primary care to high-acuity and high-service-need populations, that we advocate for developing a more contextualized and nuanced approach for evaluating healthcare complexity in primary care. A customized approach would support decision making in a way that accurately reflects client care needs matched with the appropriate expertise, resources, and staffing to meet those needs.

Measures for Evaluating Healthcare Complexity

Rapid Literature Review: approaches to conceptualizing complexity

Clinical complexity, or client-related complexity, in healthcare provision can be a somewhat nebulous concept—difficult to define and measure. Yet pragmatically, it becomes increasingly important for healthcare management to determine the intensity of care needed and consequently the human health resources required for meeting those needs. Corazza et al. (2017) developed a framework for evaluating clinical complexity that accounts for biological and "extra-biological" domains. Their model accounted for a continuum of complexity variables, with different weightings, along three tiers of domains. The biological domain being the most significant tier of complexity, and then the second and third tiers including behavioural and socioeconomic, then cultural and environmental respectively. Salisbury et al. (2017) used a Delphi study to generate and validate their own complexity measure for general practice. Their conceptualization accounted for greater time and workload required for client care. They differentiated between consultation and patient-related factors and used an approach based on the provider's subjective experience of complexity upon reviewing available health record data. Their consensus process involved two rounds of voting by providers and resulted in 34 factors for defining and measuring complexity (full lists are available in the article referenced). They endorsed using such a complexity measurement for informing primary care health resource decisions including staffing complements.

Existing Sector Approaches to Measuring Complexity

There are several existing local sector-based approaches to measuring and reporting on complexity. At the CHC level, a salary-based model with sector service accountabilities for quality of care, provider roster expectations are determined by a complexity measure called a SAMI score (Standardized ACG Morbidity Index -- where ACG stands for Adjusted Clinical Groups).

The Standardized ACG Morbidity Index (SAMI) is a predictor of primary care utilization and is used in the calculation of panel size for every CHC. Data from encounters with physicians and nurse practitioners is sent to the Institute for Clinical Evaluative Sciences (ICES), where it is combined with other encounters that clients have had across the healthcare system within a two-year timeframe. The resulting SAMI score is available at the organizational level.

Another metric for reporting client complexity is through the CHC Primary Care Dashboard Practice Profiles. Practice profiles are an annual report produced by the Alliance for Healthier Communities & the Institute for Clinical Evaluative Sciences (ICES) for evaluating primary care practice-level complexity. Data sources combine CHC EHR data with health system utilization

data. Indicators included are the SAMI score, healthcare utilization including other primary care models accessed, sociodemographic characteristics, cancer screening, and opioids dispensed.

Challenges with Assessing Complexity in our Practice Setting

At LIHC we serve different priority populations across different sites with unique population needs. Within each area of work we see differences in which variables are contributing the most to healthcare complexity between our programs. Over the years, the provider team has reported that there is a disproportionate workload associated with roster complexity: the higher the client complexity the more expertise, time, and energy needed to care for a client. We have heard from our provider team that our nurse practitioners have been rostering highly complex clients.

Historically, we have not had a deliberate approach to managing re-rostering of clients following provider transitions – at times, this simply involved tearing the roster list into equal parts and handing over the chart numbers. This approach gave no consideration for the different levels of care needed for the specific clients in the list, nor the existing complexity of clients carried by the receiving providers.

As a CHC we receive an updated SAMI score for our organization, as an accountability metric from our funder, that determines our required panel size (which includes targets for rostered and non-rostered clients). This score is not specific to any individual provider and over the years providers have voiced that they question the practicality of a Centre-wide SAMI score. Our SAMI score fluctuates over the years, but the providers continuously report that it does not seem to reflect the subjective experience of the complexity of the clients being seen, and hence the resulting roster expectations cannot be reasonably met by our FTE allotment. We have also heard feedback on the limitations of the electronic reporting tool for generating data from which SAMI is extracted. The providers critique the availability and specificity of the encodes provided to reflect client issues addressed within an encounter, and voice challenges with the amount of time it takes to find and click all the encode boxes to obtain a more accurate SAMI score.

Complexity Project 1.0 – Utilizing Health Links Chronic Conditions

This inspired our first attempt at obtaining a provider-level complexity measure. We used the available Health Links list from the Alliance Primary Care Dashboard pulled through BIRT. The Health Links report identifies rostered clients with 3 or more chronic high-cost conditions reported in the EHR (electronic health record).

We extracted the data by provider, summarized by role, and by site. We presented the findings to the leadership team and distributed practice profiles to providers. This initial round of exploring roster complexity at LIHC confirmed that some providers, namely some of our NPs,

are indeed carrying rosters with much higher rates of chronic/high-cost conditions than others. Our provider team, however, were less impressed with the findings and provided ample reasons why this measure of complexity was too narrowly focused on medical conditions. They voiced that this was not an accurate reflection of the actual complexity within their rosters, particularly accounting for the psychosocial and contextual aspects of care that make healthcare provision increasingly challenging with our clientele.

Knowing the limitations of available tools for defining and evaluating complexity in primary care, we determined that we needed something customized for LIHC.

Key Project Questions

How do we define and measure healthcare complexity of our clients?

How can we utilize the data from our EHR to help determine varying complexity across provider rosters?

Key Project Objectives

Develop a more ethical and nuanced measure for appropriate matching of client complexity to skill/scope/pay of the provider role

Better reflect complexity in our encountering to ascertain a more accurate reflection of the care we are providing

Future tailored design and resourcing of primary care teams with the right skill mix/staffing supports to complement the specific roster complexity needs

LIHC Approach to Evaluating Complexity: Provider Profiles

Initial Conceptualization of Complexity

Grounded in the Model of Health and Wellbeing, at LIHC we wanted to adopt a comprehensive model for conceptualizing complexity, that accounts for traditional medical factors that contribute to clinical complexity but also the client's contextual factors as this resonated with the providers' experience in our practice. Based on the articles selected in the rapid review of the literature, we paralleled Corazza et al.'s (2017) concept of a three-tier framework for defining complexity, using the domains of: biomedical, psychosocial, and social determinants of health (SDoH) & contextual factors.

We adopted several principles inspired by SAMI for our evaluation framework. This includes age and pregnancy represented as their own factors. We also retained the principle of accounting for the number of high-cost and/or chronic conditions a client has. We also included a measure

for the number of visits to the emergency department, and adopted the principle of applying a higher weighting for conditions that are unstable and likely to recur.

In our conceptual model, the biomedical tier includes multimorbidity as well as biological states such as aging or pregnancy that demand additional clinical expertise, attention, and care. The psychosocial tier accounts for cognitive, neurologic, and mental illnesses, as well as substance use, suicidality, etc. Finally, social determinants of health and contextual factors include factors such as housing precarity, poverty, childhood and trauma, and forms of structural violence, etc. Complexity factors endorsed by Corazza et al. (2017) and Salisbury et al. (2021) were reviewed, and we adopted specific ones to generate an initial list of factors for team consideration.

Provider Consultation for Inclusion & Exclusion of Complexity Factors

Factors impacting complexity were defined as those that increased the amount of provider time and energy spent directly with the client, as well as indirectly managing/coordinating client care. Because we work in a team-based collaborative practice this includes interprofessional team members needed to support the care of the client while the most responsible provider (MRP) oversees the care team and plan.

a. Providers reviewed the initial list and added to it based on clinical experience and tacit knowledge of which factors might be missing from the initial list that impact complexity based on the definition above. They included:
    i. Low health literacy
    ii. Intergenerational trauma (we determined that there would be elements of this factor reflected in institutional trauma and the child protection/adult safeguarding factor)
    iii. Health Institutional trauma

We mapped these based on encodes and available indicators for which we could pull data from the Electronic Health Record (EHR). We reviewed the exact encodes mapped per factor with the providers to ensure there was alignment with how the providers are using those encodes in their charting practices. See Appendix B for the exact extraction data points and sources for each factor.

Finalized List of LIHC Complexity Factors

1.	unemployment
2.	low income
3.	pregnancy/65 years and older
4.	8+ emerg visits (over 2 years)
5.	high visits with the primary care team
6.	food insecurity
7.	institutional trauma
8.	low health literacy
9.	substance use
10.	New to Canada
11.	autism/learning disability
12.	requires an interpreter
13.	child protection/adult safeguarding
14.	unhoused
15.	mental Health Condition
16.	low compliance
17.	10+ prescriptions
18.	dementia/cognitive Decline
19.	Multiple Health Links conditions
20.	Unstable MH

Appendix on Complexity Factors Definitions & Encode lists: Number of visits is >12 in one year (i.e. >1 per month, pulled over two years).

Weighted Scores for Complexity Factors

Congruent with the literature on complexity measures (Corraza et al. 2017), and echoed by our providers, not all complexity factors have an equal impact on subjective sense of healthcare complexity: workload, time or energy to manage that client's care. We presented our finalized list of complexity factors at an NP/MD meeting for each provider to provide a weighted relative score for each factor.

a. We requested participating providers (13 NP and MDs participated in our consultation process) to weigh each factor on a scale of 1-10, with

1= no extra time/energy

5= 50% more time/energy

10=100% more time/energy

Weighed Score Calculations

iv. Lowest and highest clinician scores eliminated to reduce outliers impacting average
v. Calculated average of clinician scores for each individual factor
vi. All factors total score = sum of individual factors
vii. Scaled factors to sum total possible score of 20
viii. Relative weight= individual factor average /all factors average
ix. Rounded relative score to the nearest tenth decimal place

Item	Complexity Factor	Average Score from providers (n=13)	Weighted Score *rounded to nearest 0.1 decimal*
1.	unemployment	3.4	**0.5**
2.	low income	3.6	**0.6**
3.	Pregnancy/65+	4.1	**0.7**
4.	4+ emerg visits (8 over 2 years)	5.0	**0.8**
5.	High visits	5.0	**0.8**
6.	food insecurity	5.0	**0.8**
7.	Institutional Trauma	5.2	**0.8**
8.	low health literacy	5.6	**0.9**
9.	Substance use	5.8	**1**
10.	New to Canada	6.2	**1**
11.	Autism/Learning Disability	6.4	**1**
12.	interpreter	6.5	**1.1**
13.	safeguarding	6.5	**1.1**
14.	unhoused	6.6	**1.1**
15.	Mental Health Condition	7.1	**1.2**
16.	low compliance	7.1	**1.2**
17.	10+ prescriptions	7.4	**1.2**
18.	Dementia/Cognitive Decline	7.4	**1.2**
19.	6+ conditions	9.3	**1.5**
20.	Unstable MH	9.5	**1.5**
Total Score		122.5 (Average 6.1)	**20**

Proposed Adjusted Roster Targets

Based on the range of provider complexity scores generated from the scoring system we wanted to use that data to make decisions about roster expectations and redistributions. We

decided that we would use a relative adjustment of the roster target compared to the average CHC complexity score. First we would shift a providers' roster expectations up or down depending on role and the average complexity of their current roster. As follows:

a. Adjusted Role Target - adjusted the average complexity target based on provider role compared to overall CHC average.
    x. Adjusted Complexity Score Target = Up Half a point interval for MDs from CHC average complexity score
    xi. Adjusted Complexity Score Target = Down Half a point interval for NPs from CHC average complexity score

    Rationale: MDs can be expected to see, on average, more complex clients.

b. Adjusted Roster Targets:
    xii. Based on the distribution of average scores found across all they provider profile reports (range of 1.18 – 5.24) we proposed adjusting roster size by increments of %5 increase or decrease, based on each half point interval deviation from the role-adjusted complexity target.

We completed these calculations manually in excel, demonstration of the calculation as follows:

E.g. Roster Target Adjustment Scale

Adjustment method	**Adjusted Role Targets**	**Example Roster Complexity Score**	**Anomaly in +/- 0.5 intervals**	**Adjusted Roster Targets = +/- 5% adjustment for each interval anomaly from adjusted role targets**
		$n(c)$ + 2.6	2.6 = +5	-25% roster target adjustment
	MDs adjusted Complexity Target: $m(c)$ = c+0.5	$m(c)$ + 1.3	1.3 = +3	-15% roster target adjustment
CHC Avg. Complexity Score =	*C*			
	NPs adjusted Complexity Target: $n(c)$= c -0.5	n(c) - .7	-0.6 =-1	+5% roster target adjustment
		n(c) – 1.2	-1.2= -2	+10% roster target adjustment

Validation Processes

Proxy indicator: high number of visits as an indicator for "instability"

As a professional group, we determined that we would measure the "instability" of a client's medical conditions through assessing for persistent high number of visits as a close proxy indicator. At the advice of the Clinical Advisor, we suspected that a client who comes in >1/month consistently over the course of 2 years would suggest chronic unstable medical or mental health conditions. We pulled the number of visits with the MD/NP/RN team. We included RNs to account for the shared care model of our core primary care teams. We then correlated these results with the average complexity score generated through our framework and found a moderate/near strong positive correlation between number of visits and client complexity score (r=0.67).

Complexity Scores at Client Level Match Expected Outcomes:

The initial complexity profile report generated a score for all clients which was filtered for the clients with the highest scores. We selected two provider profiles to trial validation of complexity scores at the client level. Chart numbers of the top 10 clients were taken to two primary care team members to validate if the report generated aligns with the subjective sense of complexity of care for the clients in the list. The first clinician confirmed that the clients included in the list were clients they would expect to be in the most complex of their roster. The clinician was then asked if there were any clients that they would have expected to be in top grouping, that were excluded from the generated list. The first provider provided 2 additional client names. Those were searched for in the complexity ranking tool and found to be at 11th and 15th place based on complexity scores. We repeated this process with a second provider with similar results. This provides face validity of our scoring system, that the tool is working as expected at the client level.

Adjusted Roster Targets Compared to Official Panel Targets:

Once we had the calculations completed for all providers, we tallied the total adjusted roster targets compared to our official MOH panel size (currently at 711 per 1FTE at LIHC). Our proposed roster targets were off by 116 clients, representing 1.69% of our total current panel size. The slight difference can be explained by whether we rounded a providers complexity average up or down to the nearest half point interval in favor of the provider for making a smaller roster target increase.

Limitations

Firstly, the quality of the complexity measure is only as accurate as the quality of the encodes entered into the client EHRs by the providers. Additionally, the new complexity factors selected

as part of the complexity measure are not routine charting practice yet but will come in to play with time and a shift in charting habits e.g. problem with health literacy.
Some rosters have a small roster size, which may inflate the complexity averages for those rosters.
Some complexity indicators are proxies. Namely to evaluate the concept of "instability" of a medical condition, we used 1 or more visits per month over a 2yr period and we validated this as a decent proxy by testing for positive correlation to the client complexity scores. Note that the compiled complexity score of any given client also includes the high number of visits factor in that score, so that could impact the correlation result.

The weighting scale system we employed for ascertaining relative impact of the factors was co-created with our internal providers, not based on an externally validated tool. However, the approach does demonstrate face validity with the results meeting provider's expected outcomes/felt sense of specific clients in their care when we provided them with the top 20 clients on their roster.

Provider complexity scores and adjusted targets are reported relative to organization-wide and peer averages. We know from experience that some providers have complex rosters, but when we compare to the overall complexity at our Health Centre, a provider might land slightly below the average. This must be taken into consideration when helping interpret results with the specific providers and leadership.

Visualizing & Disseminating Our Findings

We determined that we wanted to show our findings in a way that would easily help leaders and providers have the information they needed to make staffing, rostering, and client-level decisions in keeping with our overall project objectives.

CHC Report

Organization-wide report created for the leadership level for strategy and monitoring and quality improvement.

Summary Indicators:

a. Provider by FTE and Count of rostered clients
b. Average Complexity Score by Provider > average biomedical score subset*
c. Average complexity score for the whole CHC > subset average biomedical score

Comparators

d. Breakdown of CHC Average complexity score by site
e. Breakdown of CHC Average complexity score by role (MD/NP)

f. Adjusted roster targets for all providers

**Biomedical score subset* includes indicators: 10 or more medications prescribed, chronic conditions, emergency visits, over the age of 65, and pregnancy.

Provider Report

Provider specific reports with individualized and client-level complexity information that would support us in understanding how to right size and make rostering decisions to better match scope manage workloads would be individualize and interactive. Reported indicators per provider practice include:

Summary of Sites & Roles

a. average complexity across sites & roles > average biomedical score
b. averages of roles visualized by site

Complex Clients:

c. Current Client Count
d. Roster Target based on CHC SAMI Score (Currently 711 clients per 1 FTE)
e. Average Complexity Score > Average Biomedical Score
f. Percentage of roster with a complexity score of 0
g. Top 20 clients, with associated chart numbers, individual client complexity score > biomedical complexity score

Provider Roster Complexity by Factor

Shows a visual bar chart of the proportion of rostered clients with each complexity by factor

- Useful for understanding which factors are generating the greatest sense/pressure of complexity within a provider's roster
- Interpretation note: Different weighting across each factor, proportion of clients marked "positive" for that factor, not how much of the complexity score is derived by that factor. Useful for comparing a specific factor between MD to another MD, or group of MDs to NPs.

Dissemination Plan

We determined that we wanted to provide multiple ongoing avenues for sharing the findings with full transparency about our intent and methods and extend an ongoing invitation to providers to submit feedback to help us improve the next iteration of the project.

We disseminated via:

- Presentation to shared leadership on methods and findings
- Pre-met with a few providers who we anticipated to have concerns about their profiles
- E-mail out all provider profiles individually and invited them to submit questions and suggestions
- Hosted 2 virtual drop-in times offered for providers to meet with the project team and discuss their report findings/concerns and feedback.

Commitments to Continuous Process Improvement

From the outset we knew this would be an evolving process. Arriving at a comprehensive framework to evaluate complexity that is relevant and pragmatic for our practice setting would take continuous learning and adapting. Process improvement initiatives we committed to:

- Update EHR encountering tools to include the more specific as well as generalized encodes to facilitate more accurate documentation of care provided.
- Update intake processes to include some of the biomedical factors as guidelines for streamlining which clients are assigned to MDs or NPs. Used this information to enhance our existing primitive decision tool that we had prior to this.
- Redistributing rosters for NPs with really highly complex clients. Any roster redistributions would be in collaboration with the provider to assess appropriateness (including client impact) for transferring clients to MDs or other providers on the team with rostering room.
- Incorporating feedback and missed encodes for next iteration of Complexity 3.0, goal of rerunning the reports and adjusted roster targets on a q6months basis or at least yearly.

Appendix A

Provider Complexity Factors Rating Tool

Factor	**Rating 1-10** (how much does this factor increase the time or mental energy in caring for this client in primary care) **1= no extra time/energy** **5= 50% more time/energy** **10= 100% more time/energy**	**Comments on the factor** **(should we use a different cutoff? Are there encodes we should use?)**
Over 65		
Pregnancy		
Has >10 active prescriptions		
Has 3 high cost/chronic conditions (*Ex: Diabetes, CHF, Sepsis)*		
Has 4-5 high cost/chronic conditions		
Has 6+ high cost/chronic conditions		
Mental Health Condition (*Depression, anxiety, postpartum, bipolar, eating disorder)*		
Unstable mental illness (*Schizophrenia, psychosis, suicide, somatization, borderline personality)*		
Dementia/Cognitive Decline		
Learning Disability/Autism Spectrum Disorder		
History of Institutional Trauma		
Substance Use		
4+ emerg visits in past year		
Requires an interpreter		
Unhoused/unstable housing		
Food Insecurity		
Child Protection/Adult Safeguarding		

Unemployment		
Low Income		
Low Health Literacy		
Low Compliance with medical recommendations		
Interpreter Required		
New to Canada		

Do you have other areas that we're missing and should pull? If so, where do we pull that information from (i.e. what issue addressed? etc)

Appendix B

Details of our Process: Complexity Factors/Score/Data Extraction Source/Parameters

Factor	Weight	Data Source	Data Points/Encodes Pulled	Parameters
BIO- MEDICAL				
Age > 65 years	0.7	Roster list	Not defined by time	Current date
Pregnancy	0.7	Issues addressed	7703,9332,7852	Pulled over 2 years
Has > 10 active prescriptions	1.2	Prescriptions	Total number of distinct medications prescribed	Pulled over the past year Filtered to remove discontinued Removed duplicates (distinct count)
Multiple chronic or high cost health conditions 3 conditions 4-5 conditions 6+ conditions	 0.5 1 1.5	Issues Addressed	Health links list – chronic major medical conditions issues addressed K:drive>Dundas Clinic>K folder>M	Pulled over 2 years
Has High level of Emergency Department visits	0.8	HRM reports		8+ visits in 2 year
Other Factors				
Mental Health Condition	1.2	Issues Addressed	Depression (major, severe, recurrent), • 5604 – major depression (recurrent) • 5612 – severe depression (recurrent) anxiety, • 5644 – generalized anxiety disorder • 5643 – anxiety disorder postpartum, • 8208 – postpartum depression bipolar, • 5622 – affective disorder • 5632 - bipolar type II • 5588 – schizoaffective eating disorder • 5719 PTSD • 9322 Conversion Disorder • 5697 Report pull: 5604,5612,5644,5643,8208,5622,5632,5588,5719,9322,5697	Charted by NP/MD within past 2 years

High number of primary care visits	0.8	Number of visits in the last 2 years		>24 visits with primary care NP, MD, and RN April 1, 2022-March 31, 2024
Dementia/Cognitive Decline	1.2	Issues Addressed	• 4714 Alzheimer's Disease • 10422 Fear/Concern about Cognitive Impairment/Decline • 4732 Dementia in Parkinson's Disease • 4709 Cognitive Impairment (Acquired) • 90 Disturbed Cognition • 4705 Dementia • 4733 Lewy Body Dementia • Acquired Brain Injury (Chronic) (10352) • intellectual disability (10614) • Post-traumatic brain syndrome (4804) Report pull: 4714,10422,4732,4709,90,4705,4733,10352,10614,4804	One of the encodes charted by NP/MD within past 2 years
Learning Disability/Autism Spectrum Disorder	1	Issues Addressed	• Learning disability (5293) • Autism 10579 • Developmental delay (5278), • dual diagnosis (10271), • intellectual developmental disorder (10613), • fetal alcohol spectrum disorder (1053), • fetal alcohol syndrome (9973) Report pull: 5293,10579,5278,10271,10613,1053,9973	Charted by NP/MD within past 2 years
Unstable mental illness	1.5		Schizophrenia • 5561 – generic • 5564 - disorganized • 5562 – paranoid • 5565 - catatonic Affective psychosis • 5623 • 5624 - Manic depressive • 5424 - hallucinogen • 4792 – organic • 5560 – psychotic disorder Borderline personality • 5756 Suicide • suicidality (10589) • Suicidal act (5196 • suicidal ideation (5192), • active suicidal ideation (10589) and self harm (9997) Somatization • 5691 Unstable PTSD	Charted by NP/MD within past 2 years

			• Complex PTSD (10013) • Psychogenic (5704) Report pull: 5561,5564,5562,5565,5623,5624, 5424,4792,5560,5756,10589,5196, 5691,10013,5704,5192,10589,9997	
History of Health Care or Institutional Trauma	0.8	Issues Addressed	Health care facility unavailable (9103) Problem with health care system access/ availability" (9069) War affecting community (9601), Victim of terrorism (9260) Report pull: 9103,9069,9601,9260	Charted by NP/MD within past 2 years
Substance Use	1	Issues Addressed	• Substance Use 10102 • Substance Abuse 5304 • Multiple Substance Abuse 5462 • Visit for Advice on Safer Drug Use 9848 • IV Drug Use 10141 • Opioid Replacement Therapy 10246 • Opioid Use Disorder 10424 • Opioid Abuse 5351 • Alcohol use disorder (10339), • Alcohol Dependence (5325), • Alcohol Addiction (5326) • Alcoholism (chronic) (9276), • Chronic Alcohol Abuse (5323), • Alcohol Abuse (5318), • Alcoholic cardiomyopathy (3140), • Alcoholic cirrhosis (1654), • Alcoholic liver disorder (1651) Report pull: 10102,5304,5462,9848,10141,10246,10424,5351,5325,5326,10339,9276,5323,5318,3140,1654,1651	Charted by NP/MD within past 2 years
SoDH/Contextual				
Unhoused or Unstable Housing	1.1	Issues addressed	• 8986 Inadequate Housing • 9440 At Risk of Homelessness • 8990 Homelessness Report Pull: 8986,9440,8990	Charted by NP/MD within past 2 years
Food Insecurity	0.8	Issues addressed	• 9802 Food Insecurity • 1027 Food Deprivation • 8972 Inability to Acquire Adequate Food • 8971 Inability to Acquire Food Report Pull: 9802,1027,8972,8971	Charted by NP/MD within past 2 years
Child Protection/Adult Safeguarding	1.1	Issues addressed	10046 – Involvement of Child Welfare Agency 9160, 9529, 9161 - Family with Elder Abuse 10142, 9530 - Intergenerational Issue/Conflict	Charted by NP/MD within past 2 years

			9168 - Abusive Relationship Between Partner/Spouse 9170, 9169, 9172, 9171 - Abusive Emotional Relationship with Partner/Spouse 9174, 9173, 9176, 9175 Abusive Physical Relationship with Partner/Spouse 9179, 9177, 9180, 9178 Abusive Sexual Relationship with Partner/Spouse 9181, 9183 - Consequences of Partner Abuse Report pull: 10046,9160,9529,9161,10142,9530, 9168, 9170,9169,9172,9171,9174, 9173,9176, 9175,9179,9177,9180,9178,9181,9183	
Unemployed/Precarious Work	0.5	Issues addressed	9011 - Problem with Being Unemployed 9012 - Unemployment 9807 - joblessness 9465 - Chronic Unemployment 9466 - Underemployment Report pull: 9011,9012,9807,9465,9466	Charted by NP/MD within past 2 years
Low income	0.6	Issues addressed	8967 - Low income 10545 - Financial Insecurity 9379 - Inadequate Income 8965 - Financial Problem 8968 - Poverty Report pull: 8967,10545,9379,8965,8968	Charted by NP/MD within past 2 years
Low Health Literacy	0.9	Issues addressed	10548 - Problem with health literacy	Charted by NP/MD within past 2 years
Low compliance with medical recommendations	1.2	Issues addressed	9120 - Noncompliance 9119 - Problem with Medical Care Compliance Report pull: 9120,9119	Charted by NP/MD within past 2 years
Interpreter Required	1.1	Issues Addressed	1044 - Requires an interpreter	Charted by NP/MD within past 2 years
New to Canada (within 3 years)	1	Issues Addressed	9415 – adjusting to new community 10030 – problem with adjustment to new country culture 9580 – community immigration issues 9456 – fear/concern about immigration status 9002 - Immigration adaptation problem 9445 - Immigration Issues 10029 - Post-Immigration Stress 10040 - Family reunification issue Report pull: 9415,10030,9580,9456,9002,9445,10029,10040	Charted by NP/MD within past 2 years

Updated Nov 14/24 to include 3.0 revisions.

Appendix C

3.0 Notes

Non-encode feedback to incorporate:

- External Feedback
    - Consider stratifying by population (Newcomers, Precariously Housed, etc)
    - Include racism, discrimination, etc encodes in Institutionalized Trauma
    - Face validity – confirmed from client complexity scores with providers, and with the adjusted provider targets within a rounding error of panel/MOH targets
- Feedback from Providers:
    - Should chronic pain/high dose narcotics (not related to substance use) be its own category?
    - Should we have a behavioural category (hx of escalation, anger issues, etc that isn't captured by a diagnosis)?
- Process improvement
    - See if we can automate target adjustment calculations in power BI
    - Suggestion from Alliance learning day re: target adjustments. Trial a calculation to start with total panel target, adjust based on role, and then FTE proportion of the whole.
    - Suggestion from Alliance learning day re: tracking impact on clients due to transferring care to a new provider for break in continuity.

Encodes to add:

Factor	Encode to add	Description
Institutionalized Trauma	9601,9260	War affecting community (9601), Victim of terrorism (9260)
Mental Health	9322,5697	PTSD (9322), Conversion Disorder (5697)
Unstable Mental Health	10013,5704,5192,10589,9997	Complex PTSD (10013), psychogenic seizures (5704), suicidal ideation (5192), active suicidal ideation (10589) and self harm (9997)
New to Canada	10040	Family reunification issue (10040)
Learning disability	5278,10271,10613,1053,9973	Developmental delay (5278), dual diagnosis (10271),intellectual

		developmental disorder (10613), fetal alcohol spectrum disorder (1053), fetal alcohol syndrome (9973)
Substance use	5325,5326,10339,9276,5323, 5318,3140,1654,1651	Alcohol use disorder (10339), Alcohol Dependence (5325), Alcohol Addiction (5326) Alcoholism (chronic) (9276), Chronic Alcohol Abuse (5323), Alcohol Abuse (5318), Alcoholic cardiomyopathy (3140), Alcoholic cirrhosis (1654), Alcoholic liver disorder (1651)
Dementia/Cognitive decline/Impairment	10352,10614,4804	Acquired Brain Injury (Chronic), intellectual disability (10614) Post-traumatic brain syndrome

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