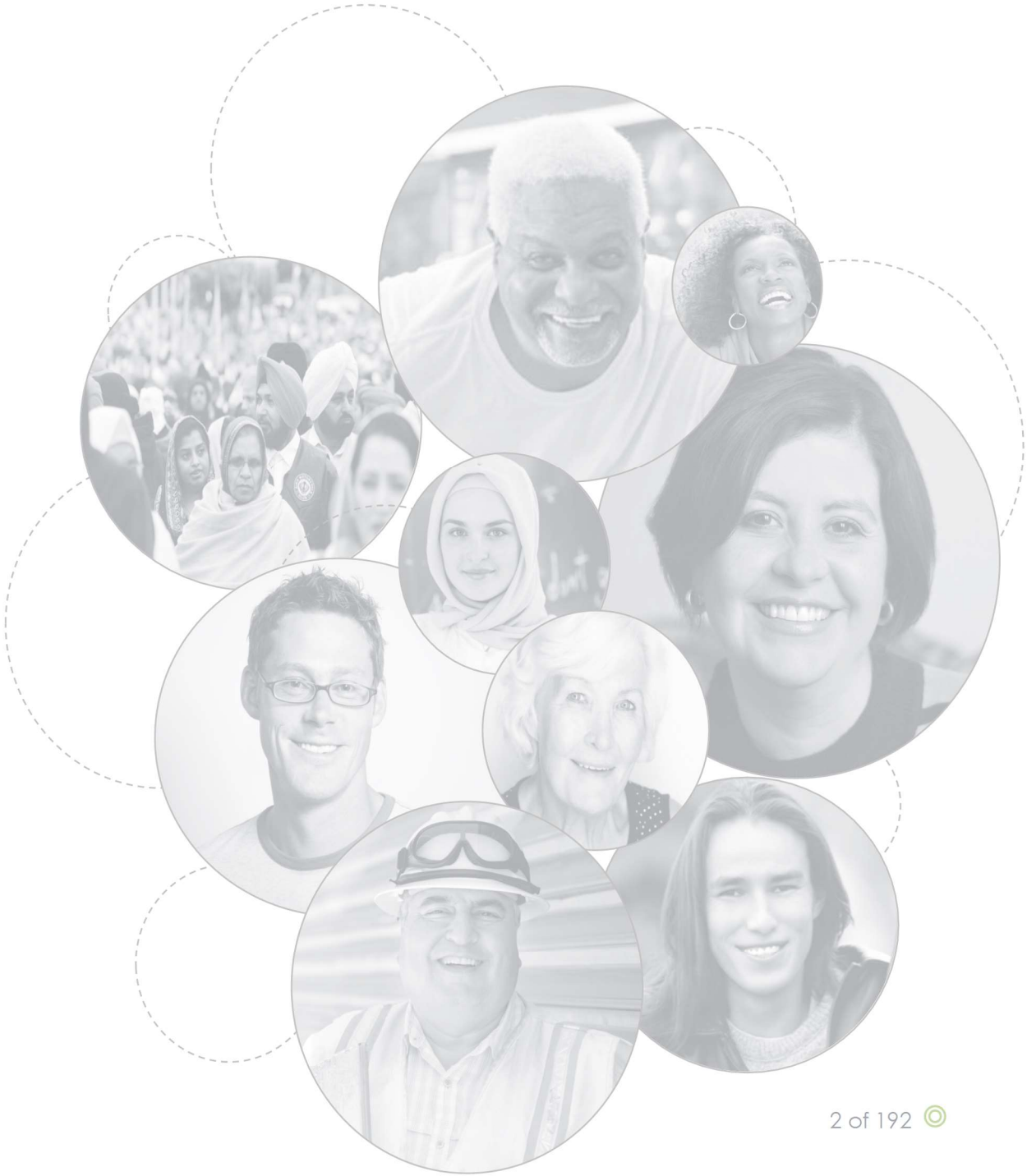
Health PEI
One Island Health System

MENTAL HEALTH AND ADDICTIONS MASTER PROGRAM VISION

A multi-site, multi-phased integrated strategy, allowing for a transitional/incremental roadmap of integrated and collaborated programs of Mental Health and Addictions Services

2018

"All people living in P.E.I. will have the equal opportunity to achieve and maintain the best possible mental health and well-being throughout their lifetime."



Report Contents

1. Acknowledgements 5
2. Scope of Study 6
2.1 Project Background 6
2.2 Project Approach 9
3. Executive Summary 13
4. Current State Themes 19
4.1 Current Health PEI Mental Health and Addictions Services 20
4.2 Theme #1: Access 21
4.3 Theme #2: Quality 33
4.4 Theme #3: Communication, Coordination, and Technology 39
4.5 Theme #4: Client Experience 44
4.6 Theme #5: Workforce 48
4.7 Theme #6: Facility Design 53
5. Establishing a Long-Term Vision for Mental Health and Addictions Services in PEI 67
5.1 Leveraging Outcomes-Based Visioning™ Methodology 67
6. Project Future Demand for Mental Health and Addictions Services 78
6.1 Forecasting Methodology 78
6.2 Mental Health and Addictions Patient Volume Projections 83
7. Putting it All Together: Creating a Service Delivery Strategy 90
7.1 The Future Model of Care: Overview 90
7.2 Adult Mental Health Client Journey 93
7.3 Child & Adolescent Mental Health Client Journey 108
7.4 Geriatric Mental Health Client Journey 117
7.5 Forensic Mental Health Client Journey 130
7.6 Addictions Services Client Journey 135

8. Translating Future Vision into Future Facility Needs 143
8.1 Establishing a Site of Service Strategy 143
8.2 Prince Edward Island Mental Health and Addictions Access Centre 144
8.3 Community Mental Health and Addictions Hubs 144
8.5 Mobile Crisis Response Teams 148
8.6 Tele-Mental Health Services for Acute Assessment and Stabilization 149
8.7 Mental Health Emergency Department 150
8.8 Inpatient Acute Care Services 152
8.9 Long-Term Housing 154
9. Establishing an Implementation Roadmap 156
9.1 Summary of Innovations 157
9.2 Innovations Requiring Enabling Moves 164
10. Establishing a Workforce Strategy to Support the Future 167
10.1 Health PEI Mental Health and Addictions Access Centre 168
10.2 Mobile Crisis Response Teams 168
10.3 Community Mental Health and Addictions Centres 169
10.4 Day Programming 174
10.5 Mental Health Emergency Department 174
10.6 Inpatient Mental Health and Addictions Services 177
11. References 182
12. Appendices 190

1. Acknowledgements

During this study, CannonDesign partnered with Health PEI to complete a Master Program vision for the provincial mental health and addictions system. This vision would serve as the basis of design for the implementation of future-state strategic, experiential, operational, workforce, technological, and built environment solutions. CannonDesign would like to thank Health PEI leadership - Dr. Heather Keizer, Verna Ryan and Sean Morrison - for their insights and collaboration, Marsha Pyke for guiding us through the process, Karen Blacquiere for her organizational skills, and Irene Gillis for providing us with the data and information necessary to inform this master program. We also want to thank the staff of the many mental health and addictions programs who shared their personal stories as well as those of their clients and their families.

Site/Entity

Talbot, Lacey, St, Eleanor's, and Deacon Houses
Prince County Hospital
Queen Elizabeth Hospital
Hillsborough Hospital
King's County Memorial Hospital
Provincial Addictions Treatment Facility
Community Mental Health & Addictions East and West
Community Mental Health Programs – *Alberton, O'Leary, Summerside/Montague, McGill Centre, Richmond Centre, Souris, Cornwall, Hunter River, Rustico, Tyne Valley*
Insight Program
STRENGTH Program

Community Partners

Child and Protective Services
Centre for Health and Community Research at UPEI
Canadian Mental Health Association
Catholic Family Services Bureau
Department of Family and Human Services,
Residential and Employment Services
Bridge Program
Adventure Group
PEI Reach Foundation
Public Health and Children's
Developmental Services
School Wellbeing Team (Montague)
Behavioral Support Team (Students)
Boys and Girls Club
Executive Council Office
Council on the Status of Women

Visioning Session Attendees

Hon. Robert Mitchell, Minister of Health and Wellness, PEI
Heather Keizer, MD, Chief of Mental Health and Addictions Services
Verna Ryan, CAO, Mental Health and Addictions Services
Javier Salabarria, MD
Robert Jay, MD
Christine Beck, MD
D.I. Stewart, MD
Harminder Dhillon, MD
Sean Morrison, Program Manager, Child & Youth MH&A
Marsha Pyke, Director of Capital & Facility Planning, Health PEI
Dr. Jackie Goodwin, PhD, Team Lead Insight Program
Karen MacDonald, Director of Justice and Public Safety
Leslie Warren, Manager of Acute Mental Health, Hillsborough Hospital
Shelly Higgins, Acting Manager, CMH&A East
Bruce Davison, Manager, CMH&A West
Brooke Mitchell, Operations Manager, Justice and Public Safety
Reid Burke, Executive Director, Canadian Mental Health PEI
Sara Townsend, Client Advocate
Jamie MacDonald, CAO, QEH
Arlene Gallant Bernard, CAO, PCH
Mike Gaudet, Acting Residential Coordinator Family & Human Services
Alison Campbell, Manager Student Services - Public Schools Branch
Rosanne Sark, Director of Health Mi'kmaq Confederacy of PEI
Terri MacAdam, Director of Student Services
Mike MacDonald, ED Nurse Manager, QEH
Norm MacDonald, Director of Operations, QEH
Kelly Rayner, Director of Hospital Services, QEH
Patsy Barrett, Nurse Manager, Inpatient Mental Health, PCH
Tina Lowther, Manager of Administration and Finance, Health PEI
Karen Blacquiere, Administrative Assistant

2. Scope of Study

2.1 Project Background

Health PEI faces a number of challenges in the provision of mental health and addictions services to the residents of Prince Edward Island. These challenges include, but are not limited to, a lack of an integrated model of care delivery, facilities that are not configured to deliver contemporary mental health and addictions care, and aging infrastructure that is not reflective of current building code or safety standards. These challenges are exacerbated by difficulties recruiting the appropriate workforce to care for clients, and growing demand for mental health and addictions services.

By age 40, one in two Canadians will have had or currently has a mental illness; of these, 70% experienced their first onset during childhood or adolescence. To tackle this growing crisis, in January 2018, Health PEI commissioned CannonDesign, in partnership with Manuel Hernandez, MD. MBA, CPE, Health Care Practice Leader and Leader of Strategic Innovation at Kahler Slater, and Tannis Chefurka, to create a plan to redevelop the provincial mental health and addictions care system. CannonDesign partnered with mental health and addictions stakeholders across Prince Edward Island to co-create innovative and forward-thinking approaches to mental health and addictions care delivery.

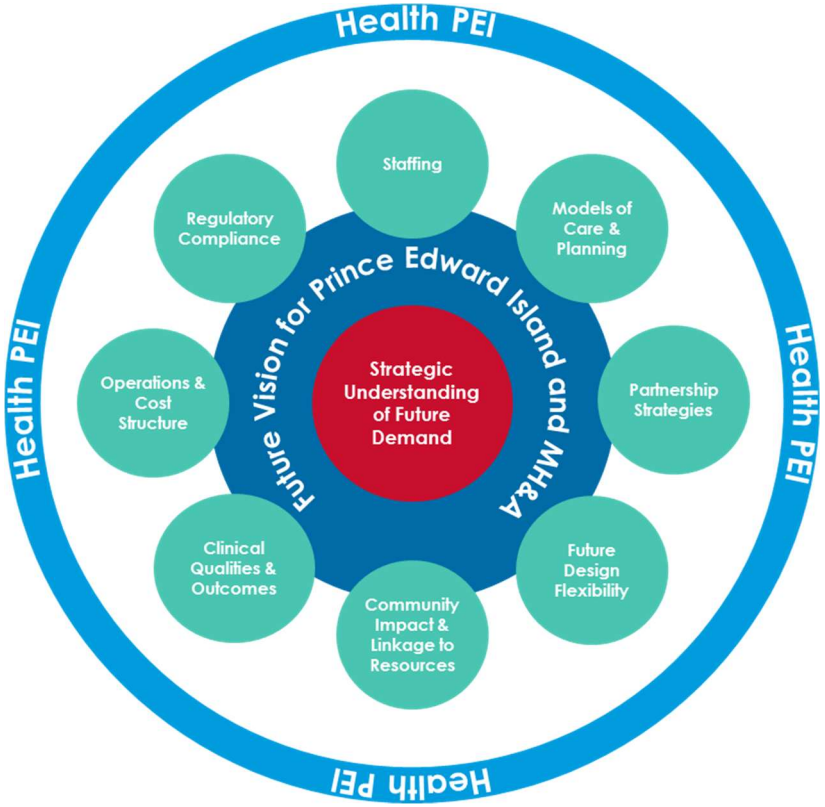


Diagram 1: Health PEI Future Vision

The process began with understanding and addressing several questions that inform province-wide planning, which are listed below:

- Do inpatient, community and supportive living environments promote the safe and comprehensive care of mental health and addictions clients? What types of spaces are required for current and future care delivery?

- What is the optimal model of care for Health PEI to adopt for its mental health and addictions services, understanding the unique attributes of the province, its people, and its available workforce?

- How can Health PEI facilitate improved access to mental health and addictions services across the care continuum and across all geographic areas?

- How do we ensure that mental health and addictions clients receive the highest quality care through the use of evidence-based protocols in pursuit of the best possible outcomes?

- With care continuing to shift from inpatient to community-based settings, how might we redefine how, when, and where services will be delivered, and the types of

innovations needed to support this shift?

- What types of operational, technologic and built environment infrastructures are required to deliver care at the right time in the right place with the right resources?
- What are the workforce requirements necessary to support the optimal future state of the Island's mental health and addictions system?

In partnership with Health PEI, CannonDesign utilized a comprehensive, facilitated approach to understand the current state of Prince Edward Island's mental health and addictions system. Leveraging quantitative and qualitative analysis, CannonDesign identified and established alignment around the existing strengths of the mental health and addictions program, as well as consensus around where opportunity areas exist to continue the program's evolution. Inviting nearly thirty (30) stakeholders into the process, CannonDesign engaged in a highly structured visioning process, customized to Health PEI, to ask the questions necessary to develop a best-in-class mental health and addictions program for the province. At the same time, a team of data analysts partnered with Health PEI's leadership and business analytics team to vet and validate a customized approach to project future service demand based on demographics and several impact factors associated with the implementation of a new, community-based mental health and addictions care model. Considering this approach, the Master Program's foci included:

- Identification of current best practices and opportunity areas within the existing provincial mental health and addictions program;
- Analysis of current and projected demographic trends and their impact on services demand over the next decade;
- Development of planning principles and assumptions;
- Definitions of clinical, support and administrative programs and services to be offered within the redeveloped mental health and addictions system – including inpatient, rehabilitative, transitional, community, child and adolescent, forensic, and long-term housing services – in support of organizational vision and goals;
- High-level human resource plan outlining opportunities, challenges, and projected workloads for clinical, clinical support, administrative, educational, and support services; and
- Recommendation for the number of client beds or clinical rooms needed that is flexible enough to adapt to different program types and needs.

The Master Program built upon previous work completed by Health PEI and Corpus Sanchez International. In April 2017, the province developed "Health PEI Strategic Plan 2017 – 2020", a strategic plan intended to identify the goals and priority areas of focus for Health PEI to effectively respond to the needs of all Islanders. Building on this plan, Health PEI leadership developed a framework and implementation plan entitled "Mental Health & Addictions 2017 – 2020 Action Plan", which is currently being used as a roadmap to improve mental health and addictions services across the Island.

Other reports that informed this Master Program are listed below:

- *Review of Mental Health & Addictions Services and Supports in Prince Edward Island*, February 2013
- *Review of Mental Health and Addictions Services and Supports in Prince Edward Island*, July 2014, Corpus Sanchez International
- *Meeting the Inpatient Mental Health & Addictions Care Needs of Islands: A Proposed Future Role for Hillsborough Hospital*, 2014
- *Moving Forward Together: Prince Edward Island's Mental Health and Addiction Strategy 2016 – 2026,* PEI Department of Health and Wellness

Previous work conducted by Health PEI and its partners culminated in an overarching mental health and addictions strategy used to guide the direction of Prince Edward Island's mental health and addictions system and services. These strategic vision, goals, and guiding principles were used as guideposts for the development of CannonDesign's Master Program.

Health PEI Strategy Vision

All people living in Prince Edward Island will have the equal opportunity to achieve and maintain the best possible mental health and well-being throughout their lifetime.

Health PEI Overall Goals

Access and Coordination

- Islanders and their families receive services and support designed around their needs, and recovery is supported at every point of contact
- Mental health and addictions diagnoses will be recognized early, in people of all ages

Collaboration

- Promote mental health and reduce stigma by improving collaboration and coordination within mental health and addictions services and between the provincial government and community-based services
- Mental health and addictions outcomes for all Islanders, including those with unique and complex needs, will improve

Health PEI Guiding Principles

- Everyone has a role to play in mental health;
- People can and do recover, and recovery is a unique and personal process;
- The system is organized with and around the needs of Islanders and their families;
- Culturally safe and competent programs and services are available to everyone;

- Services are delivered using the best available knowledge, and are informed by ongoing monitoring and evaluation;
- Stigma can be reduced through the promotion of mental health and addictions awareness;
- Effective use of resources at all times.

2.2 Project Approach

From February through August 2018, Health PEI and CannonDesign embarked on an assessment of the current state and an exploration of the future state of Prince Edward Island's mental health and addictions system. This approach consisted of four phases:

Diagram 2: Health PEI Project Approach

Phase 1: Current State Assessment

The current state assessment was designed to understand the present state of Prince Edward Island's mental health and addictions system, encompassing the system's inpatient, acute assessment and stabilization, community, and supportive housing services. A central aim throughout Phase 1 was to understand how different programs, departments, physical locations, and community-based programs and services interface and impact with one another. System-wide comprehension was achieved through a combination of one-on-one interviews, focus group discussions, tours, photo journaling, and direct observation, and included engagement with a diverse group of over 100 stakeholders across the mental health and addictions system. Stakeholders that took part in the current state assessment include, but not necessarily limited to:

- Mental health and addictions clients and their families
- First Nations community
- Psychiatrists
- Psychologists
- Mental health and addictions program nurses
- Mental health and addictions clinical and support staff
- Social workers

- Non-mental health and addictions clinicians and staff at provincial acute care hospitals
- Health PEI leadership

CannonDesign's team of clinical, operational, and architectural subject matter experts toured nearly every site of service within the Island's mental health and addictions system. The team collected and reviewed over one million data points to develop a clear understanding of the current strengths, challenges and opportunities facing Health PEI and its clients.

During Phase 1, CannonDesign's clinical subject matter experts engaged in a functionality assessment of key clinical areas across the mental health and addictions system. The goal of this functionality assessment was to analyze if existing built environments had the ability to facilitate the delivery of comprehensive, quality care while respecting the safety of both clients and staff. The functionality assessment also asked the following questions:

- **Location**: Are services located in the right place with respect to campus access and their relationship with the other clinical and diagnostic platforms on each campus and across the larger continuum of care?
- **Layout / Circulation**: How does the physical arrangement within facilities accommodate clients, visitors, staff, and logistics?
- **Operations**: Are there operational processes and procedures that affect service delivery or efficiency?
- **Technology**: Are systems and equipment up-to-date, and do they enhance efficiency in client care delivery?
- **Quantity**: How does the currently existing space and number of key rooms compare to the space and key rooms required to serve all Islanders?
- **Image / Quality**: Do aesthetics, image, lighting, HVAC, and furnishings meet the facility's needs?

Phase 2: Future State Visioning

The development of any future-state plan is rooted in an understanding of the core tenets that will inform care delivery over the foreseeable future. Population projections, community demographics, economics, regulations and reform, workforce availability, technology and innovations, and coordination are at the center of reasonable and logical planning. These foundational tenets were leveraged by CannonDesign to lead a team of interdisciplinary mental health and addictions program stakeholders and client representatives through the development of a comprehensive future-state plan for Prince Edward Island's mental health and addictions system. The intention is to support an evolution toward interdisciplinary care models that span the entire continuum of care from the home to community, acute assessment and stabilization, acute care and supportive living environments in a manner that optimized performance in six key areas:

- Clinical quality and outcomes

- Operational optimization
- Fiscal stewardship
- Provider and staff alignment and integration
- Service excellence
- Growth

Diagram 3: Six Areas of Optimized Performance

To respond to the desire to develop a high-performing and innovative model of mental health and addictions programming on the Island, CannonDesign employed our Outcomes-Based Visioning™ methodology. The Outcomes-Based Visioning™ process is designed to be a collaborative effort between mental health and addictions stakeholders and Health PEI leadership. The process, facilitated by an expert in mental health and addictions programming and disruptive innovation, engaged over 30 participants to co-create the future of mental health and addictions programming in Prince Edward Island. The intention was to co-create a future-state mental health and addictions planning model that supports the goals outlined early in the visioning process.

Concepts explored during Phase 2 include, but are not limited to:

- Defining stakeholder value
- Identifying key performance metrics that will define success in mental health and addictions programming
- Establishing transformational principles that articulate a vision for the future of mental health planning for Prince Edward Island
- Capturing the “wish list” that mental health and addictions stakeholders have for future programming Emerging innovations and technologies
- Creating the mental health and addictions client / patient journey
- Reimagining the future mental health and addictions model of care through “deep dive explorations

Phase 3: Future State Assessment

During Phase 3, CannonDesign partnered with Health PEI clinical and administrative leadership to translate the outputs of Phases 1 and 2 into the quantitative and tactical information necessary to develop a plan for service delivery that informs what services are required. Representing the “most likely” scenario stemming from multiple possible future scenarios, the future state assessment guided the strategies and recommendations developed in Phase 4.

CannonDesign, in collaboration with Health PEI's clinical and administrative leadership, developed baseline and customized population-driven forecasts that would serve to calculate customized volume projections that aligned with a redesigned model of care. Service-specific 10-year customized volume projections were constructed from a population-driven baseline forecast, which was then adjusted to reflect the impact of various care delivery innovations that, once implemented, would help lay the groundwork for an enhanced community-centered model of care. These customized volume projections were then used to determine how many treatment or client-care specific rooms are needed to appropriately serve Islanders over the next decade. The "key room forecast" was subjected to multiple "what-if" scenarios to understand potential futures and arrive at a final consensus.

Phase 4: Strategies and Recommendations

Using custom volume projections and the future-state model of care introduced in Phase 3 that forms the basis of future demand and utilization projections, CannonDesign facilitated a series of design sprints with Health PEI stakeholders to determine where services should be provided in the future. The consensus gathered from these design sprints was used to build a future service delivery strategy that would support the infrastructure necessary to carry the vision of "One Island Service" and ensure that the goals of all proposed capital projects align with the goals identified throughout the master planning process.

3. Executive Summary

Health PEI commissioned CannonDesign to develop an innovative model of care for the delivery of mental health and addictions services throughout Prince Edward Island, with the goal was that mental health and addiction services for Islanders should be provided in PEI whenever possible, and include services for promotion and prevention, early intervention, inpatient care, treatment, rehabilitation, and recovery. From February to August 2018, CannonDesign met regularly with Health PEI leadership, interviewed over 50 individuals directly involved in the care of mental health and addictions clients, and toured four inpatient facilities, two Emergency Departments, three community centres, two transitional homes, and one day program.

This study focuses on the future capacity needs for the next ten years and the development of an innovative, world-class model of care for the entire mental health and addictions care continuum. Recommendations for best practices in clinical care, future capacity bed need, strategies to maximize appropriate community-based care, and a high-level staffing plan are discussed in this report.

Project Guiding Principles

During the visioning process, a set of principles were developed to guide the master programming process and transformation of Health PEI's mental health and addictions future model of care.

- Provide the people of Prince Edward Island with a state-of-the-art mental health and addictions services in a manner that emphasizes cultural-based healing and elevates the dignity of our clients, facilitating greater levels of hope, purpose, meaning and belonging.
- Deliver quality care in a safe, coordinated and, expeditious manner, ensuring clients receive the care they need as quickly and efficiently as possible, while guaranteeing that transitions in care between organizations and sites of care are seamless with information necessary to provide optimal services flowing bi-directionally.
- Ensure that clients and their support networks are actively engaged in all aspects of their mental health and addictions journey with services provided in locations that are accessible, balancing client and support network systems with the availability of mental health and addictions resources across Prince Edward Island.
- Serve as a magnet for current and future providers from across Canada and beyond, drawing them to the opportunity to be a part of a world-class mental health and addictions program that provides opportunities for research, growth and innovation.
- Deliver services in healing environments and teaching facilities that reflect the quality and aspirations of mental health and addictions programming across the province while ensuring these facilities enable staff to provide the very best care every day.
- Establish an innovation culture that promotes Health PEI's desire to learn, evolve and advance itself to the benefit of clients, staff and providers while enhancing its value to the Prince Edward Island community.

Key Current State Themes

Continuum of Care for Mental Health & Addictions Clients and Patients

While Health PEI has inpatient, Emergency Department, community, and housing options, it is challenging for clients to receive care in the right place at the right time. Clients are unable to access care because they are often unable to obtain an appointment with a psychiatrist, psychologist or other type of therapist. There are long wait times for community outpatient care, and a lack of the appropriate resources to provide said care. To receive treatment once symptoms are too acute to ignore, clients visit the Emergency Department at their local hospitals to gain access to services. These Emergency Departments do not have the programs, staff, or appropriate facilities to care for these clients. Clients spend hours or days in Emergency Departments waiting for evaluation; ultimately, many clients are admitted because there are no other facilities that can provide appropriate levels of care. Once admitted, clients do not receive the specialized services required. Due to a lack of the appropriate community services, clients remain in acute facilities for extended periods of time. Clients would benefit from a variety of community-based services, such as mental health assessment in primary care, intensive care management, partial hospitalization programs and transitional housing for clients who would thrive outside of the hospital.

During CannonDesign's current state assessment, six key themes emerged. Health PEI and CannonDesign viewed these themes as opportunity areas for Health PEI to address to achieve an optimal model of care. The six themes are summarized below and described in Section 4 of this report.

Theme #1: Access. Difficulties accessing care, caused by a lack of resources and a geographically dispersed population, makes it difficult to link the right care to the right place and time. It also makes it difficult to transition a greater number of clients into community care settings. The emergency department has become the main entry point into the mental health and addictions system for many clients. Client acuity within the emergency department has increased in recent years – the average length of stay in Queen Elizabeth Hospital's emergency department for admitted mental health and addictions clients is 29.2 hours. The current average daily occupancy for inpatient mental health units hovers at 99%; alternate level of care (ALC) clients reside in 35% of all inpatient beds due to a lack of community housing and sub-acute services. The average length of stay for clients on inpatient units at QEH and PCH is over 20 days.

Over half of all Islanders referred for community mental health and addictions services are never seen. Adult and adolescent clients must wait an average of 41 days and 48 days after referral, respectively, before they are seen for community mental health and addictions services.

Theme #2: Quality. Clients are often assigned to suboptimal care environments due to a lack of available treatment and placement options in PEI. Widely variable performance in metrics related to quality of care highlights the lack of placement options and inconsistent application of evidence-based care models. High rates of restraint use and episodes of seclusion on inpatient units and in transitional housing facilities do not align with best practice standards.

Theme #3: Communication, Coordination, and Technology. Barriers to communication, IT standardization, and coordination hinder the ability of the current mental health and addictions system to seamlessly coordinate home, community, ambulatory, acute stabilization, and long-term care resources. Critical information is not always shared between providers. Health PEI is still in the process of incorporating strategies and technologies that can close the information gap between various sites and providers.

Theme #4: Client Experience. Growing demand for services, coupled with need for client and public education of available mental health and addictions resources, leads to highly variable client experiences by site of care. Prince Edward Island's population is aging – currently, 1 out of every 5 residents are over the age of 65. A growing number of clients are presenting with dual diagnosis and substance abuse issues, and youth services are becoming an increasingly larger percentage of the client mix. A recent mental health and addictions inpatient satisfaction survey, only 54% of clients were satisfied with the environment at Hillsborough Hospital, and 61% of clients were satisfied with the environments at Queen Elizabeth Hospital and Prince County Hospital.

Theme #5: Workforce. Critical shortages of qualified mental health and addictions personnel and a lack of staff coverage in rural areas creates challenges in maintaining continuity of care. Recruitment and retention continue to be an issue, with high levels of vacancies for psychiatrists, psychologists, nurses, social workers and occupational therapists. Staff need to be well-trained and diversified in their skillsets – otherwise, efforts at system-wide transformation are likely to fail. A Health PEI Work-Life Pulse Survey result revealed that 49% of surveyed staff had concerns with their overall safety at work.

Theme #6: Facility Design. Inpatient facilities at Hillsborough Hospital, along with the other mental health and addictions units at Queen Elizabeth Hospital, Prince County Hospital, and Provincial Addictions Treatment Facility, are functionally obsolete and not conducive to current clinical, safety, quality, and workforce best practices. The facility infrastructures are inefficient and outdated. As they stand, existing facilities will be difficult to reconfigure to meet best practices. Modernizing facilities will require significant investment.

Current Population Profile

Over the next 40 years, Prince Edward Island will experience steady population growth, with a notable surge in growth among the Island's aging and geriatric populations. CannonDesign, in conjunction with Health PEI, developed a forecasting methodology to estimate baseline and customized mental health and addictions volume growth over a ten-year period. The baseline volume forecast is solely based on estimated population growth and the customized volume forecast is constructed from a series of innovations aligned with a redesigned model of care.

Customized Forecast. Like Health PEI's redesigned model of care, the customized volume forecast shows a large shift in client volume away from acute, inpatient care and toward community care services. Overall inpatient volumes are expected to decline over the next decade, driven exclusively by mental health clients; inpatient addiction volumes will experience slight growth during the same time. Emergency department volumes will fall for both mental health clients and addictions clients over the next decade. By contrast, community visits will experience rapid growth in client volumes over the next ten years.

Future State Need

Using custom volume projections outlined in the previous section, CannonDesign and Health PEI developed a key room need forecast by service type. Key rooms are defined as spaces in which client or patient medical care physically takes place – examples of key rooms are inpatient beds, Emergency Department bays, group or individual therapy rooms, and transitional housing beds. The key room need analysis estimates the physical space needed to appropriately treat future patient volumes while adhering to Health PEI's vision for a new model of care. By 2026, Prince Edward Island's mental health and addictions system will require a total of 88 inpatient beds, the majority of which will be dedicated to mental health clients. The Island's newly redeveloped community mental health

and addictions service will require 55 rooms to provide therapy to clients, 33 of which will be dedicated to mental health clients. Expanded day treatment services will require space for 84 clients at one time, while transitional housing/long-term care services will require 136 spaces to care for clients.

Future Model of Care

Understanding that to be maximally effective, mental health and addictions services must be integrated into the daily lives of clients the future model of care will emphasize a heavy investment in services located in close proximity to clients and where they conduct their daily lives. This will be a community-based model underscored by the decentralization of resources establishing a matrix of care, as opposed to a traditional hub and spoke network. This model will emphasize convenient services for clients with a new emphasis on virtual services available anywhere, anytime. As the future-state model of care is considered, it is also important to understand that the vision for the future-state model of care is intended to be reviewed and reevaluated as Health PEI learns more during implementation.

Clients journeys, discussed further in Section 7, were developed to illustrate the path a client might follow over the course of their interactions with mental health and addictions programming in Prince Edward Island. No two journeys are alike and care does not always occur in a linear process however they will illustrate opportunities to enhance the care provided to all clients. The matrix of care will ensure that all sites of service are connected and that clients will move seamlessly across the sites based on their needs. The journeys include:

1. Adult mental health
2. Child and adolescent mental health
3. Geriatric mental health
4. Forensic mental health
5. Addictions service

Client Journey

Client Access. The adult mental health client journey will begin with the client, a healthcare provider, or member of the client's support network, identifying a need for the client to seek mental health services.

Innovations: On-line Appointment Scheduling, SMS Text Messaging, Access Centre, Mental Health Specialist in Primary Care, Tele-Mental Health Services in the Community.

Community-Based Services. Once the client has completed their initial encounter with their family (primary care) physician and a diagnosis of a mental health condition has been made, the client will be under the auspices of a shared care model that will promote collaborations between primary care and mental health and addictions professionals.

Innovations: Peer Coaches, Tele-Mental Health Services, Multi-disciplinary Standardized Assessment Tools, Electronic Medical Record, Intensive Case Management, Access Centre, Crisis Response Team.

Acute Assessment and Stabilization. When clients arrive at the Emergency Department there will be accelerated medical screening in which they will be triaged as requiring either a limited or comprehensive medical clearance. Clients deemed medically clear based on the limited medical screening will be eligible for immediate mental health evaluation, those requiring a more complex medical assessment who do not present with altered mental status will be eligible for medical and mental health assessment in parallel, while clients who present with altered mental status will await mental health assessment until the causes of the altered mental status have been identified and managed.

Innovations: Mental Health Emergency Department, Telehealth, Standardized Screening Tool, Electronic Medical Record.

Inpatient Care. For clients requiring acute stabilization services that exceed the capabilities of the Mental Health Emergency Department, they will be admitted to the Acute Stabilization Unit which will operate on a model of a targeted 72-hour length of stay and staffed around the clock by an on-site psychiatric hospitalist. If a client has not been stabilized to a point where they can be safely transitioned to a community or supportive housing setting within 72 hours of arrival onto the Acute Stabilization Unit they will be transferred to the Short-Term Inpatient Unit. This unit will be targeted to care for clients for up to thirty (30) days though the targeted average length of stay should be 7-10 days.

Innovations: Psychiatric Hospitalist, Telehealth for Patients with Specialized Mental Health Needs, Pre-discharge Planning in Acute Care, Electronic Medical Record, Written, On-Line, App-Based Education on their Diagnosis, Community Health Appointment within one Business Day of Discharge.

Return to Community-Based Services. There are times a mental health patient may require a level of care that exceeds what can be provided in a traditional community-based setting but is not intensive enough to require inpatient hospitalization. To meet the unique needs of these clients, intensive day hospital programming will be introduced in Prince Edward Island to meet the needs of this client group.

Innovation: Day Programming or Partial Hospitalization Programming.

Further information about the innovations listed above can be found within Section 9.1, on page 158.

Future State Recommendations

Throughout the project, Health PEI and CannonDesign engaged in a comprehensive exploration of where Health PEI is and where they want to be. The goal was to develop a model of care that delivers the right care, in the right place, at the right time with the right resources. Optimal state recommendations include:

Mental Health and Addictions Integration with Primary Care. Embedding mental health and addictions services into primary care clinics will improve access for clients and enhance collaboration between primary care and mental health and addictions services. Tele-mental health services in primary care settings will facilitate rapid evaluation by a qualified mental health provider without requiring an in-person evaluation. This will reduce unnecessary delays in care and inpatient hospitalizations.

Mental Health and Addictions 24/7 Access Centre. A Mental Health and Addictions 24/7 Access Centre will provide clients with immediate access to mental health and addictions information and resources. One Island-wide Mental Health and Addictions Access Centre, operating 24 hours a day, 7 days a week, and 365 day a year, will be able to effectively meet the needs of Prince Edward Island residents.

Emergency Department/Crisis Stabilization. The mobile crisis response teams provide intensive alternative care for clients experiencing acute mental health or addictions crises. Mobile crisis response staff, which will be educated and trained to provide mental health and addictions crisis services, will provide rapid mental health assessment, stabilization, disposition, and transfer to higher levels of care. These teams will be located within one hour of most residents. Queen Elizabeth Hospital will be home to a newly developed Mental Health Emergency Department that will operate 24 hours a day, 7 days a week, and 365 day a year. The Mental Health Emergency Department will provide telehealth services for both the Queen Elizabeth Hospital and Prince County Hospital Emergency Departments on a 24/7 basis, and the Kings County Memorial Hospital and Western Hospital Emergency Departments during operating hours. Utilizing telehealth services will allow remote mental health evaluators to provide assessment and disposition to clients presenting to any Emergency Department across the Island.

Inpatient Centres of Excellence. Assuming the recommendations and innovations are implemented, Health PEI will require 72 inpatient mental health beds and 16 addiction beds in 2026. Total bed counts include beds found on inpatient units and short stay units. Inpatient care will have Centres of Excellence including adult (33 beds), geriatric (29 beds), addictions (16 beds), child and adolescent (5 beds) and forensics (5 beds). Each Centre of Excellence will cohort all appropriate clients onto one single site of service in PEI, increasing quality, better leveraging resources and lowering cost. Mental health hospitalists will be employed to provide consistent care to inpatient, ensuring that clients receive timely evidence-based care. Proactive discharge planning will be engaged to ensure clients are discharged in a timely manner and receive continuity of care in the community.

Community mental health and addictions centres. Community mental health and addictions centres located within a 30-minute drive of all Islanders will provide community-based mental health services including individual therapy, group therapy, CBT, DBT, intensive case management, assertive community treatment, day treatment programming, and other relevant services. Intensive day programming will be introduced for adult clients to reduce utilization of the Emergency Department and inpatient services. Intensive Case Management (ICM), will be provided to individuals diagnosed with severe and persistent mental illness, all coordinated by case managers monitoring the clients' progress. Virtual Peer Coach/Support will provide services to clients.

Long Term Housing. The Island's high number of ALC days will be partially solved by the development of long-term housing and / or therapeutic environments more appropriate than an inpatient unit. Many of these therapeutic environments will be specifically earmarked for mental health clients with responsibility for ownership and operation of the long-term housing environments to be under the auspices of Health PEI. Housing could be distributed across the Island in the larger cities and towns. These houses will receive support from community mental health resources and Assertive Community Treatment Teams to ensure successful placement into the community.

Technology Investment. The implementation of an integrated electronic mental health record with a mental health and addictions module that will be patient focused is a crucial first step in this new care system. Telehealth health services will be provided to meet with the providers for those clients unable to drive to the Community mental health and addictions centre. Internet solutions to allow clients and their families to schedule community mental health and addictions appointments via on-line app-based solutions. Same day appointment scheduling will allow clients to have access to mental health and addictions providers and allow the 40% no-show slots to be used. Client Care Portal will be able to access information about his care team and progress.

Further information about the future state recommendations listed above can be found within Section 7, on page 90.

4. Current State Themes

Over the course of this study, six key themes emerged that affect how Prince Edward Island's mental health and addictions system provides care and services to clients and their families. These themes include:

- Access
- Quality
- Communications, coordination & technology
- Client experience
- Workforce
- Facility design

These themes, supported by both qualitative and quantitative data, reflect the basis for the critical issues and recommendations formed in this report.

4.1 Current Health PEI Mental Health and Addictions Services

Health PEI currently provides a full range of mental health and addictions services across the Island at a combination of sites located on hospital campuses as well as at locations embedded within local communities. At present, Health PEI operates seven hospitals and one facility for inpatient addictions services.

Hillsborough Hospital, located in Charlottetown, operates a 69-bed inpatient mental health facility serving all Islanders. It is also designated under the Criminal Code Review Board as the province's psychiatric facility responsible for forensic clients.

Queen Elizabeth Hospital, located in Charlottetown, is a 247-bed secondary and tertiary hospital serving all Islanders. Queen Elizabeth Hospital operates a 24-bed acute adult inpatient mental health unit and a 4-bed child and adolescent unit. The emergency department at Queen Elizabeth Hospital serves as a primary point of access for clients seeking acute assessment and stabilization services for mental health and addictions conditions.

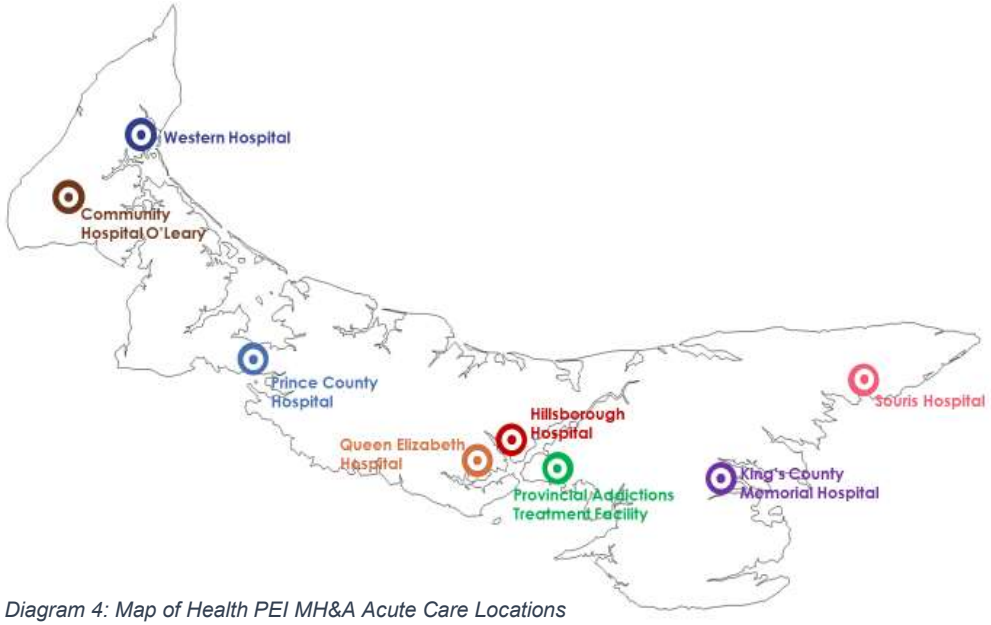


Diagram 4: Map of Health PEI MH&A Acute Care Locations

Prince County Hospital, located in Summerside, is a 110-bed secondary acute hospital serving Summerside and communities across western Prince Edward Island. Prince County Hospital has a 14-bed acute inpatient mental health unit and provides inpatient child and adolescent mental health services on its general pediatrics inpatient unit. The emergency department at Prince County Hospital serves as a primary point of access for clients seeking acute assessment and stabilization services for mental health and addictions conditions.

Western Hospital in Alberton, and **Kings County Memorial Hospital** in Montague, are 25-and 30-bed community hospitals, respectively, offering medical inpatient services and urgent care services. There are no dedicated inpatient mental health beds at these facilities.

Community Hospital O'Leary and **Souris Hospital** are community hospitals offering 13 and 17-bed extended care services with no emergency or urgent care capabilities. There are no dedicated inpatient mental health beds at these facilities.

Provincial Addictions Treatment Facility, located in Mount Herbert, is a 34-bed adult addictions facility (18 beds plus 16 transition beds). There are no dedicated inpatient mental health beds at this facility, though many clients admitted to this location for management of an addictions condition struggle with a concomitant mental health diagnosis.

The INSIGHT Program, located in Charlottetown, provides youth mental health day treatment programming to clients between the ages of 13 to 18 years.

Community mental health services in the following facilities: **McGill Centre, Richmond Centre, Montague, Souris, Summerside, O'Leary,** and **Alberton**

Other live-in facilities, which all provide addiction services, include:

- The **Strength Program**, a 12-bed, 16-client (4 outpatient), 24/7 transitional housing facility serving clients between the ages of 15 to 24 years
- Three chemical-free transitional housing facilities - **Lacey House, Talbot House,** and **St. Eleanor's House**.
- **Deacon House**, a separate male-only small house, provides overnight shelter for homeless clients struggling with chemical dependency.

Health PEI maintains care partnerships with Nova Scotia and New Brunswick for the provision of some specialty health care services. For example, forensic evaluation services for Islanders within the criminal justice system are provided by the East Coast Hospital in Nova Scotia.

4.2 Theme #1: Access

Accessibility is an integral part of every model of care – if clients are unable to receive services in a timely and efficient manner they are less likely to seek out necessary services and the care provided, regardless of quality, is ineffective. Available data indicates that Health PEI is struggling with providing timely and convenient accessibility to mental health and addictions services. This is driven by multiple factors including the rural nature of Prince Edward Island, the cultural mindset of Prince Edward Island residents with respect to service location and convenience, challenges in recruiting advanced mental health and addictions providers to Prince Edward Island, and by operational and systematic inefficiencies within the mental health and addictions care system.

The Rural Nature of Prince Edward Island and Its Impact on Location of Services

Residents of Prince Edward Island share many of the same hopes, dreams, and fears of Canadians across the nation, and like elsewhere, many struggle with mental health and addictions challenges. Unfortunately, these challenges are exacerbated by some of the realities of living on Prince Edward Island. With a

current population of just under 150,000 residents and a population density of about 25 people per square kilometre, Prince Edward Island is a rural province. It is, in fact, the most rural province in all of Canada. With only 150,000 total residents, Prince Edward Island lacks a critical mass of residents to support full-service mental health and addictions programming, particularly as it relates to child and adolescent as well as forensic programming. While benchmarks for minimum demand to operate a viable mental health and addictions program vary by province within Canada and across health systems around the world, the reality is that Health PEI will need to provide services regardless of the amount of demand across the island. To this point, many aspects of the Health PEI model of care reflect approaches more appropriate to communities with higher levels population density and demand.

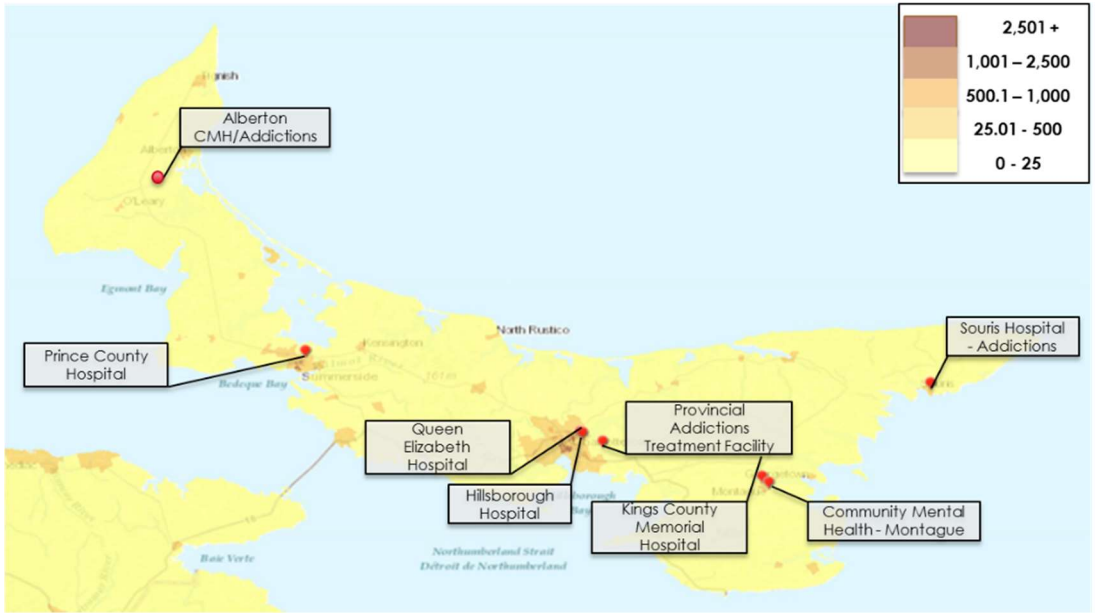


Diagram 5: Map of Population Density and Health PEI MH&A Locations

When considering the distribution of the population across Prince Edward Island, 60% of Islanders live in Queens County, representing roughly the middle one third of the Island. It is also home to the PEI's capital and most populous city, Charlottetown. By nature of the population density of Charlottetown and the surrounding communities relative to other areas of Prince Edward Island, many mental health and addictions services are concentrated within this area. Summerside represents the second largest concentration of Islanders and, as such, play host to a secondary nexus of mental health and addictions services. Though not as comprehensive as the services provided in Charlottetown, Summerside does provide a combination of community-based, acute assessment and stabilization and inpatient mental health and addictions services. While there are some outpatient and addictions services scattered towards either end of Prince Edward Island in the population centres of Alberton, Summerside, Souris and Montague, mental health and addictions services are unevenly distributed throughout the Island. This lack of appropriately distributed services requires many rural, coastal residents to travel in excess an hour to access even the most basic care. The geographic barrier to care can become particularly challenging during periods of inclement weather during the Island's harsh winters.

Island Culture

Complicating the lack of service distribution and rural nature of the Island is a general preference for shorter travel distances for services considered essential rather than optional. During one-on-one interviews and focus groups, both clinicians and clients alike spoke of many Islanders' lack of desire to drive far for services. The general consensus was that residents believe that all mental health and addictions care should be accessible within their individual communities and they should not need to drive to the larger population centres of Charlottetown and Summerside to access these services. Clinicians and clients cited both real and perceived hardships associated with what many consider excessive travel distances. This situation is exacerbated by perceptions among many rural

residents that concentration of services of all types in the more urban areas creates a number of disparities that create further challenges to rural living. Interestingly, many interviewees and focus group participants also shared that this resistance to longer travel distances does not apply to services that residents consider desirable or tied to improvement in their quality of life, such as preferred retailers, dining and entertainment venues and recreational activities. This is not uncommon in rural communities.

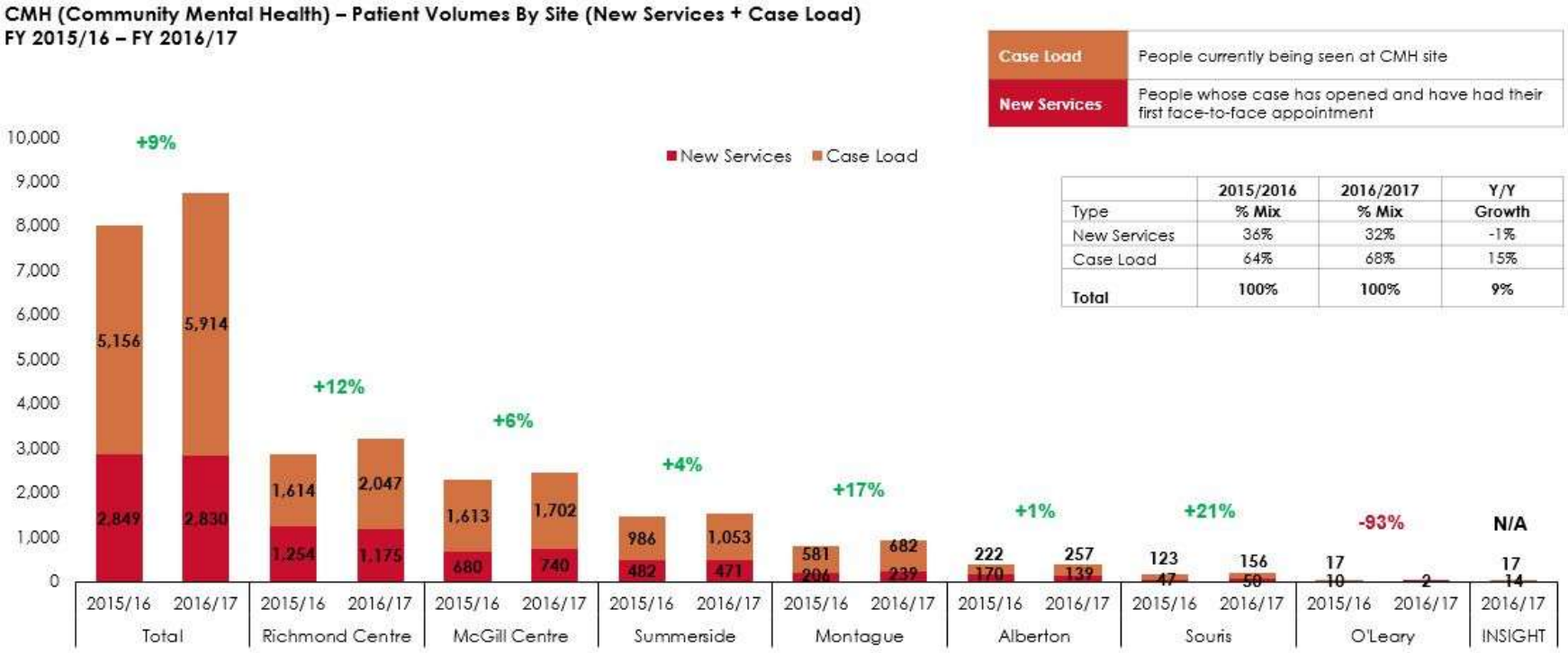
Unfortunately, Prince Edward Island lacks the population to support all necessary mental health and addictions programming, much less to provide these services in every community vis-a-vis a physical presence. Additionally, very limited public transportation options leave some far-flung coastal residents that lack access to personal vehicles with few to no options to travel for care. The only way to access mental health or addictions care for these rural residents is through community hospitals offering emergency or urgent care services once their symptoms become too acute to ignore.

Because many of these challenges are inherent realities to living in a rural province, they will be difficult to address through many of the traditional approaches that Health PEI has leveraged to this point. Put more bluntly, mental health and addictions operational models and access strategies that have proven successful in more populous provinces like Ontario, British Columbia and Québec will not be able to appropriately address the unique challenges faced on the Island.

Lack of Resources

In most modern mental health and addictions care delivery models, community-based services function as the primary point of entry into the system. Health PEI clients that are unable to be seen are forced to access services from another point of entry or ignore their complications until they are in crisis. At present, more than half of all clients are unable to access any form of mental health and addictions care through community-based services.

Demand for all mental health and addictions services has continued to increase in recent years. Community mental health services saw a total of 8,744 new and existing clients in FY 2016/17. This represents a year over year growth of 9% between FY 2015/16 and FY 2016/17, compared to annual population growth of just 1.8%. This rapid increase in service utilization can be tied to a series of operational improvements and staffing modification undertaken by Health PEI to address known access challenges for mental health and addictions services. Interestingly, the community mental health volume growth across all sites appears to be driven by existing client volumes; in FY 2016/17, community mental health services saw a year over year growth in existing client case load volumes of about 15%, while services provided to new clients remained relatively flat. This suggests that initial access into the system remains an on-going challenge, while clients currently receiving care would benefit from more frequent access to mental health and addictions services. Improving access to services for existing clients can be used as a strategy to reduce utilization of higher acuity services.

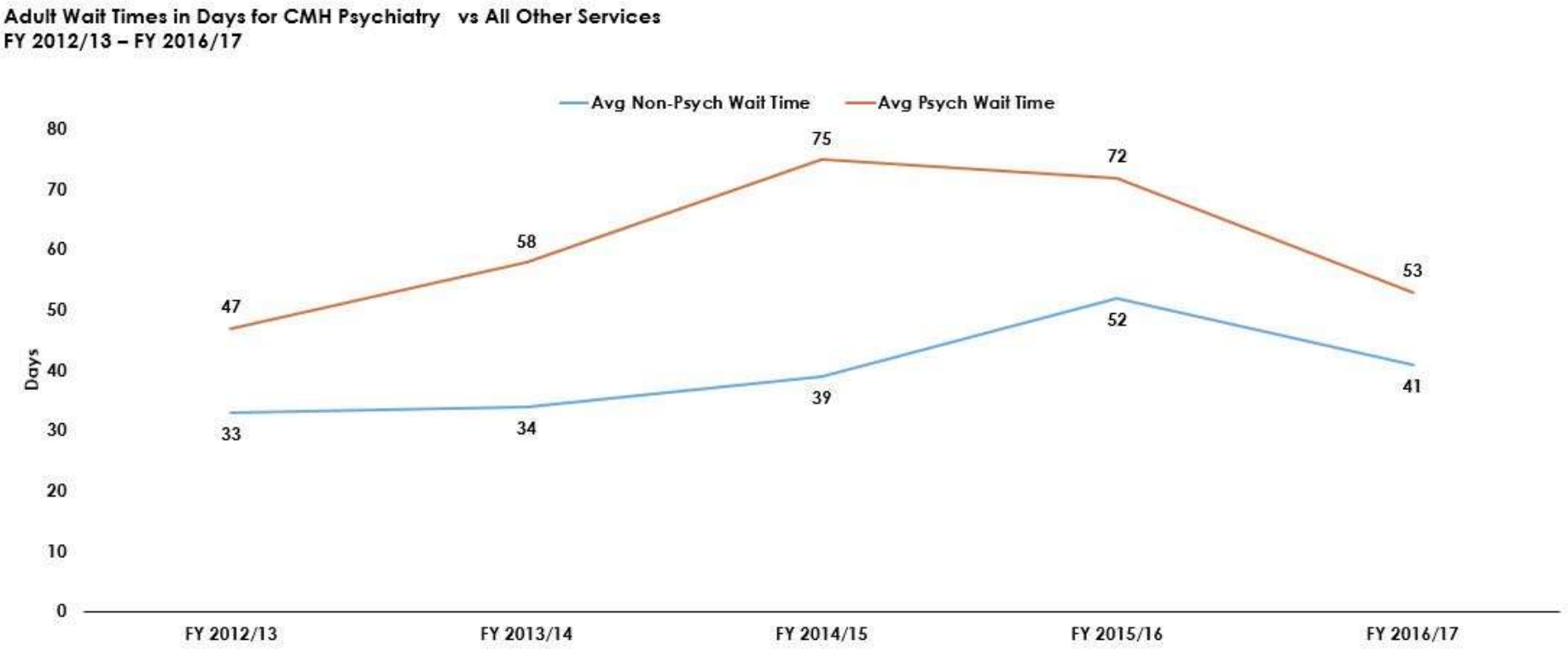


	2015/2016	2016/2017	Y/Y
Type	% Mix	% Mix	Growth
New Services	36%	32%	-1%
Case Load	64%	68%	15%
Total	**100%**	**100%**	**9%**

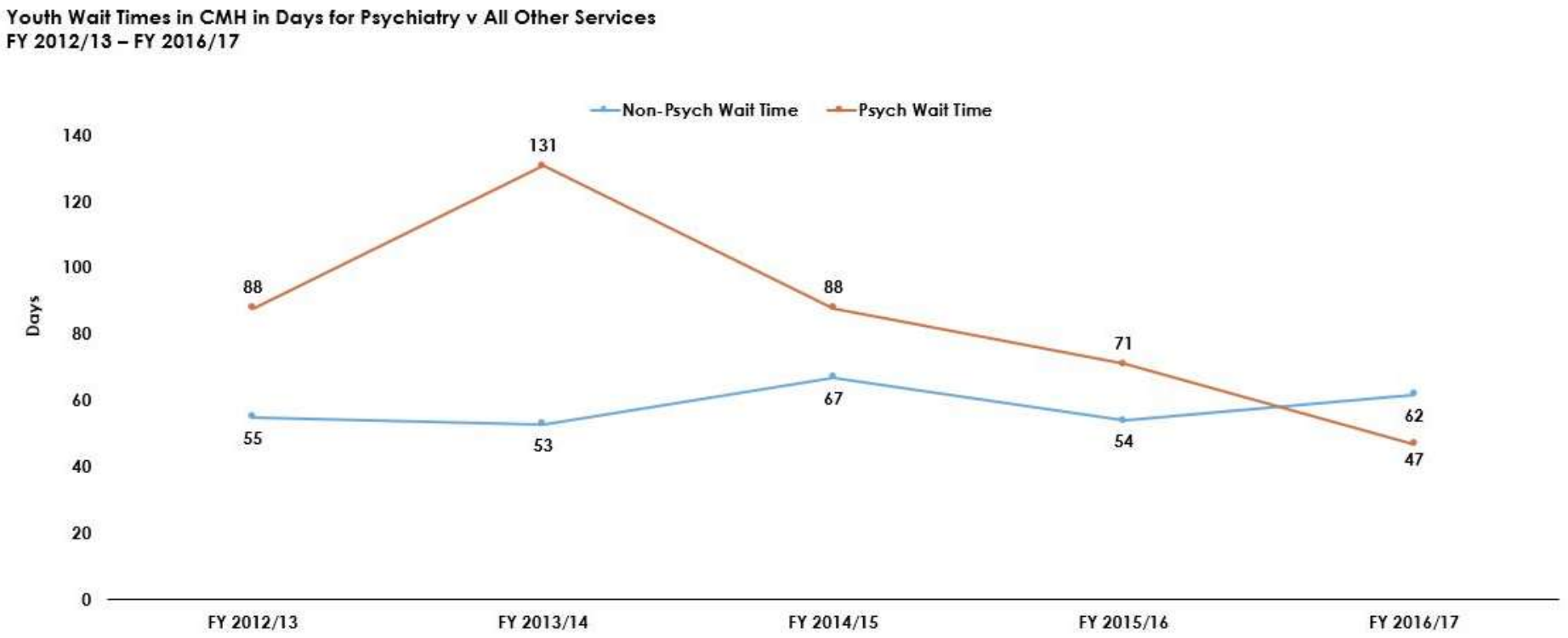
Diagram 6: CMH Existing Case Load vs. New Services Volumes by Site of Service
Source: CMH Caseload by Service and Site.pdf

Currently, Health PEI is not meeting recommended access benchmark standards established by the Canadian Psychiatric Association (CPA). CPA standards recommend that emergent clients should be seen by a psychiatrist within 24 hours of initial referral, urgent clients should be seen within one (1) week after initial referral, and scheduled non-urgent clients should be seen within four (4) weeks after initial referral. In 2016/17, new non-emergent adult clients in Prince Edward Island waited for an average of 41 days to access community mental health services and new child and adolescent non-emergent clients waited an average of 48 days before receiving community mental health services. While the current wait times for non-emergent mental health and addictions services in Prince Edward Island do not meet current recommended benchmarks, they represent a nearly 60% reduction in wait times over a five (5) year period for adult clients and a reduction of nearly 68% for child and adolescent clients. FY 2016/17 wait times for non-emergent mental health and addictions services in Prince Edward Island are similar to those in Nova Scotia, where adult clients waited for an average of 41 days and children waited an average of 42 days before receiving community mental health services. During the same year, 73% of children in the province of Alberta received scheduled community mental health services within

30 days. When considering this data, it is important to note that the likely causes of Health PEI's performance as it relates to access are multifactor and, in part, due to workforce challenges which will be discussed in more detail in Section 4.6.



Diagrams 7: Adult Wait for CMH Psychiatric Services vs. All Other Services
Source: Wait Times in CMH to Psychiatry.pdf; Wait Times for all other services other than psychiatry.pdf



Diagrams 8: Youth Wait for CMH Psychiatric Services vs. All Other Services
Source: Wait Times in CMH to Psychiatry.pdf; Wait Times for all other services other than psychiatry.pdf

Reinforcing the access challenges related to mental health and addictions services in Prince Edward Island, in FY 2016/17, less than 50% of new clients referred to community mental health care received the recommended services - 5,914 clients received their first face-to-face community mental health service, while 6,057 clients were referred for first-time services but were never seen. While a portion of individuals that ultimately fail to follow through with recommended referrals can be attributed to non-compliance on the part of the client, a portion of this volume is directly related to limited access capacity, coupled with systems that are not designed to improve the productivity of the existing resources.

During the North American deinstitutionalization era of mental health care in the 1950's and 1960's, outpatient, community-oriented care was seen as the wave of the future. In the following decades, community care replaced many inpatient services, as clients were slowly transitioned out of mental health "asylums" and placed in care environments closer to home. Specialty community outpatient services, like partial hospitalization programs and day programs were created to

effectively treat mental health complications in a low cost, familiar setting and limit the need for high-acuity inpatient and crisis stabilization care. In fact, several systematic reviews have found evidence that people with mental health issues enrolled in specialized outpatient services like day programs spent significantly fewer days in inpatient care over a two-year period. Health PEI currently lacks the resources to support these unique outpatient services. Currently, intensive outpatient and partial hospitalization treatment programs are only offered in the Strength and Insight Programs, which are geared towards young adults between the ages of 13 to 24 years. Lack of a variety of outpatient services limits the number of clients that can benefit from low acuity care and places excess strain on other sites of care in the mental health and addictions system.

Inappropriate Utilization of Existing Resources

Emergency Department

When access to community-based care is limited, clients are more likely to experience an acute mental health or addictions crisis. This often culminates in utilization of acute assessment and stabilization services in local emergency departments as a primary access strategy. In FY 2016/17, there were nearly 4,000 emergency department visits for mental health and addictions complications across Prince Edward Island. Over the past five years, the percent of Queen Elizabeth Hospital and Prince County Hospital inpatient mental health discharges that have originated from the emergency department has steadily risen, indicating that the emergency department has now become the primary route of entry into inpatient services. Although it is not reflected in the data provided by Health PEI, several primary care clinicians throughout the Island reported their inability to refer clients for inpatient mental health services; these clinicians ultimately refer clients to the emergency department to gain access to higher acuity mental health and addictions services.

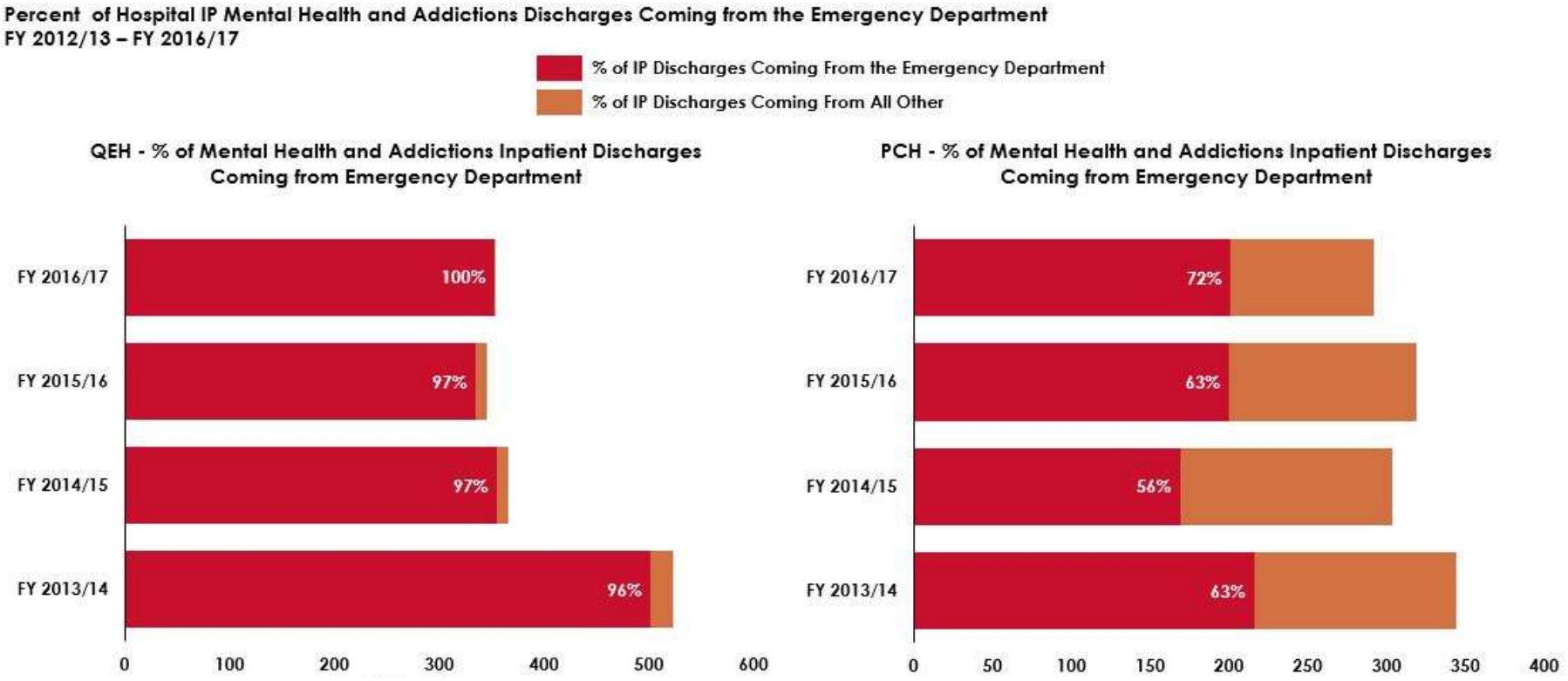


Diagram 9: Percent of Mental Health and Addictions Inpatient Discharges Originating from Emergency Room
Note: Hospitals included in analysis have inpatient mental health and addictions unit
Source: MH and Addictions ED Visits 1213-18718

The impact of the current access challenges on Prince Edward Island's emergency departments and on clients seeking care in the emergency department cannot be understated. Mental health clients in the emergency department are forced to endure excessive delays while waiting for psychiatric assessment – the average admitted mental health and addictions client length of stay (LOS) was 29.2 hours in the emergency department at Queen Elizabeth Hospital, and 9.3 hours in the emergency department at Prince County Hospital. Mental Health LOS for both hospitals has been increasing since 2013. Best practice found in The Journal of the American Medical Association (JAMA) states that the length of stay for admitted mental health and addictions clients should not exceed 8 hours. These excessive lengths of stay have considerable deleterious impacts on the overall operation of the affected emergency departments as it relates to the overall cost of care, staffing requirements, departmental capacity requirements and the overall experience of both mental health and addictions clients and the general emergency department population. Moreover, excessive psychiatric patient boarding, a common term for the practice of keeping admitted clients on

stretchers in the emergency department for hours or days, is routinely associated with an increased risk of symptom exacerbation and elopement, both of which are harmful to both clients and staff.

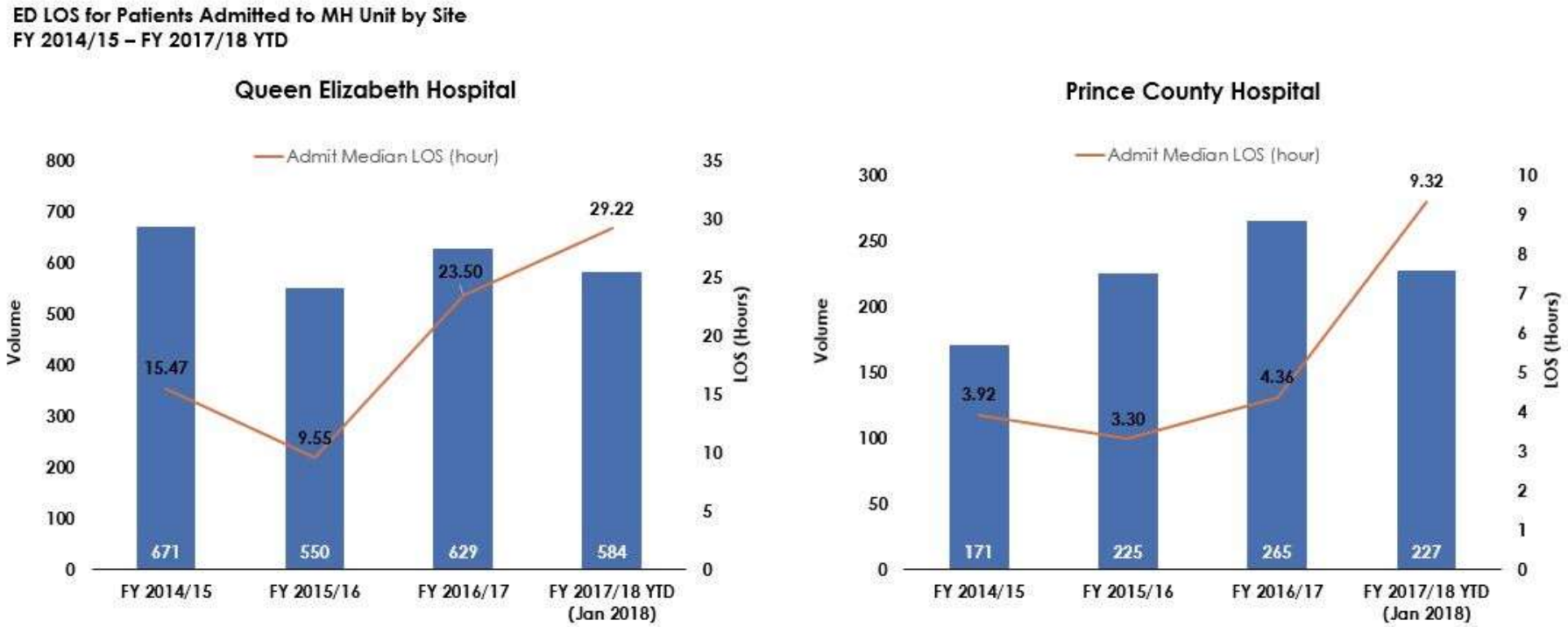


Diagram 10: ED LOS for Patients Admitted to Mental Health Unit by Site
Source: MH ED Volumes and Admissions.xlsx; mental_health_admission_ed_waits_INC-85951_2018-02-07_final.xlsx

Acute Services

As the Island's mental health and addictions program currently exists, most services are delivered in low-acuity or inpatient environments. With limited exceptions, few options exist for clients who require more intensive engagement but not enough to require inpatient hospitalization. Similarly, few options exist for clients who no longer require high-acuity inpatient care but require either supportive housing for those unable to live independently or an those able to live independently but lack access to reliable, safe housing.

Limited options for clients requiring sub-acute or supportive services leaves few pathways to more appropriate levels of care. To provide adequate care within the confines of the existing resources, clients are unnecessarily admitted to or maintained in inpatient mental health units, leading to hospital overcrowding and

unnecessary costs. High rates of inappropriate admissions and subsequent unit overcrowding have led to mental health occupancy rates close to or over 100% for nearly every inpatient mental health unit in Prince Edward Island. While data analyzed for Health PEI's inpatient mental health units suggest occupancy levels approaching 100%, the reality is that occupancy levels exceed 100% when clients awaiting admission in the emergency department and clients being staged on inpatient medical units awaiting a mental health inpatient bed are considered.

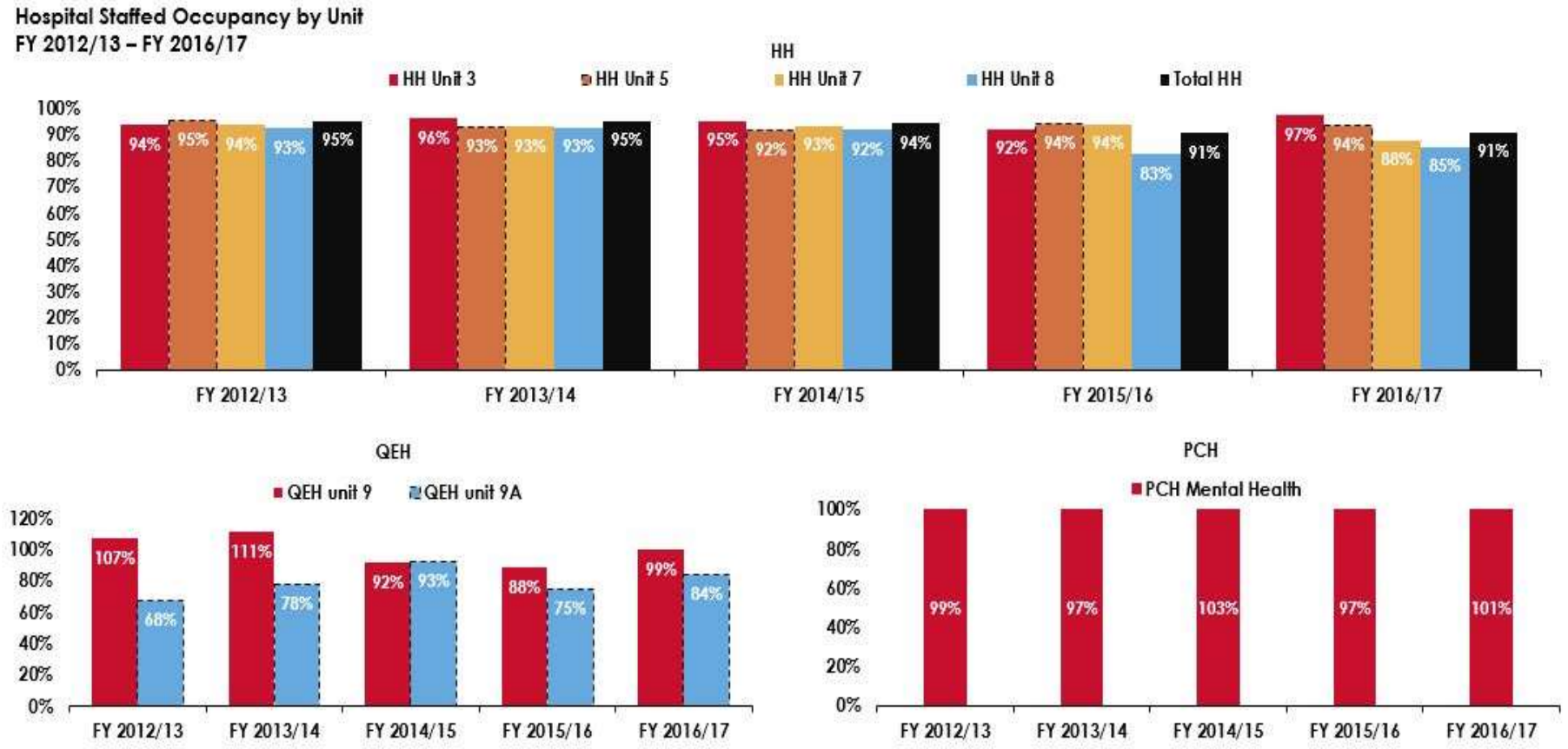


Diagram 11: IP MH Unit Occupancy, FY 2012/13 – FY 16/17
Source: Occupancy Rate-five years.xlsx

When clients who do not require acute mental health services remain on inpatient units, these units are unable to accommodate other clients who meet clinical criteria for inpatient services. Persistent inpatient mental health unit overcrowding forces overflow of adult and pediatric mental health clients onto general medical floors that are not equipped and lack the necessary clinical competencies to safely care for mental health and addictions clients. These clients are essentially being staged on inappropriate inpatient medical units until a dedicated mental health bed opens. This delays necessary interventions, resulting in increases in the overall lengths of stay and unnecessary costs to the system.

Mental health overcrowding is an omni-present challenge across Canada. For instance, mental health occupancy rates at Joseph Brant Hospital in Burlington, Ontario have soared as high as 188% during this past year, and the London Health Sciences Centre in Ontario has experienced at or above 100% mental health occupancy in every quarter since the beginning of the 2012/13 year. Best practice suggests a target occupancy of 85% for all inpatient mental health and addictions units. Maintaining an occupancy rate “safety margin” of 15% allows units to appropriately treat existing clients while providing flexibility to accommodate fluctuations in unplanned or unscheduled admissions.

Limited service options and a lack of easily accessible community-based care limits the ability to provide clients with access to step-down care once they no longer require intensive inpatient programming. Because of the lack of intermediate level care options and post-acute care options such as supportive housing and housing options for those without permanent housing, mental health clients in inpatient settings across Prince Edward Island often experience lengths of stay that exceed expected recommended benchmarks. Current best practice guidelines for acute inpatient care in Canada indicates that expected lengths of stay should be within 9 to 11 days for most client types. Across the Island’s inpatient mental health units, lengths of stay vastly exceeds current benchmarks, ranging from lengths of stay of 20 days at Prince County Hospital to nearly 41 days at Hillsborough Hospital. Lengths of stay at Queen Elizabeth Hospital and Prince County Hospital have shown a concerning upward trend – both facilities demonstrate a near doubling of lengths of stay over the course of five (5) years. Mental health inpatient average lengths of stay by site of service are illustrated in the graphic below.

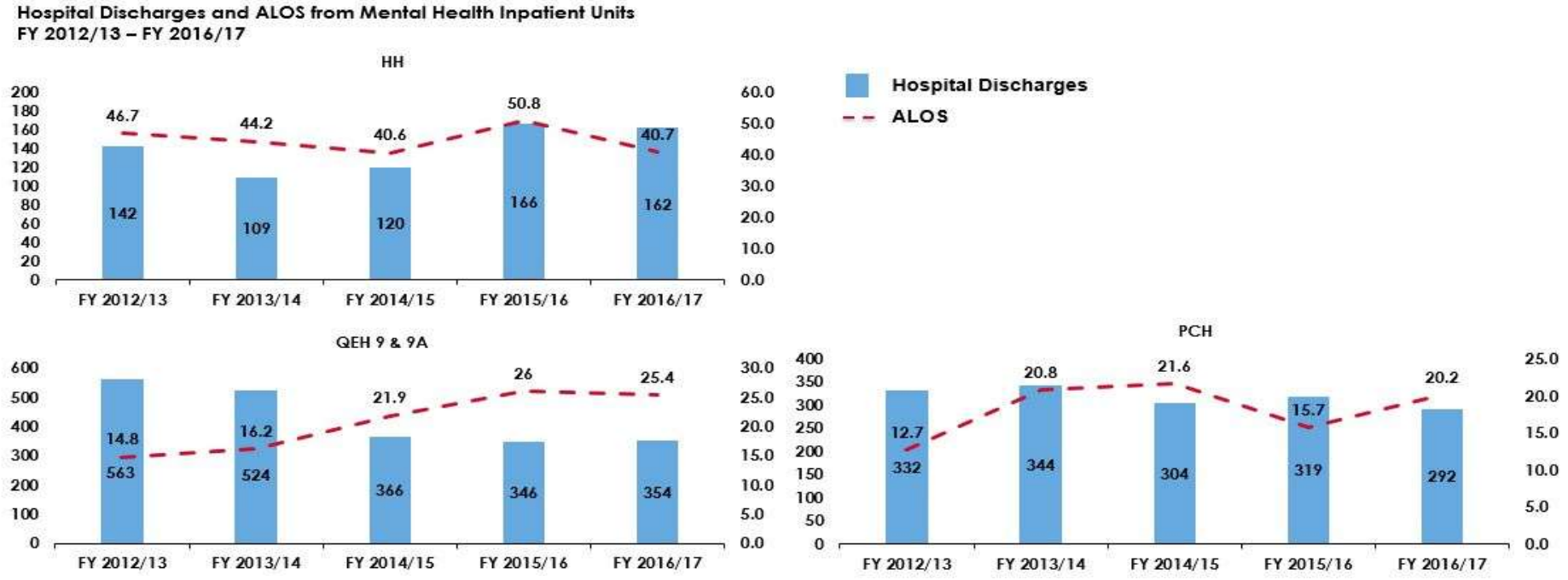


Diagram 12: Hospital Discharges and ALOS by Site, FY2012/13 – FY 16/17
Source: Discharged by CMG Unit Summary (all sites) -5 years.pdf

At any given moment, over 30 inpatient mental health clients across Prince Edward Island are awaiting placement in a non-acute setting such as supportive or transitional housing. These clients are not acutely ill and do not require the intensity of resources or services provided in an inpatient hospital setting. These clients, commonly referred to as Alternate Level of Care (ALC) clients, still require some form of care, such as personal care, home care, or long-term care. ALC clients are unable to be moved due to lack of available community-based resources to support their discharge. ALC clients are a common phenomenon throughout Canada, but not to the extent that exists in PEI. Nationwide, approximately 5% of inpatient beds are occupied by ALC clients at any given time. In Prince Edward Island, by comparison, approximately 40% of inpatient mental health and addictions beds are occupied by ALC clients. This represents the highest ALC rate of all Canadian provinces.

Nearly all adult clients with complex needs, including dual diagnosis clients and clients with co-occurring mental health and addictions diagnoses, find themselves being classified as an ALC patient toward the end of their acute inpatient hospitalization. These clients require specialized, supportive care after discharge and are unable to safely function independently. Unfortunately, because of the lack of supportive, structured living options available on the Island, these clients have nowhere to go once they leave an inpatient unit. It's common to witness complex needs clients who have been living on inpatient mental health units for months or years, filling valuable specialized inpatient bed space and limiting care access for newly admitted clients. As of FY 2017/18, the ALC patient with the longest LOS is a patient residing in Hillsborough Hospital's Unit 8 for the past 30 years.

Units housing large volumes of ALC clients have average lengths of stay measured in months to years. The impact of this situation cannot be understated from the perspectives of quality, client dignity and cost. From a cost perspective, Health PEI representatives report that the cost of caring for an inpatient mental health patient is approximately $733 per day as of the date of this publication. This translates to approximately $267,500 per client, per year or, in the case of the ALC client with a length of stay exceeding 30 years, over $8 million in total care costs in 2018 dollars. In FY 2016/17, ALC clients were responsible for 4,294 total patient days at a cost of approximately $3.15 million to the healthcare system. While transitioning these ALC clients to the appropriate site of care will not eliminate expenditures for these clients, it can be reasonably expected that doing so would reduce their overall cost of care by over 50% without compromising quality and improving their levels of dignity and independence.

The most recent ALOS for Hillsborough Hospital by unit are as follows:

- Unit 3, general psychiatric unit = 31.3 days;
- Unit 5, geriatric psych unit = 1,238 days;
- Unit 7, unit caring for dual diagnosis clients with cognitive delays = 3,996 days;
- Unit 8, transition unit, has an ALOS of 2,309 days.

While reducing the number of inpatient days associated with ALC clients will improve the overall length of stay of mental health and addictions clients in Prince Edward Island, it is not enough to lower lengths of stay to benchmark levels. To achieve this, a number of other modifications to the model of care, introductions of intensive community-based day treatment programming and evolutions in the practice patterns of a number of providers will be necessary. Observations related to these considerations can be found in their appropriate sections of this document.

4.3 Theme #2: Quality

Quality forms the basis of healthcare delivery. It is seen as the minimum expectation and assumed to be present in all interactions. When quality is present, few take notice. When quality is compromised it becomes evident quickly. The reality is that quality can sometimes be subjective, based on the goals of the individuals involved in the interaction that may, in fact, not align with one another. As CannonDesign focused on understanding how the Health PEI Mental Health and Addictions system functions from a quality perspective, we sought to focus on the attributes that indicate whether or not an environment exists that will enable the program to achieve quality. Where possible, our assessment is rooted in quantifiable data. However, in a number of circumstances, the information available was anecdotal due to the limited ability to collect electronic quality data for objective analysis. A deep analysis of quality at the individual client level would require a retrospective medical record review that is well beyond the scope of this engagement.

The quality of care for the Island's Mental Health and Addictions system suffers from inadequacies in each of the other five current state themes: access, communication and coordination, client experience, workforce, and built environment. Based on a 2016 Canadian study, *Driving Improvements in the Implementation of Collaborative Mental Health Care: A Quality Framework to Guide Measurement, Improvement and Research,* "Collaborative mental health care models can improve access to quality mental health care in primary care settings, and have demonstrated effectiveness, cost effectiveness, and population impact." One major roadblock when standardizing collaborative care models is that most implementations of the model vary from one another and do not conform to evidence-based practice. The authors propose a new quality framework for collaborative care, drawing upon other widely accepted models of care "to ensure

comprehensiveness, coherence, relevance and transferability." This new framework is summed up by three main characteristics which will drive quality improvement: "a) guiding comprehensive and balanced program evaluation, b) providing a menu from which organizations can select a specific focus for quality improvement, and c) informing the selection of measures for future research evaluating Collaborative Care interventions."

CannonDesign wishes to reiterate that that the observations being made with respect to quality are not reflective of any inability program leadership to achieve success in this area. The observations advanced in this section are made understanding that difficult foundational changes and significant investments of human resources, technology and capital must be made to address the issues identified. In addition, CannonDesign wished to assert that quality is a journey, not a destination. In every healthcare organization there are opportunities to improve quality and Health PEI is no different. The clinical and administrative leadership of the Mental Health and Addictions system were transparent in their own assessment of programmatic quality, are eager to continue improving quality and, by CannonDesign's assessment, are capable of improving programmatic quality if given the resources necessary to do so.

Our initial impression of programmatic quality is that quality across the mental health and addictions system is variable and inconsistent. This perception is based on the combination of quantitative and qualitative data and observations. CannonDesign believes the issues related to quality are reflective of systemic programmatic challenges as opposed to a lack of focus on quality. The Mental Health and Addictions clinical and administrative leadership team had made quality the foundation of their leadership philosophy but remained constrained by the realities of access challenges, programmatic gaps tied to the lack of demand to support some programmatic initiatives and difficulties with recruiting a full complement of mental health and addictions providers to Prince Edward Island.

The greatest challenges with quality stem from the access issues outlined in Section 4.2 of this report. The lack of reliable, efficient access to mental health and addictions services in and of itself creates quality challenges from the start. The peer-reviewed literature on this issue is clear – delays in accessing treatment have a deleterious effect on client outcomes and increase the right of harm and the overall cost of care. Delays result in client harm and make treatment and return to baseline more difficult and prolonged. Quality will continue to remain inconsistent if the existing systemic issues regarding access to mental health and addictions programming are not addressed.

May of the access challenges highlighted in Section 4.2 impact mental health and addictions clients even after they have accessed services at an acute care facility. For example, clients in acute crisis who present to the emergency department can wait in excess of 16 hours to receive a mental health evaluation by a licensed provider. During this time, clients who are agitated or in distress are likely to continue to escalate, partly due to their condition and partly due to the stimulating environment of a busy emergency department. When these clients escalate to the point that intervention is required, emergency department staff is called upon to assist with de-escalation. In most emergency departments, staff are not trained in best-practice de-escalation strategies for mental health and addictions clients – their focus is on ensuring the safety and comfort of all clients, visitors and staff in the department with minimal disruption to operations. The result is often de-escalation strategies that incorporate a show of force and chemical (medication) de-escalation through the use of sedatives and antipsychotic medications. De-escalation is eventually achieved, but at a cost. The client reinforces that the emergency department is a hostile environment to be avoided. Additional resources are necessary to safely monitor a sedated patient and mental health evaluation can be further delayed due to prolonged sedation.

Quality is further compromised when mental health and addictions clients are admitted to medical inpatient units either while they wait for an available mental health or addictions bed or for the duration of their hospitalization. For example, children and adolescents who require inpatient mental health care at Prince

County Hospital are admitted to the general pediatric unit. This is problematic for a number of reasons. First and foremost, nursing staff on the general pediatrics unit are medical nurses, not mental health nurses. While these nurses may receive training in the care of mental health clients, they are not expert in this area. They have reported feeling ill-prepared to provide the psychosocial support necessary to mental health clients on their unit. At the same time, the medical unit does not provide a safe and therapeutic milieu for clients. Inpatient rooms are not ligature-free and the unit is not designed to minimize the risk of self-harm and maximize staff safety, as is the case on inpatient units designed with intention for mental health and addictions clients. These environments increase the risk of client self-harm, staff injuries, client elopements, and other deleterious outcomes.

Patient and staff safety continue to remain at the forefront of Health PEI's acute care operations. Unfortunately, staffing challenges, like staff shortages and inexperienced staff caring for highly challenging clients, create safety and security issues. In addition to these staffing challenges, current medical and mental health facilities do not provide safe and secure environments, according to contemporary design standards.

The lack of treatment and placement options in Prince Edward Island leads to assignments of clients in suboptimal care environments for their treatment and recovery needs, impacting the mental health and addictions system across its entire spectrum of services. Under the current system, severely-mentally ill clients between the ages of 18 to 60 years who require long-term care do not qualify for a long-term care (LTC) bed; these clients must remain in acute inpatient beds until LTC beds become available. Additional LTC and supportive housing capacity would immediately address a majority of the ALC challenges highlighted in Section 4.2

Widely variable length-of-stay values dependent on age and inpatient unit suggests inconsistent care models for specific disease groups and demographics. This is reinforced by the absence of clinical pathways for inpatient admissions. For example, there are is no standard applied to determine when a client no longer requires acute inpatient hospitalization and can be safely returned to the community for on-going care or transitioned to a post-acute care setting. This enables providers to apply subjective metrics to the decision-making which can result in premature or delayed discharge.

Another key indicator of quality in mental health environments is the use of physical restraints to address behavioral issues and acute escalation. Use of physical and chemical restraint has been shown to increase the risk of harm to clients and staff and has led to countless incidents of client harm and death. In recent years there has been a movement toward achieving a "zero-restraint" environment in the acute setting. While many mental health and addictions programs are working toward declining use of restraints, Health PEI's mental health and addictions program has seen a concerning increase in restraint and seclusion use in recent years. CannonDesign recommends that Health PEI engage in a root cause analysis to determine the causes of this increasing use of restraint techniques.

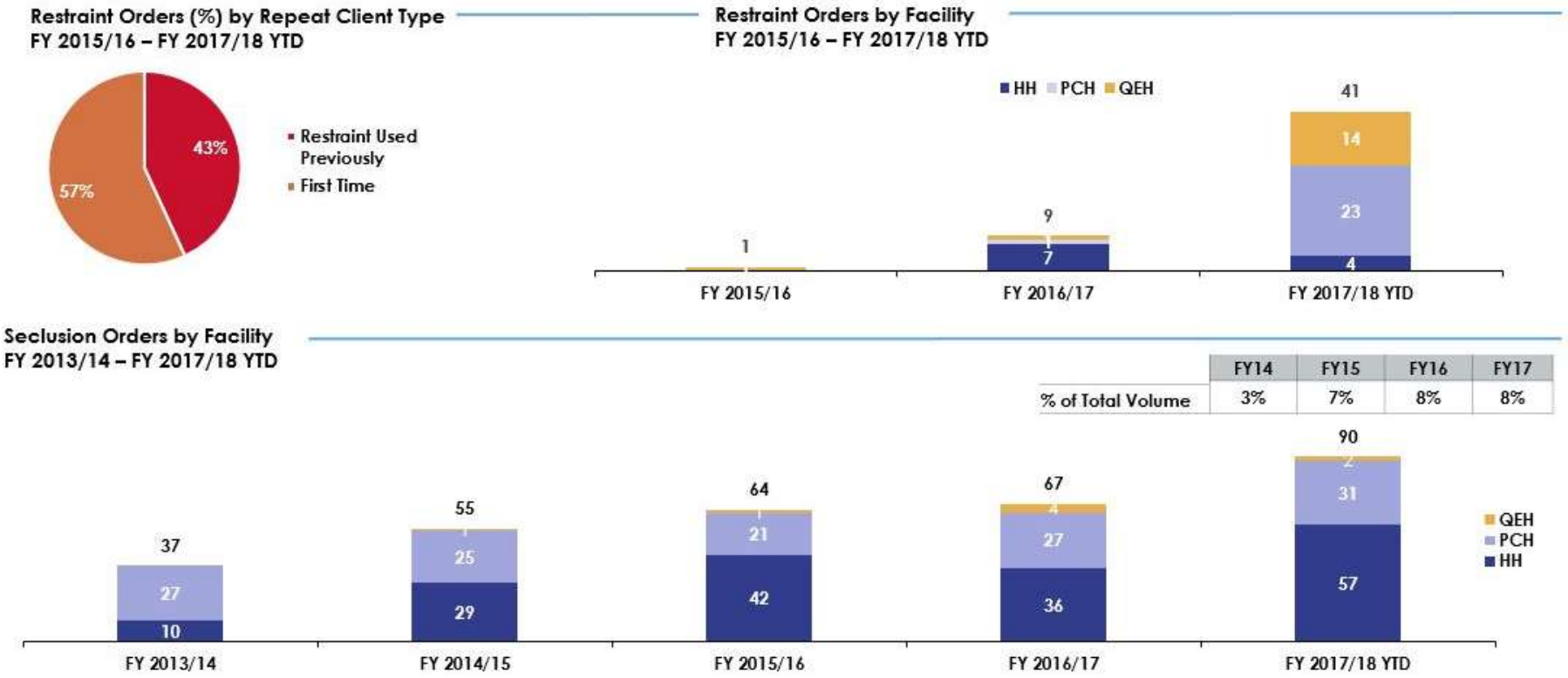


Diagram 13: Restraint and Seclusion Usage by Client Type and Facility, FY 2015/16 – FY 2017/18 YTD
Note: Restraint chair use not documented as restraint order
Source: Restraints_CIS_data_2016_to_Feb6_2018-updated.xlsx; Seclusion_Order_data_encrypted_mrn.xlsx

In addition to programmatic generalities, there are a number of site-specific quality considerations. These are highlighted below.

Hillsborough Hospital. Due to a lack of dedicated resources, Units 3 and 3B at Hillsborough Hospital are forced to mix geriatric, acute care, and forensics patient populations within the same unit space. Meeting the specific needs of each population is no easy task - there are several safety concerns involved in accommodating each patient within the mixed populations. Other barriers to providing optimal care are a lack of private rooms, blind corridors, and limited space for family visitation.

Unit 7 at Hillsborough Hospital faces its own set of challenges. Unit 7 serves dual diagnosis clients with intellectual disabilities and mental health diagnoses. The unit is the only dedicated dual diagnosis inpatient site of service on Prince Edward Island and treats adult clients of all ages within the same space. Many clients

come to Unit 7 from adolescent services or group homes, with the intention of returning to some type of supportive housing facility upon discharge. The plan for each client is to stabilize acute symptoms, evaluate and treat clients within the inpatient unit, and refer to sub-acute supportive living and housing services. Unfortunately, this is not the reality for many clients living in Unit 7. Due to a lack of appropriate long-term supportive living and housing services, dual diagnosis and other complex care clients often stay well beyond what is necessary for acute treatment. ALC days can number in the weeks, months or years.

Unit 8 at Hillsborough Hospital, which is considered to be a transitional care unit, has trouble with moving clients out of the unit and into the community due to a shortage of sub-acute placement opportunities and a lack of available of support services. ALC days can number in the weeks, months or years.

Queen Elizabeth Hospital. Mental health and addictions clients in the hospital's emergency department do not have access to appropriate crisis stabilization or psychiatric care during their stay. The emergency department also lacks any significant counseling or integrative care plans to effectively move mental health and addictions clients through the system. Due to the long average lengths of stay for mental health and addictions patients in the emergency department, there are an inadequate number of safe and secure rooms in the emergency department to accommodate today's volumes. As these clients continue to overwhelm the emergency department, innovative care models should be explored to afford clients access to the appropriate level of care and alleviate bottlenecks.

Prince County Hospital. A lack of placement options limits Prince County Hospital's ability to care for clients in the right settings with the appropriate resources. Mental health clients often endure extended delays in the emergency department before being seen and evaluated.

While Prince County Hospital accepts involuntary admissions past 72 hours, clients are occasionally kept in the hospital's emergency department with no other options for placement. Patients can wander the halls of the emergency department as they await admission to an inpatient unit, disrupting staff and patient flow and creating an elopement risk.

At Prince County Hospital, geriatric mental health and addictions clients are frequently combined with dementia patients and cared for on a single unit. With geriatricians in short supply, geriatric clients are often held for long periods of time until they are able to be moved to a long-term care facility. Geriatric mental health and addictions clients are often difficult to manage in traditional long-term care facilities and many facilities request clients to either return to an emergency department or be placed on additional medication. Unfortunately, most geriatric mental health and addictions clients would benefit from additional behavioral health management rather than additional acute care or medication.

As highlighted earlier, children and adolescents who require inpatient mental health care at Prince County Hospital are admitted to the general pediatric unit in the hospital. This is problematic for a number of reasons. First and foremost, the nursing staff on the general pediatrics unit are medical nurses, not mental health nurses. While they may receive training in the care of mental health clients they are not expert in this area. They have reported feeling ill-prepared to provide the psychosocial support necessary to mental health clients on their unit. At the same time, the unit does not provide a safe and therapeutic milieu for clients. Inpatient rooms are other areas of the unit are not ligature-free and the unit is not designed to minimize the risk of self-harm and maximize staff safety, as is the case on inpatient units designed with intention for mental health and addictions clients. These environments increase the risk of client self-harm, staff injuries, client elopements and other deleterious outcomes. If the hospital's general pediatric unit is unable to accept mental health clients, pediatric clients are placed in the hospital's adult mental health unit; this practice is frowned upon by modern psychiatric care standards due to the serious safety risks associated with cohorting adult and pediatric mental health clients within the same unit. In addition to numerous safety concerns, pediatric clients serviced in adult mental health units are unable to receive appropriate, age-specific programming during their stay.

Provincial Addictions Treatment Facility. Th Provincial Addictions Treatment Facility remote location makes accessing the facility's many community and outpatient services difficult for many clients. Additionally, the facility's long lengths of stay can be attributed to its treatment of low-acuity conditions in inpatient settings. The facility has a disjointed floor plan with crossover between the inpatient and transition units. Poor site lines and a lack of an intercom system create challenges for monitoring clients and communication between clients and staff.

Community Mental Health and Addictions. Community mental health and addictions care is experiencing a major shortage of providers and staff, preventing staff from meeting existing demand for services. While staff sometimes conduct community outreach, there isn't enough staff to care for all the clients referred to their sites for community services. The primary care delivery model for community mental health and addictions has revolved around servicing high volumes of community clients in individualized therapy and treatment. Because many clients receive community services for multiple years to decades, servicing clients on an individual therapeutic basis, without providing options for group programming or therapy, is an inefficient use of already constrained staff and resources. A major barrier to access and quality of community care is the lack of an integrated medical records system, which will be discussed in further detail in Section 4.4. The lack of an interoperable medical record system prevents optimal care coordination, leading to suboptimal quality of care. Clients are often under the impression that they are being handed off from one site to the next, with no one to navigate them along the right care path or coordinate medical and/or psychosocial determinants of health. Several clients whose needs should be met out in the community repeatedly end up at the emergency department due to inadequate management of chronic diseases.

Residential Housing. Talbot House for men, Lacey House for women, St. Eleanor's House, and Deacon House are all valuable transitional housing facilities, but only for those that can access the service. With only four transitional housing facilities, minimal spaces for women and no dedicated long-term housing available for clients, mental health and addictions residential services suffers from a shortage of community spaces.

On a final note relating to quality, there were several approaches to mental health and addictions care that were brought to the attention of CannonDesign that warrant further analysis that is beyond the scope of this engagement. CannonDesign can substantiate that these practices have been confirmed by representatives of Health PEI as occurring. Many of the issues highlighted are reflective of the practice patterns of individual practitioners and are not seen as system issues within the mental health and addictions program. CannonDesign can further assert that these activities do not adhere to the recommended standard of care for mental health and addictions clients and should be studied for their impact on programmatic quality and outcomes. These observations include:

- Delays in initiation of a plan of care for new admissions to inpatient units
- Forced separation of child and adolescent clients during the initial days of an inpatient admission and as a behavioral control measure
- Inpatient admission for initiation of Methadone and Suboxone therapy
- Resistance to discharging homeless clients back into the community without a permanent housing solution

4.4 Theme #3: Communication, Coordination, and Technology

Communication and coordination in the mental health and addictions setting is an important aspect that ties everyone and everything together. Communication and coordination breakdowns can contribute to serious problems, such as decreased productivity, delayed care, costly readmissions, and capacity issues. Barriers to communication, IT standardization, and coordination prevents the ability of the system to seamlessly coordinate home, community, ambulatory, acute stabilization, and long-term management resources.

Across one-on-one interviews, focus groups and direct observation a singular theme continued to emerge: no single entity is responsible for facilitating communications, ensuring coordinated care management, or integrating disparate technologies across the various sites of service. This reality serves to create a highly disjointed model of care that is more transactional than it is integrated.

Communication

Challenges facing communication, with respect to mental health and addictions programming, was the most frequently cited concern by both clients and providers alike. Clients participating in focus group sessions and surveys shared several concerns regarding communication they perceived as presenting barriers to not only accessing care, but also to actively engaging in their care as a partner in the process. Many indicated they felt as though they were being left to coordinate services on their own, without support. Many clients admitted this was particularly challenging as they struggle with the impact their mental health or addictions diagnosis has on their ability to function independently. Still, others lamented on the lack of communication between their providers, which resulted in disjointed care, duplication of services, and challenges with referrals and follow-up care.

Many clients, particularly those who are younger and more tech savvy, reported that the channels available for communication with their care teams and other resources was limited. There was a perception that communication could only occur during normal business hours and via phone or mail. Clients reported experiencing delayed response times to communication requests and, in many instances, receiving communication that did not address their primary need or concern. In the end, many clients expressed a combination of frustration and resignation towards the communication challenges they experience.

Discussions with mental health and addictions providers yielded similar insights. Many reported considerable challenges in communicating with clients and with each other, particularly when communicating across different agencies or physical locations. Specifically, a disconnect has been felt by staff between primary care and mental health services across the system. Primary care providers reported feeling as though information “is being kept” from the primary referring physician; they reported obtaining information on a client’s treatment and plan of care was difficult if not impossible. It was discovered through discussions with mental health and addictions program staff that part of this challenge may stem from the misinterpretation of the guidelines related to patient privacy and the required protections of sensitive health information. This was corroborated in a staff survey response, “When clients are moved from service to service there is little to no information sent along with the client. We have an issue at present which concerns the privacy law and cannot get a straight answer from anyone.”

The combination of client, provider and stakeholder feedback on communications can lead to only one conclusion: regardless of the reasons, communications processes and channels are inadequate to meet the demands of all constituencies. Health PEI’s mental health and addictions system will need to embrace communication channels that stakeholders use routinely in other aspects of their lives. When selecting which channels to deploy and when and where to employ them, Health PEI will need to better understand its own communication goals.

Coordination

The delivery of mental health and addictions care exists along a continuum that spans from the home to community-based services, acute assessment and stabilization services, inpatient acute care, and post-acute care. As mental health and addictions clients manage their conditions over the course of a lifetime, they will invariably require many different services of varying levels of acuity, across different sites of service. At multiple points in time, clients' care will be transitioned from one organization to another, or from one site of service to another. Along the way, the clients, the clients' primary care providers, and all mental health and addictions providers need to forge a bond that supports an integrated approach to service delivery to ensure seamless transitions and hand-offs, a standard to which all high-performing mental health and addictions programs operate. During one-on-one interviews, focus group discussions, and during direct observation, CannonDesign repeatedly discovered examples where coordination gaps exist. These gaps reduce treatment compliance, limit the ability to render psychosocial support, negatively impact quality, duplicate services, and generally create friction and stress in the system.

Throughout the Island's mental health and addictions program, major care coordination point occurs during the handoff of clients from service to service and from site to site. Where should a specific client be placed? Is there bed availability in a location? Does the patient require isolation? Are there any previous behaviors staff should be aware of? Are there any relationships with staff and the client? Should staff be on the lookout for specific drug use? What are the treatment recommendations stemming from the client's last interaction with the program? Is the client experiencing psychosocial stressors that everyone might not be aware of? These questions represent a few of the basic actions essential to the successful execution of mental health and addictions care, yet they are inconsistently achieved across Prince Edward Island.

The lack of coordination begins at the point of referral into the mental health and addictions system. Many primary care providers report difficulty and frustration in obtaining services for their patients who will one day become clients of the mental health and addictions system. Referrals from primary care providers to direct psychiatric services are not possible. Instead, referrals must be made to a community-based service where assessments will be made to determine if psychiatric intervention is warranted. This roundabout referral process creates unnecessary delays in treatment initiation and limits the ability of psychiatrists to support primary care providers in medication management and other interventions that may arrest symptom progression. Once referrals are made into the mental health and addictions system, many primary care providers report that information regarding assessment and stabilization actions, inpatient hospitalizations, and other critical client care information does not flow back to the them. The lack of a backwards flow of information results in uncoordinated care and a narrative suggesting primary care providers are not partners in the care of mental health and addictions clients.

Like their primary care counterparts, community-based mental health and addictions providers report frustration over service coordination, in addition to general dissatisfaction regarding their relationships with each other and with Health PEI. Transitions between organizations and sites of service can become complicated and delayed. When clients are referred between sites of service that utilize different information technology solutions, referral and care information is either not relayed between sites or is disseminated through inefficient and inaccurate means of communication due to a lack of integrated information technology solutions. This problem will be discussed in more detail in a later portion of this section.

An equally frustrating challenge in client transitions occurs between acute and non-acute settings. Clients referred to the emergency department for acute assessment and stabilization frequently arrive to the hospital only to discover that little to no information has been conveyed to the emergency department that would alert staff of concerns warranting the need for assessment or any special considerations that need to be taken into account prior to arrival. The emergency

department is often left flying blind or, at most, left to rely on information from clients' previous emergency department visits and/or inpatient hospitalizations which, admittedly, only reflects a snapshot of the total continuum of care. This prohibits the emergency department from participating in the active coordination of care for their clients.

Coordination between different sites of service is further challenged when different agencies and providers fail to speak the same "language." There are misconceptions about the ability to share client/patient information between providers and staff, which creates a bigger burden for providers trying to make timely referrals for mental health and addiction services. The technology systems utilized across Prince Edward Island are dated, costly, and ineffective. Interoperability is completely lacking for both inpatient and outpatient IT systems, creating a sizeable gap in communication and limiting the ease of coordination. In addition, there is also a lack of tele-health/tele-psych services and IT/data standardization across the Island.

Technology

Technology has become a ubiquitous part of the lives of every Canadian. Digital natives are now in their 30's and the tech savvy include individuals in their 60's, 70's and beyond. As mental health and addictions programs seek to gain the most benefit from leveraging technology, they need to consider how information exchange, tele-mental health, data analytics, application optimization, quality reporting, cybersecurity, experiential expectation, and population health can be optimized by leveraging digital solutions. High-performing organizations from an information technology perspective focus not only on cost reduction and information exchange, but also on digital business and clinical innovations that work to streamline client journeys, improve mental health and addictions care, and create new, more impactful models of care.

The best way to profile the strengths and opportunities related to the use of technology across the Health PEI mental health and addictions program is simply to catalog the technologies currently in use across the system. This technology inventory appears in the following table.

ACCESS TECHNOLOGIES	
On-Line Appointment Scheduling	-
App-Based Appointment Scheduling	-
Text / SMS Reminders	-
CARE DELIVERY	
Video Visits	-
Tele-Mental Health Services	+
App-Based Well-Being Program	-
Text Communication with Care Team	-

Client Care Portal	-
AI-Guided Care Pathways	-
Dynamic Case Management / Care Coordination Care Portal	-
Inter-Provider Communications within Electronic Health Records	-
CLINCAL DOCUMENTATION	
Electronic Health Record	+
Bi-Directional Interfaces (interoperability) Between Disparate Electronic Health Records	-
Read-Only Open Access for All Relevant Care Providers	-
Care Summaries to Primary Care Providers	-

Table 1: E-Health Technology Inventory

The most concerning aspect of the mental health and addictions system's technology inventory is the current lack of bi-directional, real-time interfaces (interoperability) between disparate electronic health records and other forms of clinical documentation used at various sites of service. Interoperability refers to the basic ability of technology systems to communicate, exchange data, and use information that has been exchanged, even if systems were developed by widely different manufacturers in different industries. Being able to exchange information between applications, databases, and other technology systems is considered essential for the delivery of modern, high-quality healthcare services and is a crucial step in the implementation of a new mental health and addictions care system. According to the Healthcare Information and Management Systems Society (HIMSS), "Interoperability describes the extent to which systems and devices can exchange data and interpret that shared data. For two systems to be interoperable, they must be able to exchange data and subsequently present that data such that it can be understood by a user". A lack of interoperability is problematic as it related to client activation and compliance, communication, care coordination, clinical quality and cost of care.

HIMSS has described three levels of health information technology interoperability. In their words:

Foundational	Allows data exchange from one information technology system to be received by another and does not require the ability for the receiving information technology system to interpret the data.
Structural	Interoperability is an intermediate level that defines the structure or format of data exchange (i.e., the message format standards) where there is uniform movement of healthcare data from one system to another such that the clinical or operational purpose and meaning of the data is preserved and unaltered. Structural interoperability defines the syntax of the data exchange. It ensures that data exchanges between information technology systems can be interpreted at the data field level.
Semantic	Interoperability provides interoperability at the highest level, which is the ability of two or more systems or elements to exchange information and to use the information that has been exchanged. Semantic interoperability takes advantage of both the structuring of the data exchange and the codification of the data including vocabulary so that the receiving information technology systems can interpret the data. This level of interoperability supports the electronic exchange of patient summary information among caregivers and other authorized parties via potentially disparate electronic health record (EHR) systems and other systems to improve quality, safety, efficiency, and efficacy of healthcare delivery.

Table 2: HIMSS Levels of Health Information Technology Interoperability

But how does interoperability add value to the delivery of mental health and addictions care? First, interoperability improves efficiency. When information is made available and presented in an easy to reference and consistent format, providers can quickly gain situational awareness into the needs of clients. Providers have access to all existing client information and any information pertaining to their clients' courses of treatment. Second, transitions in care are made safer thought the avoidance of duplicative services; medication errors, duplication and avoidable drug-drug interactions; accelerated communication of care transition risks; real-time access to care summaries and plans of care; and identification of comorbid conditions. Third, as a result of all the benefits previously outlined, interoperability reduces cost.

Currently, much of the exchange of health information between organizations with different electronic health record (EHR) systems in Prince Edward Island happens via post, paper faxing, or phone calls, eating up both time and money. Accreditation Canada, a national healthcare accreditation body, has cited the Island's lack of an interoperable mental health and addictions EHR as a serious risk issue for the system. Increased interoperability between EHR systems would make information universally sharable, which in turn would facilitate client care and allow for seamless referrals and transitions between mental health and addiction providers.

4.5 Theme #4: Client Experience

In the face of multiple priorities like enhancing clinical quality, reducing cost, recruiting and retaining top-tier talent, and prioritizing capital expenditures, healthcare systems may question the value of measuring and improving client experience with the overall system of care. That said, there is increasing evidence linking client experience to important clinical and business outcomes. This evidence makes a compelling case for improving client experience.

Improving the client experience has an inherent value to clients and their support networks and is therefore an important outcome. But good client experience also is associated with important clinical processes and outcomes. Data compiled by the Agency for Healthcare Quality and research suggests:

- Clients' experiences with providers, correlate with adherence to treatment recommendations
- Clients with better experiences have been proven to have better outcomes

In addition to this data, mental health and addictions providers often state that a positive client experience can reduce the incidence of escalations that often result in client and/or staff harm.

Many providers incorrectly believe that providing a good experience means "the client is always right," even though clients lack medical training and clinical expertise. Providers argue that focusing too heavily on experience risks compromising quality initiatives and could possibly result in clients dictating care plans, even if what clients want is not in their best interests. For the purposed of this analysis, CannonDesign believes that focusing on the client experience means focusing on three key themes:

1. Clients and their support networks are treated with courtesy, respect and dignity regardless of the situation.
2. Clients and their support networks needs are heard and considered when making treatment and operational decisions
3. Doing the minimum required is not enough. When possible, expectations should be exceeded.

Although Canada does not conduct national client satisfaction surveys for mental health and addictions clients, the province of British Columbia publishes a mental health and substance use short-stay inpatient experience survey. The province's most recent survey was conducted in 2011 and covers eight dimensions of patient-centered care. In 2011, 91% of clients responded positively when asked to rate the quality of the care and services received; positive responses for individual inpatient hospitals ranged from 89% to 92%. Additionally, 71% of clients responded positively to questions regarding care environment.

With growing demand for mental health and addictions services coupled with the need for community education regarding available resources, Health PEI's mental health and addictions clients are subjected to a high degree of experiential variability between sites of service. While there is variability in the client experience, a large majority of clients report satisfaction with their experience in the mental health and addictions program. This is a testament to the dedication of the clinical and administrative team who have gone above and beyond in an attempt to overcome many of the challenges inherent with today's mental health and addictions program.

While Prince Edward Island's overall acute mental health and addictions quality was comparable to the overall quality for the same services in British Columbia, quality scores from Prince Edward Island's individual acute care sites fall short, particularly quality scores pertaining to hospital environment. During interviews, both clients and their families spoke of a number of issues surrounding the interior and exterior environments of inpatient mental health facilities – interiors were dated and falling apart, clients lacked privacy and security, and exterior campuses were underutilized and in disrepair. Clients spoke of feeling as though they lacked privacy and were "on display" during their inpatient stays due to the units' physical interior and exterior environments, leading to dissatisfying inpatient experiences. These negative client experiences are reflected in the survey's mediocre positive satisfaction rates – only 54% of clients at Hillsborough Hospital and 61% of clients at both Queen Elizabeth Hospital and Prince County Hospital rated their inpatient hospital environment as "satisfying" or "highly satisfying".

Client satisfaction varies between inpatient and outpatient platforms. While there remains room for improvement, a 2016 survey of mental health and addictions clients showed that they were moderately to highly satisfied regarding the care they received. In September through October of 2015, community mental health and addictions clients were surveyed to determine their satisfaction. The results showed clients had a relatively high satisfaction (greater than 79%) except for Richmond Centre where clients rated their experience at 75%. In April of 2016, Health PEI opened walk-in mental health and addictions clinics throughout the Island. These walk-in clinics have been very well received; clients interviewed for a 2017 satisfaction survey were generally satisfied with their experience, although there were unique concerns raised from mental health and addictions clients at Alberton, McGill, and Richmond Centres worth exploring further.

Health MH&A PEI Mental Health, Inpatient and Residential Addictions and Provincial Addictions Client Survey
September – October 2015

Higher than 75% | 50-75% | 50% or less

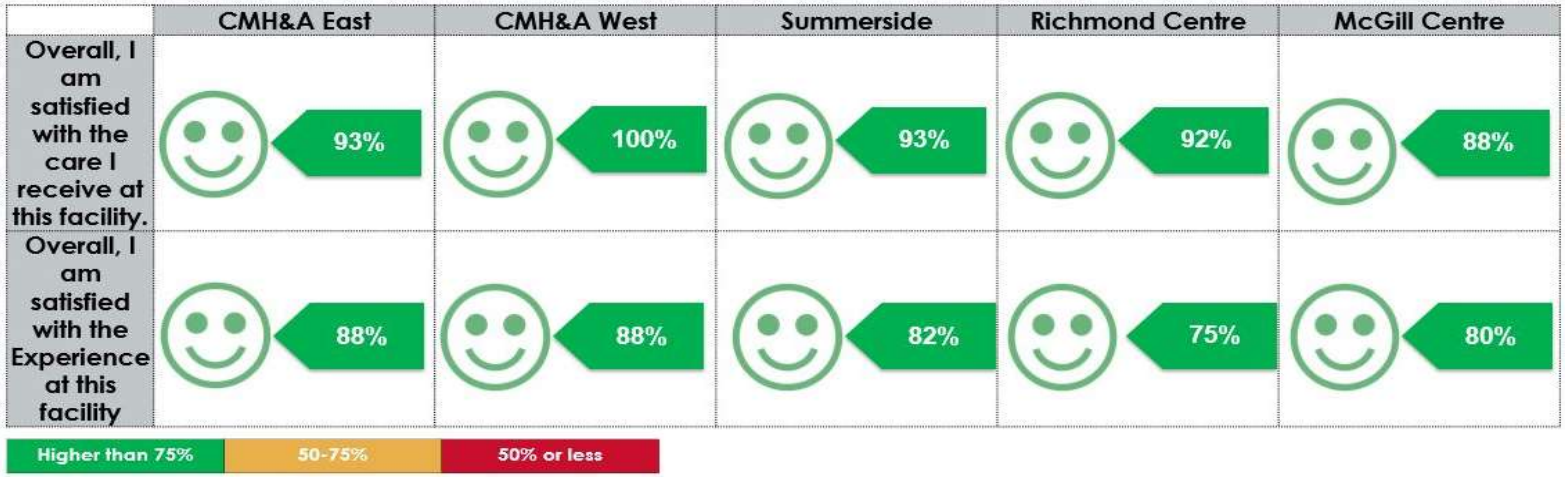
	Inpatient and Residential Addictions	Provincial Outpatient Addiction Services
Overall, I am satisfied with the care I receive at this facility.	100%	90%
Overall, I am satisfied with the Experience at this facility	92%	89%

Percent of Health PEI Clients who Agree or Strongly Agree with Overall Survey Categories

	Hillsborough	IP (PCH and QEH)
Hospital Environment	54%	61%
Overall, I am satisfied with the care I receive at this facility.	78%	82%
Overall, I am satisfied with the Experience at this facility	79%	76%

Higher than 75% | 50-75% | 50% or less

Percent of Health PEI Clients who Agree or Strongly Agree with Overall Care Received and Experience Questions



Community Mental Health Walk in Clinics 2017

Highest Rated to Lowest Rated

Percentage Responded "Yes, Definitely" (Most Positive)	Summerside	Alberton	McGill	Richmond	Average
Did you feel welcome?	96%	96%	92%	85%	92%
Did you feel heard and understood?	89%	87%	83%	82%	86%
Were your concerns addressed?	74%	51%	63%	72%	67%
Today's session was helpful to me?	83%	70%	69%	72%	76%
Would you recommend the clinic to others?	89%	81%	86%	82%	85%
Overall my visit to the walk-in clinic was helpful?	88%	84%	85%	78%	84%

Diagram 14 - 17: Client Satisfaction Survey Results
Source: Client Experience Survey Results Summary.docx

Educating the population about available resources and how to use these resources can be an invaluable tool to aid in the delivery of the right care, at the right place, and at the right time to further enhance the client experience. Providing comprehensive mental health and addictions education to the general population, with a focus on community care and service availability will further reduce the stigma faced by mental health and addictions clients and shift focus to the importance of early interventions, such as the provision additional community addictions support for adolescents and young adults.

Long wait times for both mental health and addictions services can be a major client dissatisfier. Several programs are currently limited or absent from the care continuum, including adult day treatment programming, mental health and addictions mobile crisis teams, group therapy for all age cohorts, peer support, geriatric long-term care environments, transitional housing for mental health clients, and supportive housing for dual diagnosis clients. Clients spoke of feeling uncomfortable and "on display" during their stay on inpatient units due to the units' physical interior and exterior environment, contributing to a lack of client satisfaction, which is reflected in the

Clients and families do not feel that they are receiving the services that they need at the point in time in which services are needed. Once clients are seen, they often feel alone and unsupported while navigating the care continuum without guidance from Health PEI staff. In addition, Health PEI lacks services for co-morbid mental health and addiction clients, offering only separate services for mental health and for addiction. Coordination between services can help resolve issues that arise from separating co-morbid and complex clients.

4.6 Theme #5: Workforce

Determining workforce requirements is a process that requires the analysis of a number of interrelated factors that, when combined, guide the provision of proper resourcing. Interrelated factors include:

- Client characteristics & acuity
- Client flow and throughput
- Staff qualifications
- Staff mix
- Physical environments
- Technologies deployed
- Care delivery model
- Financial resources

Regardless of how staffing models are developed, the goals are the same: to ensure that client, institutional, and staff outcomes achieve minimum threshold levels of performance, quality, and value. The following outcome measures are considered important when considering workforce needs:

Client Outcomes	Institution Outcomes	Staff Outcomes
• Adverse events • Seclusion use • Restraint use • Assaults / violence • Medication errors • Falls • Satisfaction	• Length of stay / throughput • Time to access / delays • Cost	• Satisfaction • Burnout • Injuries • Professional growth & development

Table 3: Workforce Outcome Measures

The assessment of current state staffing is based on observational data and the expert option of CannonDesign and its consultants. The analysis of current state staffing is not intended to suggest that similar benchmarks should be used for future-state planning, as future-state benchmarks will be reflective new realities envisioned for the future.

At present, it is CannonDesign's opinion that there is a shortage of qualified mental health and addictions health personnel across Prince Edward Island. On the Island, there are 8.7 psychiatrists per 100,000 inhabitants, representing the second lowest number of psychiatrist per capita in Canada. Across Canada, by comparison there are an average of 14.3 psychiatrists per 100,000 inhabitants. With only 13 psychiatrists attempting to provide community-based, acute assessment, acute stabilization, inpatient, and post-acute care mental health and addictions services, the challenge to deliver high-quality, efficient care becomes obvious. Leveraging Health PEI's current model of care, CannonDesign believes that the Canada-wide benchmark of at least 14 psychiatrists per 100,000 residents would be considerably more appropriate. While recruitment challenges will limit the ability of Health PEI to hire an additional 8 psychiatrists while also backfilling departures and retirements, CannonDesign believes that care model innovations must be employed to better leverage the number of psychiatrists that Health PEI is able to retain.

In addition to an inadequate number of psychiatrists, Prince Edward Island struggles with an inadequate number of mental health nurses, psychologists, and social workers, a challenge felt most acutely in community settings, where the limited number of staff result in many of the access challenges highlighted in Section 4.2. Without an adequate number of mental health and addictions specialists deployed throughout the community, Health PEI cannot expect to address their previously identified access issues.

Health PEI is faced with a persistently high number of vacancies for psychiatrists, psychologists, psychiatric nurses, social workers, and occupational therapists. Despite a renewed focus on recruitment and retention efforts, Health PEI continues to struggle. Recruiting and retaining clinical staff with the appropriate skillsets to care for specific client populations (dual diagnosis, co-occurring, geriatric) is also hampered by the rurality of the Island, due in part to a lack of available training slots at on-island educational institutions. The system's inability to attract and retain specific clinical staff is further exacerbated by challenges associated

with recruiting clinicians from larger urban centres such as Montreal, Toronto, etc. Many potential provider candidates simply do not want to live and work in a rural setting, making these critical roles difficult to fill and keep filled. Clinicians interested in working in rural communities are a position to select from unlimited opportunities across nearly every province and a bevy of provincial health systems aggressively competing against one another for these precious resources. Health PEI's greatest opportunities to recruit off-island staff lies in identifying those with a personal connection to Prince Edward Island that would entice them to relocate.

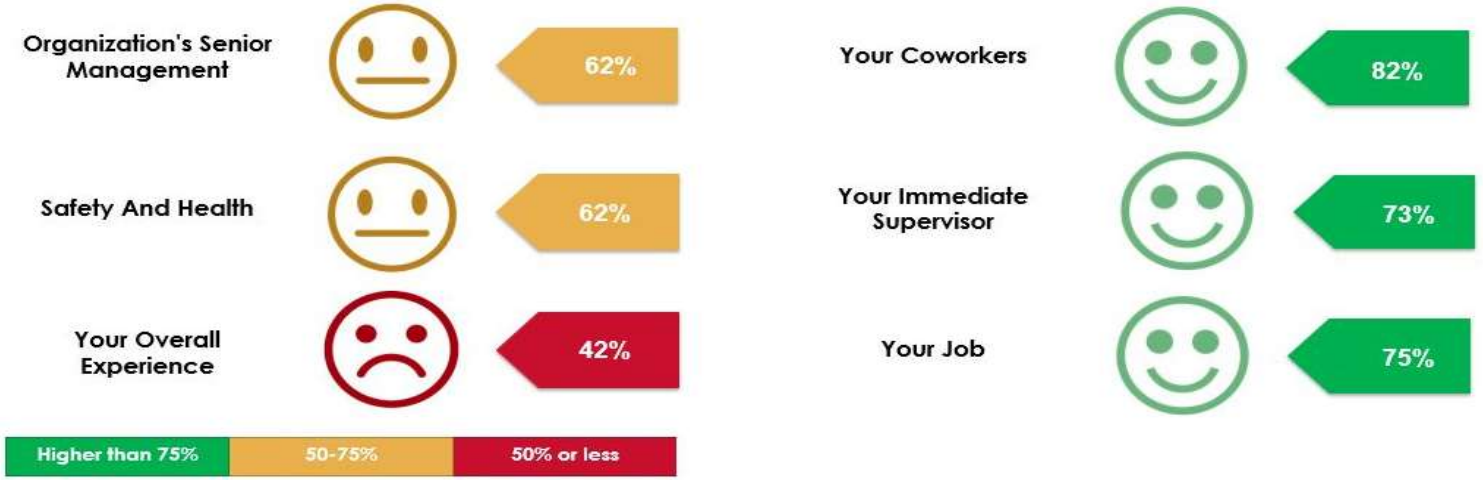
Prince Edward Island has numerous clients with mental health and addictions care needs that reside in rural areas that lack qualified care personnel. Clients in these rural locations have difficulty obtaining acute stabilization needed in emergent situations, as well as appropriate long-term management on their road to health. Clients will frequently go to local emergency departments to receive care and wait for psychiatric availability. Health PEI has developed strategies that target this population; such strategies include limited tele-health, a Seniors Mental Health Resource Team, and walk-in clinics throughout the Island. Unfortunately, these strategic services are often inadequate in number to appropriately address the needs of the entire province at any given moment.

Through anecdotal evidence provided during one-on-one interviews, focus groups, and direct observation, CannonDesign believes there are additional issues that impact effective staffing, including:

- Minimal on-boarding and orientation
- Limited opportunities for on-going training and continuing education
- Lack of experienced staff to mentor junior staff

As a result of the staffing challenges, staff burnout is a major concern. Staff satisfaction varies widely which makes recruiting and retaining staff a challenge. A Health PEI Work Life Pulse Survey performed in April 2016 demonstrated several concerning findings.

Percent of Health PEI Employees who Agree or Strongly Agree with Overall Survey Categories



Percent of Health PEI Employees who Agree or Strongly Agree with "Your Job" Survey Questions

Question	PATF	Hillsborough Hosp.	MH&A East	MH&A West	Overall
1. I understand what is expected of me in my job.	89%	87%	85%	100%	84%
2. I am given enough time to do what is expected of me in my job.	56%	60%	55%	80%	60%
3. I am consulted about changes affecting my job.	44%	47%	52%	45%	49%
4. I am able to decide how to do my work.	78%	80%	76%	80%	80%
5. I am able to make improvements in how my work is done.	67%	80%	69%	60%	74%
6. My job makes good use of my skills.	78%	73%	69%	80%	80%
7. I have the materials, supplies, and equipment I need to do my work.	67%	60%	77%	80%	75%
8. I receive recognition for good work.	44%	67%	92%	80%	73%
Total % who Responded "Strongly Agree" and "Agree"	65%	69%	72%	80%	71%
Total # who Responded to Survey	75	120	104	35	331

Higher than 75% | 50-75% | 50% or less

Percent of Health PEI Employees who Agree or Strongly Agree with "Overall Experience" Survey Questions

Question	PATF	Hillsborough Hosp.	MH&A East	MH&A West	Overall
26. How often does your work unit / team provide top-quality patient care or other services?	56%	33%	46%	60%	47%
27. Would you recommend this organization to friends and family who require care?	0%	0%	0%	0%	0%
28. How frequently do you look forward to going to work?	22%	40%	31%	0%	24%
29. Overall, how satisfied are you with your job?	78%	80%	76%	60%	74%
30. Overall, how would you rate your organization as a place to work?	33%	67%	68%	60%	59%
Total % who Responded "Strongly Agree" and "Agree"	38%	44%	44%	36%	41%
Total # who Responded to Survey	45	75	65	25	210

Higher than 75% | 50-75% | 50% or less

Diagram 18 - 20: Work Life Pulse Survey Results, April 2016
Source: MH-AS Worklife Pulse survey results.pdf

Overall Satisfaction

Despite the overall tone and tenor of the responses, 74% of the 210 respondents indicated that they were satisfied with their jobs. Fortunately, this provides Health PEI with a strong foundation upon which to build a new future. Despite the many concerns expressed in the Health PEI Work Life Pulse Survey, employees are generally satisfied and clearly want to be a part of improving the organization.

Perceptions of Quality

The Mental Health and Addictions system's staff perceptions of the care delivered to clients is a cause for concern. Only 47% of respondents indicated that their work unit or team provided high-quality care or services. There was considerable variability in responses between respondents at different sites of service, but nowhere did a sizeable majority of respondents feel the quality of care delivered was high. This was reinforced by the fact that not a single respondent indicated that they would recommend the organization to friends or family who require care. A 0% response score on this question raises serious concerns about the staff's confidence in their own abilities to deliver appropriate and effective care.

Safety and Health

While many respondents were satisfied with their specific job, co-workers, supervisors, and training resources available, almost half of the employees surveyed indicated they were dissatisfied with the safety and health aspects of their jobs. Tours of clinical environments substantiated the health and safety concerns raised by staff. All opportunities related to the built environment will be discussed in more detail in Section 4.7. Armed with the understanding that safety and health are basic needs that require fulfillment, it becomes clear why employees are dissatisfied, why turnover is high, and why recruiting is a challenge. If safety and health were the only concerns, the challenges facing Health PEI's workforce could be easily solved. Unfortunately, this is not the case.

Shared Decision Making

Feedback on decision making was mixed. While most survey respondents indicated that they are not consulted about changes that will affect their work, a sizable majority indicated they are able to decide how best to execute on their work roles and are able to make improvement on how their work is done.

4.7 Theme #6: Facility Design

The infrastructure of mental health and addictions facilities is aging; facilities are either in various stages of deterioration or have outlived their useful lives. The state of the physical facilities across the system makes it difficult, if not almost impossible, to deliver high-quality, safe care in an environment that is de-escalating and respectful of the dignity of clients and staff alike. From the standpoint of the ability to optimally support contemporary mental health and addictions care, the older Health PEI mental health and addictions buildings have reached a point of functional obsolescence and require immediate replacement. At the time of their construction, the physical footprints and layouts were no doubt well-suited to serve models of care reflective of the time, but much has changed in mental health and addictions care, and the physical environments have not kept pace with the care delivery innovations. Renovations made over time have served to minimize the impact of aging on the buildings, but there is a limit to how far renovation can go before certain systemic features cannot be overcome.

Comments on specific buildings and their needs follow.

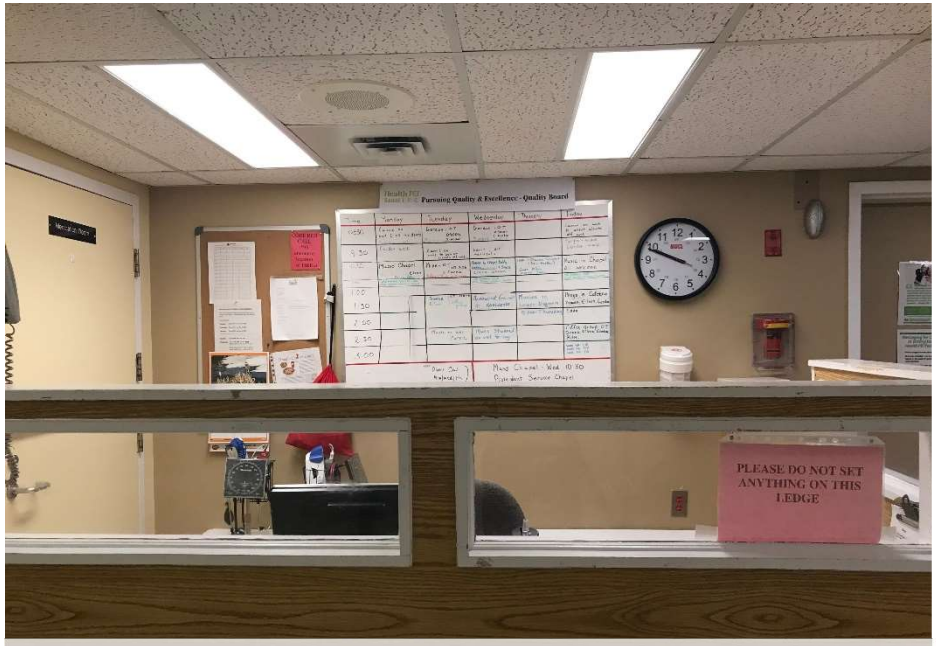
Hillsborough Hospital

Hillsborough Hospital's is located within Charlottetown and operates as a 69-bed referral mental health facility for the entire province. The facility is designated as the province's main mental health facility and is responsible for forensic clients under the Canadian Criminal Code. Founded in 1879 as Prince Edward Island Hospital for the Insane, the current Hillsborough Hospital was constructed in 1933 following a fire in 1931 that claimed the lives of eight (8) clients in the facility, then known as Falconwood Hospital.

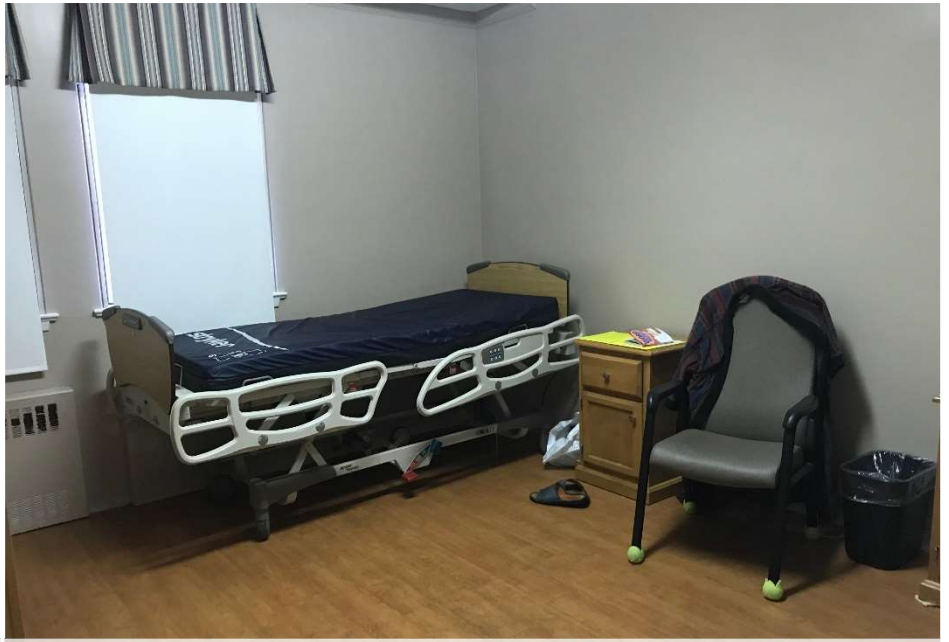
Hillsborough Hospital's most pervasive problem is its aging building structure. The structure is over 85 years old and the newest wing of the facility has not been upgraded in over 20 years. The typical useful life of inpatient environments is up to 50 years, indicating that that Hillsborough Hospital is some 35 years past its useful life. The facility was constructed during an era of mental health care where inpatient lengths of stay measured in years to an entire lifetime. The "asylum" model essentially served to warehouse the mentally ill, offering little in the way of therapeutic interventions beyond medication. Hillsborough Hospital is routinely undergoing intermittent interior renovations to remove asbestos and other dated, harmful building materials. Many of the repair renovation sites are within the inpatient units themselves and are accessible to clients, presenting safety concerns.

Picture: Hillsborough Hospital - Main Entrance, Exterior
Source: Hillsborough Hospital Facility Tour, March 2018

Picture: Hillsborough Hospital - Main Entrance Security Desk
Source: Hillsborough Hospital Facility Tour, March 2018

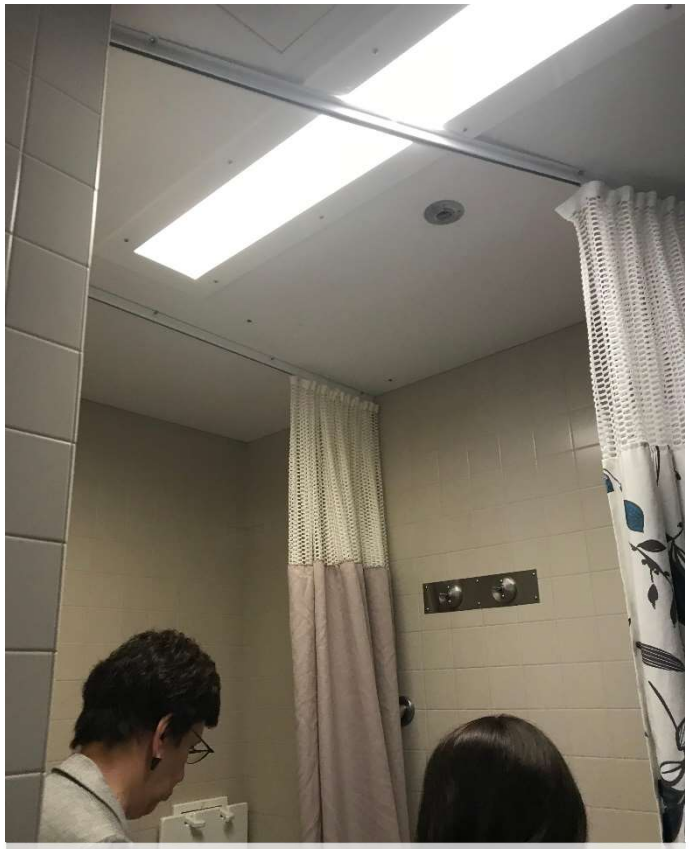


Picture: Hillsborough Hospital – Unit 5 Nursing Station
Source: Hillsborough Hospital Facility Tour, March 2018



Picture: Hillsborough Hospital - Unit 3 Patient Room
Source: Hillsborough Hospital Facility Tour, March 2018

Each of the hospital's five (5) inpatient units vary in layout and there is no standardization between inpatient units. Each unit has its own challenges and advantages. Regardless of the unit, each one struggles with the ability to segregate clients, the number of available bathrooms, and interior standards that communicate an institutional "story" that has not been the standard of care for interior design for decades. While efforts have been made to retrofit unit with life safety needs, there are a number of instances where unit security and ingress/egress technologies do not meet contemporary design standards. This situation poses a risk to patient, staff and the surrounding community. With further emphasis on staff, there are essentially no adequate areas of refuse on the inpatient units to protect staff in the event a client becomes violent and uncontrollable. All of the inpatient units also struggle with poor sightlines, multiple blind corners and environments that are not entirely ligature-free.



Picture: Hillsborough Hospital - Unit 3 Bathroom
Source: Hillsborough Hospital Facility Tour, March 2018

Picture: Hillsborough Hospital - Unit 8 Hallway
Source: Hillsborough Hospital Facility Tour, March 2018

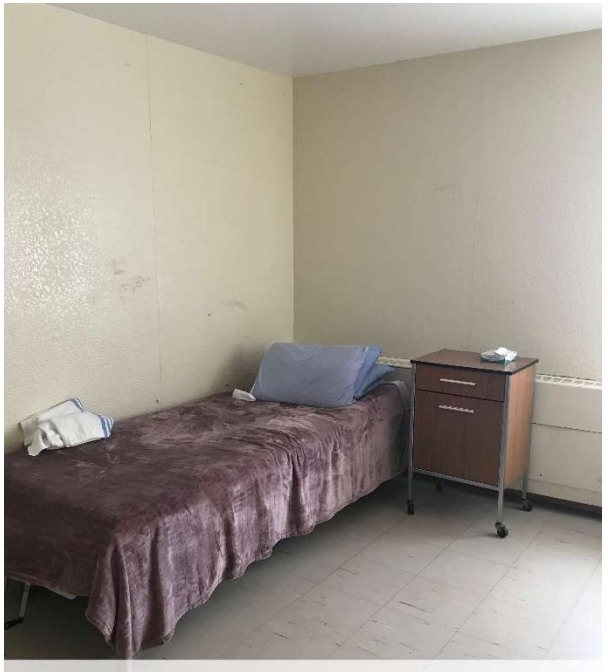
Units 3 and 3b both have issues with unsafe safe and seclusion rooms for clients that offer limited ability to provide direct and remote visualization and monitoring. Unit 5 lacks consistent handrail supports throughout its hallways. These handrails are vital to the mitigation of fall risks for Unit 5's geriatric clients. Unit 7, which is home to the Island's dual diagnosis population, resides in the new wing of Hillsborough Hospital along with Units 5 and 8, and shares many of the same challenges. Unit 7, however, resides on the second floor of the hospital and is readily accessed through stairwells at either end of the unit. These stairs are difficult for many clients with limited mobility to use when traveling throughout the hospital. Unit 8, which is considered to be Hillsborough Hospital's transition or step-down unit, is plagued by a lack of natural light, low ceilings, and a lack of general therapeutic milieu. Because many clients residing on Unit 8 are waiting to be discharged, they require tools and technology that are not often common on lower-functioning units. Many clients on Unit 8 require the use of a computer to either look for employment, apply for social assistance, or find suitable housing upon discharge. Despite the need for adequate and modern technologies, Unit 8 lacks the technology necessary to support clients as they transition out of inpatient care and back into the community.

CannonDesign's impression of Hillsborough Hospital is that it is past its useful life and requires immediate replacement.

Queen Elizabeth Hospital

Queen Elizabeth Hospital is located within Charlottetown and is the largest of the Island's hospitals. This 247-bed secondary and tertiary care facility opened in 1982 and serves the entire Island. It features a 24-bed acute inpatient mental health unit, split into Units 9 and 9A, that houses both adults and adolescent populations, respectively.

Picture: Queen Elizabeth Hospital - Unit 9 Hallway, Adults
Source: Queen Elizabeth Hospital Facility Tour, March 2018



Picture: Queen Elizabeth Hospital - Unit 9 Client Room, Adults
Source: Queen Elizabeth Hospital Facility Tour, March 2018

The adolescent unit, opened in 1992, is adjacent to the adult space and separated by a tempered glass wall and door. This unit includes a small area with tables and couches, which is the only private place for the unit's younger clients. Best practices indicate that adolescents should be placed on a separate unit, away from any contact with adult psychiatric clients. Having adolescent clients in close proximity to adult clients is a safety and privacy concern. Safety on the adolescent unit is hindered by a lack of weighted furniture and or mental health-safe beds. In addition, adolescent clients and their families lack adequate space for meetings and visitation. The adult unit has hard surfaces without padding within patient rooms. Weighted furniture is not found in the adult unit, and exposed ligatures are present in both adult rooms and bathrooms. Patient rooms in both the adolescent and adult units are less than half the size recommended by best practices.

Picture: Queen Elizabeth Hospital - Unit 9A Public Area, Adolescents
Source: Queen Elizabeth Hospital Facility Tour, March 2018

Picture: Queen Elizabeth Hospital - Unit 9A Client Room, Adolescents
Source: Queen Elizabeth Hospital Facility Tour, March 2018

Picture: Queen Elizabeth Hospital - Unit 9 and 9A Entrance
Source: Queen Elizabeth Hospital Facility Tour, March 2018

Picture: Queen Elizabeth Hospital - Unit 9 and 9A Client Recreation Space, QEH Courtyard
Source: Queen Elizabeth Hospital Facility Tour, March 2018

Like Hillsborough Hospital, Queen Elizabeth Hospital lacks therapeutic milieu for mental health clients. Client recreation space is limited; when clients desire a trip off the unit for a change of scenery, they are escorted in a group through Queen Elizabeth Hospital, passing by both patients and visitors. During client focus groups, many clients reported feeling as though they were “on parade” when lead through the hospital, and that “everyone knew we were the crazy people”. Feeling so exposed and on display only serves to reinforce the negative stigma associated with mental health and rob clients of dignity. Queen Elizabeth Hospital’s inpatient mental health unit, commonly known as “Unit 9”, carries a pervasive cultural stigma throughout Prince Edward Island. Despite the negative stigma attached to Unit 9, it is still seen by clients as a preferred alternative to the inpatient environment at Hillsborough Hospital.

Picture: Queen Elizabeth Hospital - Emergency Department
Source: Queen Elizabeth Hospital Facility Tour, March 2018

The emergency department at Queen Elizabeth Hospital serves as a primary receiving facility for mental health and addictions clients in acute crisis. Unfortunately, the hospital is not suited for this task. With only one true, designated safe and secure room for mental health clients in the emergency department, there is inadequate capacity to provide mental health clients with a safe, dignified, and therapeutic environment. Clients presenting with mental health diagnoses and who are unable to access the safe and secure room are held in the observation hallway in the direct line of sight of other patients and visitors in the emergency department. When a client does require a dedicated treatment room and the safe and secure room is unavailable, treatment stations must be converted from medical rooms to mental health rooms. Although potentially dangerous equipment is removed, these stations are not ligature-free and represent a safety risk to clients. In addition to exposed ligatures, there are items in the room that homicidal or aggressive mental health or addictions clients could easily weaponize, creating safety concerns for emergency department staff, patients, and visitors.

CannonDesign's impression of the mental health and addictions environment at Queen Elizabeth Hospital is that the facility is within its useful life expectancy but is not designed to reflect contemporary mental health and addictions standards of care.

Prince County Hospital

Prince County Hospital is located in Summerside and is a 110-bed secondary acute hospital servicing the western part of the province. The hospital features a 14-bed acute inpatient mental health unit that cohorts all inpatient psychiatric clients together. Census volatility frequently creates limited capacity and forces mental health clients to board on general medical health units. Although the unit is locked, it lacks adequate sight lines essential for clinical staff and client safety. Rooms within the unit are not ligature free and contain limited to no weighted furniture, creating an unsafe environment for clients.

The pediatric medical unit serves as overflow for adolescent psychiatric clients, but in some cases, the unit houses adult psychiatric clients as well. Mental health programming is not available within the pediatric medical unit, and staff have no routine mental health training due to limited space, resources, and equipment.

Picture: Prince County Hospital - MH Unit Client Room
Source: Prince County Hospital Facility Tour, March 2018

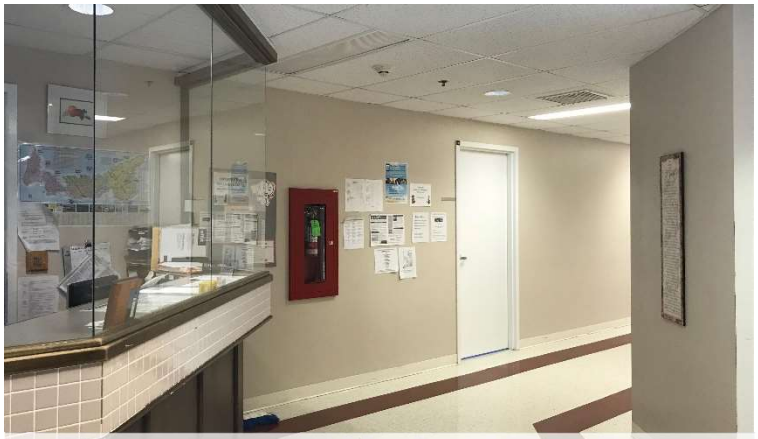
Picture: Prince County Hospital – MH Unit Hallway
Source: Prince County Hospital Facility Tour, March 2018

Picture: Prince County Hospital – Main Entrance, Exterior
Source: Prince County Hospital Facility Tour, March 2018

Provincial Addictions Treatment Facility

Provincial Addictions Treatment Facility, located in Mount Herbert, is a 16-bed inpatient withdrawal management facility with an additional 18-bed transition unit for clients who are at risk of relapse during early recovery. The facility has a disjointed floor plan with crossover between the inpatient and transition units. Lack of a security plan, security team, or intercom system create challenges in communication for both staff and clients. This facility also features a methadone clinic, which separates the inpatient unit from their group room space. The lack of a separate entrance for the methadone clinic creates additional logistical challenges for both staff and clients.

Picture: Provincial Addictions Treatment Facility - Main Entrance, Exterior
Source: Provincial Addictions Treatment Facility Tour, March 2018



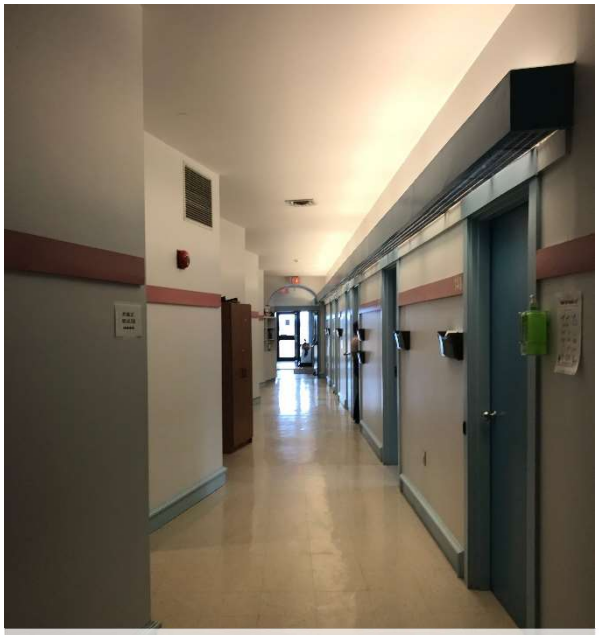
Picture: Provincial Addictions Treatment Facility - Main Entrance
Source: Provincial Addictions Treatment Facility Tour, March 2018

Picture: Provincial Addictions Treatment Facility - Hallway
Source: Provincial Addictions Treatment Facility Tour, March 2018

Community Mental Health and Addictions Facilities

There are community mental health services located throughout the Island. Community mental health and addictions programs and services are located at McGill Centre, Richmond Centre, Montague, Souris, Summerside, O'Leary, Alberton and the INSIGHT program. There is no consistency in the size and shape of the rooms within each of the various facilities. Workarounds are created and implemented by staff to make existing spaces work. Programs located in various community mental health and addictions facilities do not have the capacity to expand within their current spaces.

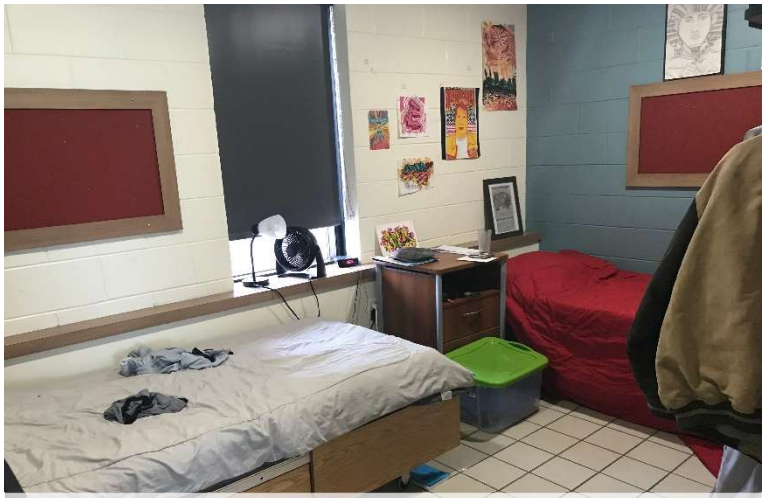
Picture: CMH&A Montague - Group Therapy Room
Source: CMH&A Montague Facility Tour, March 2018



Picture: CMH&A Montague - Hallway
Source: CMH&A Montague Facility Tour, March 2018

Picture: CMH&A Montague - Main Entrance, Exterior
Source: CMH&A Montague Facility Tour, March 2018

Picture: Strength Program - Public/Activity Area
Source: Strength Program Facility Tour, March 2018



Picture: Strength Program - Client Room
Source: Strength Program Facility Tour, March 2018

Picture: Strength Program - Main Entrance, Exterior
Source: Strength Program Facility Tour, March 2018

Picture: INSIGHT Program - Public/Activity Area
Source: INSIGHT Program Facility Tour, March 2018

Residential Housing

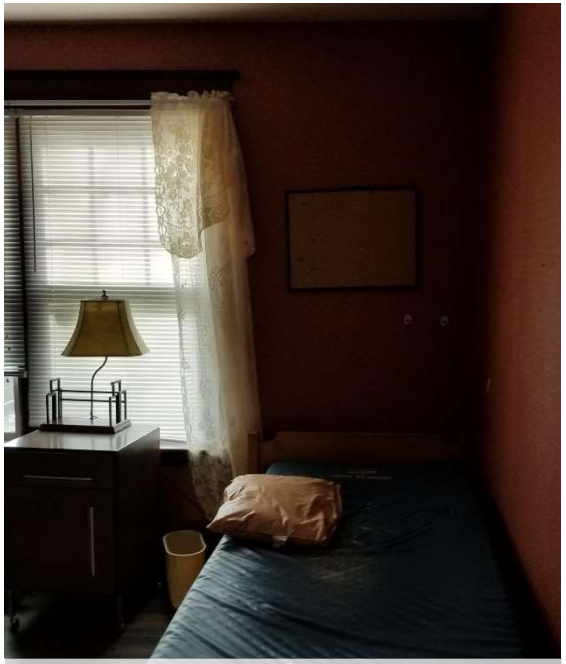
Picture: Talbot House - Main Entrance, Exterior
Source: Talbot House Facility Tour, March 2018

Both Talbot (14-male beds) and Lacey (6-female beds) houses are located within Charlottetown and serve as extended care recovery homes for support after addictions treatment. Lacey House is the only facility on the island exclusively dedicated to female clients. Each facility can hold an additional 4 outreach clients per day. These older homes have been retro-fitted for group services and are not aligned with contemporary standards of care for a 100% private residency model. The structures are run down and have not been renovated or updated for many years. Client rooms are small, hallways and stairwells are narrow, and bathroom space is limited. Due to structural age, both facilities lack privacy and confidentiality within common areas. In addition to its dilapidated state, Talbot House is located in close proximity to some of Charlottetown's most popular bars, making it a less than ideal place for recovering addictions clients.

Picture: Talbot House - Common Area
Source: Talbot House Facility Tour, March 2018

Picture: Talbot House - Common Area
Source: Talbot House Facility Tour, March 2018

Picture: Talbot House - Administrative Office
Source: Talbot House Facility Tour, March 2018



Picture: Lacey House – Client Room
Source: Lacey House Facility Tour, March 2018

Picture: Lacey House – Common Area
Source: Lacey House Facility Tour, March 2018

Picture: Lacey House – Client Bathroom
Source: Lacey House Facility Tour, March 2018

Deacon House

Located within Charlottetown, this 6-bed facility on the Hillsborough Hospital grounds provides overnight shelter for adult males over the age of 19 who abuse substances or have chemical dependency.

St. Eleanor's House

Located within Summerside, this 8-bed recover home for men provides extended support after initial addiction treatment.

5. Establishing a Long-Term Vision for Mental Health and Addictions Services in PEI

During the course of Phase 1, CannonDesign conducted a comprehensive assessment of the current state of mental health and addiction services across Prince Edward Island, as outlined in Section 4. This assessment enabled CannonDesign to vet and validate programmatic strengths and opportunities as they exist today. From here, a point-of-view regarding potential options for a future direction of mental health and addictions programming was established to help guide subsequent planning exercises. The risk of this point-of-view is that it is shaped by the world view and collective experiences of the design team. To develop solutions based on this point-of-view in isolation of the Health PEI mental health and addictions program, stakeholders would risk falling short on aligning solutions to the specific needs of the Island.

We all have inherent user biases that have been developed over the years through our collective experiences. These biases inform our world view and often create blind spots when it comes to design solutions. To neutralize these blind spots, ensure our design solutions are responding to the needs of all stakeholders, and deliver the highest levels of performance and value, we need to learn to see the world with a fresh set of eyes. The best solutions emerge when we develop a deeper understanding into human behavior and the drivers that shape said behaviors. This understanding creates the opportunity to challenge orthodoxies, to reshape conventional wisdom, and to seek opportunities to innovate outside of traditional comfort zones. Solutions are further strengthened when teams can leverage the collective brainpower of a diverse group of individuals who represent a variety of thought, experience, expertise and capabilities.

The development of any future-state plan for mental health and addiction services is rooted in an understanding of core tenets that will inform care delivery over the foreseeable future. Population projections, community demographics, economics, regulations and reform, workforce available, technology and care innovation and coordination are at the center of reasoned and logical planning. The intention is to support an evolution toward interdisciplinary care models that span the entire continuum of care from the home to residential, community, acute stabilization, inpatient and post-inpatient care environments in a manner that optimizes performance in six key areas:

- Clinical quality and outcomes
- Operational optimization
- Fiscal stewardship
- Provider and staff alignment and integration
- Service excellence
- Growth

5.1 Leveraging Outcomes-Based Visioning™ Methodology

To respond to the desire to develop a high-performing and innovative model of mental health and addictions programming on the Island, CannonDesign employed our Outcomes-Based Visioning™ methodology. The Outcomes-Based Visioning™ process is designed to be a collaborative effort between mental health and

addictions stakeholders and Health PEI leadership. The intention was to co-create a future-state mental health and addictions planning model that supports the goals outlined early in the visioning process.

Based on a structured and cumulative process, the Outcomes-Based Visioning™ sessions were used to push thinking related to care model innovation, lean practices, resource optimization, technology planning and the future of mental health and addictions care. The process, facilitated by an expert in mental health and addictions programming and disruptive innovation, engaged over 30 participants to co-create the future of mental health and addictions programming in Prince Edward Island. Outcomes-Based Visioning™ succeeded in bringing many voices to the table in a collaborative manner and created an avenue for ideation.

Over the course of three visioning sessions that totaled several days, visioning participants explored a series of concepts that cumulatively constructed the future vision for mental health and addictions programming across Prince Edward Island. These concepts included:

1. Defining stakeholder value
2. Identifying key performance metrics that will define success in mental health and addictions programming
3. Establishing transformational principles that articulate a vision for the future of mental health planning for Prince Edward Island
4. Capturing the “wish list” that mental health and addictions stakeholders have for future programming, including, but not necessarily limited to:
    a. Philosophy of Care
    b. Processes
    c. Staffing
    d. Equipment & technology
    e. Client / Patient, visitor & staff experience
    f. Facility solutions
5. Mapping the mental health and addictions client / patient journey – current state
6. Establishing the design challenges
7. Creating the mental health and addictions client / patient journey – future state
8. Selecting and prioritizing potential innovations that respond to the mental health and addictions program transformational principles and performance objectives
9. Reimagining the future mental health and addictions model of care through “deep dive explorations” into:
    a. Outpatient / community services
    b. Virtual mental health and addictions services

c. Acute crisis and stabilization services
d. Acute inpatient services
e. Transitions in care

10. Determining where community, acute stabilization, inpatient and residential services might be provided to respond to the new model of care, transformational principles and performance objectives

Visioning Participants

At its core, Outcomes-Based Visioning™ is a collaborative process intended to engage a diverse group of stakeholders involved in mental health and addictions programming to collectively come together to explore many possible future conditions through the lens of different constituencies. From these vantage points, we are able to consider the needs of clients, families and support networks, providers, system leaders, legislators, and the community-at-large, while seeking to neutralize any potential biases that can infuse themselves into planning similar processes.

In collaboration with Health PEI's mental health and addictions administrative and clinical leadership, a diverse group of stakeholders were invited to engage in the Outcomes-Based Visioning™ process. The participants outlined in the table below represent program clients, providers, leadership and community agencies engaging in caring for mental health and addictions consumers.

Visioning Participants

Hon. Robert Mitchell, Minister of Health and Wellness, PEI
Heather Keizer, MD, Chief of Mental Health and Addictions Services
Verna Ryan, CAO, Mental Health and Addictions Services
Javier Salabarria, MD
Robert Jay, MD
Christine Beck, MD
D.I. Stewart, MD
Harminder Dhillon, MD
Sean Morrison, Program Manager, Child & Youth MH&A
Marsha Pyke, Director of Capital & Facility Planning, Health PEI
Jackie Goodwin, PhD, Team Lead, Insight Program
Karen MacDonald, Director of Justice and Public Safety
Leslie Warren, Manager of Acute Mental Health, Hillsborough Hospital
Shelly Higgins, Acting Manager, CMH&A East
Bruce Davison, Manager, CMH&A West
Reid Burke, Executive Director, Canadian Mental Health Association
Sara Townsend, Client Advocate
Jamie MacDonald, CAO, Queen Elizabeth Hospital
Arlene Gallant Bernard, CAO, Prince County Hospital
Mike Gaudet, Acting Residential Coordinator, Family & Human Services
Alison Campbell, Manager Student Services - Public Schools Branch
Rosanne Sark, Director of Health Mi'kmaq Confederacy of PEI
Terri MacAdam, Director of Student Services
Mike MacDonald, ED Nurse Manager, Queen Elizabeth Hospital
Norm MacDonald, Director of Operations, Queen Elizabeth Hospital
Kelly Rayner, Director of Hospital Services, Queen Elizabeth Hospital
Patsy Barrett, Nurse Manager Inpatient Mental Health, PCH
Tina Lowther, Business Manager, Mental Health and Addictions
Karen Blacquiere, Administrative Assistant

Transformational Principles

One of the earliest steps in the Outcomes Based-Visioing™ process was to establish the transformational principles for the future condition of Prince Edward Island's mental health and addictions programming. Establishing transformational principles is important for a number of reasons. First, these principles foster a philosophy of objectivity and transparency during the master planning process. Planning decisions can be made using these transformational principles as a litmus test to ensure decisions respect the aspirational goals and objectives for mental health and addictions programming on the Island. Second, the transformational principles also set the tone for who Health PEI aspires to be in the future as it relates to its role in caring for its clients and staff.

The process of establishing transformational principles for mental health and addictions programming was achieved by exploring key questions that focus on multiple topics, such as:

- Client, provider, organizational and community needs
- Organizational mission, vision, and values
- Aspirations for the new model of care and overall goals
- Balancing client, organizational, and community objectives

Through the Outcomes-Based Visioning™ process, participants developed, vetted and approved six (6) transformational principles that were subsequently used to inform all aspects of the planning outlined in this report. These transformational principles guiding the development of the future mental health and addictions programming in Health PEI will:

1. Provide the people of PEI with state-of-the-art mental health and addictions services, provided in a manner that emphasizes cultural-based healing and elevates the dignity of our clients, facilitating greater levels of hope, purpose, meaning and belonging.

2. Deliver quality care in a safe, coordinated and expeditious manner, ensuring clients receive the care they need as quickly and efficiently as possible, while guaranteeing that transitions in care between organizations and sites of care are seamless with information necessary to provide optimal services flowing bi-directionally.

3. Ensure that clients and their support networks are actively engaged in all aspects of their mental health and addictions journey with services provided in locations that are accessible, balancing client and support network systems with the availability of mental health and addictions resources across PEI.

4 Serve as a magnet for current and future providers from across Canada and beyond, drawing them to the opportunity to be a part of a world-class mental health and addictions program that provides opportunities for research, growth and innovation.

5 Deliver services in healing environments and facilities that reflect the quality and aspirations of mental health and addictions programming across the province while ensuring these facilities enable staff to provide the very best care every day.

6 Establish an innovation culture that promotes Health PEI's desire to learn, evolve and advance itself to the benefit of clients, staff and providers while enhancing its value to the PEI community.

The transformational principles selected represent the "true north" for mental health and addictions programming in Prince Edward Island. Once selected, the transformational principles were used as a litmus test to ensure that all decisions made during the visioning process respected the aspirational goals for the future condition of mental health and addictions programming.

Future-State Performance Targets

An important element to any successful systematic plan is the ability to measure its impact, providing real time awareness of the plan's effectiveness. It also gives leadership and stakeholders a shared understanding of the elements of the plan that may need to be modified in order to continue to advance toward optimized performance. As a part of the Outcomes-Based Visioning™ process, participants collectively established a performance dashboard for systemwide key performance indicators (KPIs) and thresholds that will define success for the mental health and addictions system.

	PERFORMANCE METRIC	RECOMMENDED THRESHOLD TARGET
QUALITY & OUTCOMES	% of clients receiving symptoms rating scale assessment	100%
	% utilization of appropriate care pathways	90%
	% of clients receiving psycho-education	100%
FISCAL STEWARDSHIP	Adherence to programmatic budget	0% variance OVER budget
OPERATIONAL EFFICIENCY	Presentation to disposition for clients presenting to the ED (after medical clearance)	4 hours
	Avoidable inpatient days	< 2% of total inpatient days
ALIGNMENT & INTEGRATION	Staff satisfaction scores	Top quartile
SERVICE EXCELENCE	Net promoter score	> 50
GROWTH	Time from referral to evaluation for all cases in community settings	3 business days

Table 4: Performance Metrics and Recommended Threshold Targets

The future-state performance targets are intended to serve as indicators of the Health PEI mental health and addictions program at a systematic level. Readers of this report will note that additional performance metrics were used in the creation of the future-state models of care and subsequent client journeys highlighted in Section 8 of this report. These additional performance expectations are specific to individual client journeys and will enable the successful realization of programmatic performance goals.

Summary of Outcomes-Based Visioning™ Outputs

The Outcomes-Based Visioning™ process guided and informed the develop of all recommendations tied to the future condition of mental health and addictions programming in Prince Edward Island. Detailed information on the specifics of the future-state recommendations can be found throughout this document in appropriate sections.

Defining Goals and Values. We began our journey by exploring the goals of our mental health and addictions clients and what might stand in the way of these goals.

Once we completed an exploration of the needs of the mental health and addictions client, we turned our attention to exploring the goals of our mental health and addictions staff and providers and what might prevent them from successfully caring for their clients.

To envision a future condition that aligned with what was most important to mental health and addictions stakeholders, it was necessary to create clarity around relative value propositions of different aspects of the future-state mental health and addictions program. This exploration facilitated understanding with regards to what should be emphasized, understanding that each concept is important unto itself and cannot be ignored.

The Outcomes-Based Visioining™ process also clarified where programmatic emphasis should be placed, representing a dramatic departure from current emphasis based on stakeholder feedback.

Diagrams 21-22: Goals, Obstacles, and Fears of Health PEI
Source: Outcomes-Based Visioning ™ Session

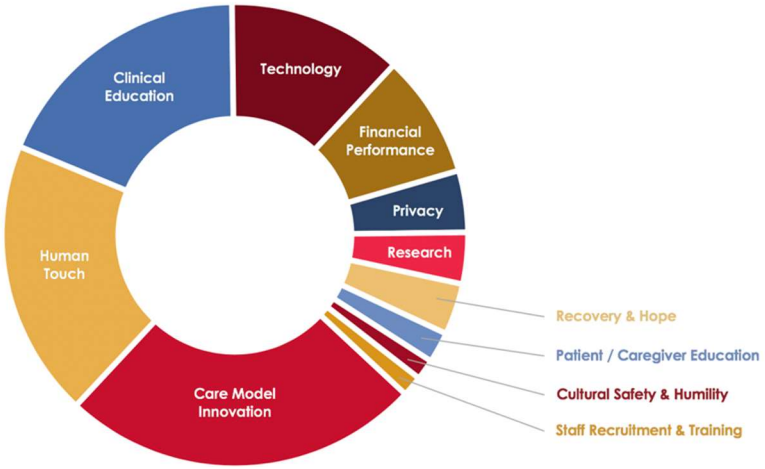


Diagram 23: Model of Care for Health PEI

Diagram 24: Health PEI MH&A Care Continuum

Model of Care. The model of care for mental health and addictions clients exists along a spectrum of effective, coordinated services that support adults, children and adolescents with, or at-risk for, developing a mental health or addictions condition. The future model of care will be organized into a coordinated network of physical and virtual services that are intended to develop effective and meaningful strategies to optimize the care of mental health and addictions clients, promoting, to the extent possible, independence, self-determination and global well-being.

In addition to focusing on the mental health and addictions client, the future-state model of care is intended to provide the resources and guidance necessary to aid individuals, groups, and providers as they seek to support mental health and addictions clients in their pursuit of optimal social and emotional outcomes. The future-state model will focus on a community-centric service delivery model, emphasizing care in local communities close to home. Anchored by community providers, community mental health and addictions centres, mobile response teams, and greater reliance on virtual interactions, the model of care will place heavy emphasis on meeting client where they are in an effort to create more convenient access that is close to home.

As demonstrated by Diagram 25, the model of care encompasses multiple layers of complexity that include different models of engagement with the continuum (outer ring), the phases of mental health and addictions care (middle ring) and the potential sites of mental health and addictions service (inner ring). For the purposes of creating a future model of care for mental health and addictions clients in Prince Edward Island, this model of care will form the basis for the recommendations that follow.

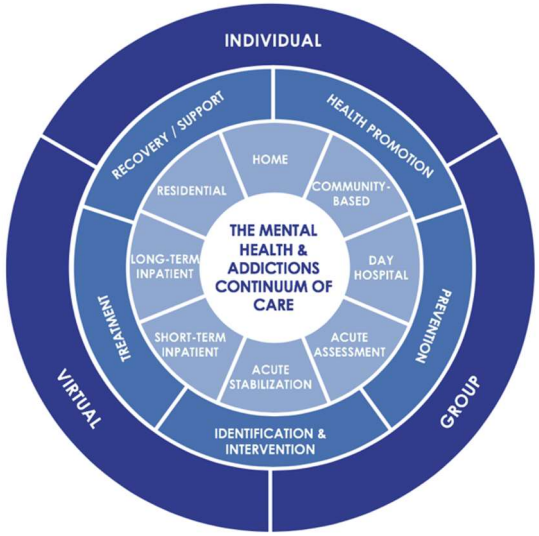


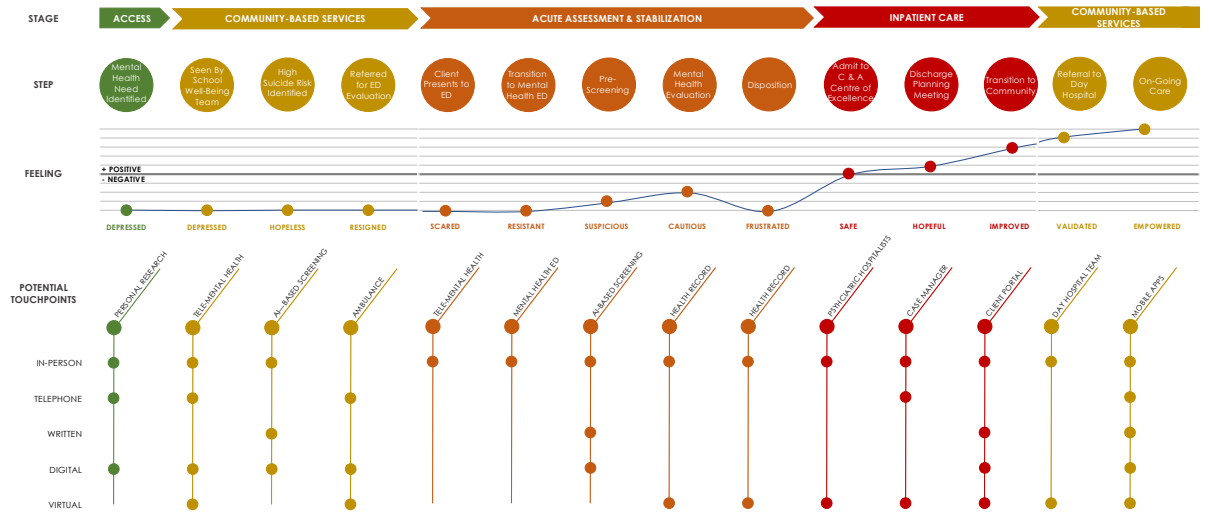
Diagram 25: MH&A Continuum of Care

The Client Journey. The goal of the mental health and addictions client journey is to promote mental, social, and functional health and wellness while protecting dignity and de-stigmatizing mental health and addictions services. By leveraging a number of different client personas that represent the depth and breadth of clients served through mental health and addictions programming in Prince Edward Island, five distinct representative client journeys were developed to illustrate aspects of the future state of mental health and addictions programming. These client journeys include:

1. Adult mental health
2. Child and adolescent mental health
3. Geriatric mental health
4. Forensic mental health
5. Addictions services

A future-state client journey map was developed for each client journey. This map is intended to serve as a guide, illustrating the distinct phases and potential sites of service and providing more detail specifically on potential areas where new innovations might be implemented. The proposed client journeys also highlight reimagined transitions in care that are intended to ensure all members of the client's care team can maintain situational awareness regarding the client's care process. Additionally, the journeys have been optimized to ensure that information regarding ongoing treatment of clients flows bi-directionally between different providers and sites of service with ongoing real-time interfaces and information updates. The client journey map presented below in Diagram 26 is intended to be illustrative only. Detailed client journey maps and additional information on this topic can be found in Section 8 of this report.

HEALTH PEI – CLIENT JOURNEY MAP – CHILD & ADOLESCENT MENTAL HEALTH



POTENTIAL STRATEGIC IMPLICATIONS	1. Multichannel methods to identify possible mental health issue 2. Self-assessment tools	1. Immediate access to assessment 2. Ensure wellness of students	1. Student safety 2. Parental engagement 3. Rapid intervention	1. Right care, right place 2. Resources available for immediate consultation with mental health provider	1. Accelerated medical clearance 2. Close to home 3. Link to mental health ED	1. Accelerated mental health evaluation 2. De-escalate rapidly 3. Right care, right place	1. Parental engagement 2. Accelerated mental health evaluation 3. AI-based clinical guidance	1. Empower client 2. Accelerated mental health evaluation 3. Right care, right place	1. Parental engagement 2. Accelerated disposition 3. Right care, right place 4. Right resources	1. Rapid stabilization 2. Highest quality	1. Transition to most appropriate site of service 2. Coordinated services	1. Client activation 2. Support network involvement 3. Services close to home	1. Right care, right place 2. Close to home 3. Parental engagement	1. Client activation 2. Parental engagement 3. Services close to home
POTENTIAL OPERATIONAL IMPLICATIONS	1. 24/7 access to resources and information 2. Digital resources in partnership	1. Linkages to Health PEI 2. Standardized assessment pathways	1. Activation Plan 2. Integrated health record	1. 24/7 access to resources 2. Tele-mental health access in EDs / urgent care 3. Integrated health record	1. Integrated health record 2. Tele-mental health access in EDs / urgent care	1. Integrated health record	1. Integrated health record 2. Standardized clinical pathways	1. tele-mental health access 2. Standardized clinical pathways	1. Standardized clinical pathways 2. Integrated health record 3. Client portal in health record	1. Standardized clinical pathways 2. Tele-mental health access 3. Integrated health record	1. tele-mental health access 2. Standardized clinical pathways	1. Integrated health record 2. Client care portal in health record	1. Integrated health record 2. Client care portal in health record	1. Integrated health record 2. Client care portal in health record 3. Digital
POTENTIAL STAFFING IMPLICATIONS	1. 24/7 access centre	1. Mental health coordinator 2. School counselors 3. Educators	1. Mental health assessor 2. School counselors	1. Mental health coordinators 2. Tele-mental health providers on or off-island	1. Mental health coordinators 2. Tele-mental health providers on or off-island	1. Mental health coordinator 2. Mental health nurse 3. Mental health technician	1. Mental health coordinator 2. Mental health nurse 3. Mental health technician	1. Mental health coordinator 2. Tele-mental health providers on or off-island	1. Mental health coordinator	1. Psychiatric hospitalist 2. Tele-mental health providers on or off-island 3. Case manager	1. Case manager	1. Care coordinators for complex clients 2. Mental health wellness team	1. Care coordinators for complex clients 2. Integrated care teams 3. Tele-mental health providers	1. Care coordinators for complex clients 2. Integrated care teams
POTENTIAL CAMPUS / BUILDING IMPLICATIONS	1. 24/7 access centre	1. Promote health, not just illness 2. Low-cost options 3. Off-peak pricing	1. Promote health, not just illness 2. Low-cost options 3. Off-peak pricing	1. Tele-mental health base station 2. Safe and secure ED rooms 3. Mental health ED	1. Safe and secure ED rooms	1. Mental health ED	1. Mental health ED	1. Mental health ED	1. Inpatient Centre of excellence 2. Day hospital 3. Community services	1. Separation from adult populations 2. On-site educational programs 3. Recreational spaces	1. Day hospital 2. Community services 3. Housing	1. Community mental health centres 2. Community mental health hubs 3. Day hospital	1. Community mental health centres 2. Community mental health hubs 3. Day hospital	1. Community mental health centres 2. Community mental health hubs

Diagram 26: Client Journey Map Example

6. Project Future Demand for Mental Health and Addictions Services

With nearly 150,000 residents today and a projected population growth of 12% over the next decade, forecasting demand for mental health and addictions services is critical to ensure that Health PEI can support the delivery of the best, most appropriate care for individuals with mental health and addictions needs. To gain a better understanding of Prince Edward Island and its future mental health and addictions client population, CannonDesign worked with Health PEI to develop a customized forecast, created from Prince Edward Island Statistics Bureau's population projections, Health PEI utilization data, and subsequent projected needs for services.

6.1 Forecasting Methodology

Given the tectonic changes envisioned for mental health and addictions care in Prince Edward Island, any existing forecasting tool would be inadequate to project future demand. CannonDesign, in collaboration with Health PEI's clinical and administrative leadership, developed baseline and customized population-driven forecasts that would serve to calculate customized volume projections that aligned with a redesigned model of care. Upon the completion of the current state analysis, multiple visioning sessions, and two-day design sprints, a carefully sequenced implementation plan emerged. This implementation plan would be used to lay the groundwork for an enhanced community-centered model of care, intended to inform future service demand and use rates. The steps taken to build Health PEI's customized forecasting model are described below.

Step 1 – Building a Baseline

The foundation of any forecasting tool begins with an understanding of population trends. To build a population-driven baseline, CannonDesign reviewed and incorporated provincial population projection scenarios spanning a 30-year period from 2016 to 2046. Low, medium, and high growth population projection scenarios were provided by the Prince Edward Island Statistics Bureau. Health PEI selected the medium population growth scenario as the most likely population growth scenario. This information was used to develop the baseline population form which to make demand and utilization assumptions. This data assumes population growth of approximately 12% over the next decade and a provincial population of nearly 190,000 Islanders (187,727) by 2046. Residents aged 65 and older are projected comprise the fastest growing age cohort, followed by residents aged 15 to 24 years.

	2016		2026		2036		2046	
PEI	Volumes	% Mix	Volumes	% Mix	Volumes	% Mix	Volumes	% Mix
Total	**146,815**	**100%**	**164,244**	**100%**	**177,530**	**100%**	**187,728**	**100%**
Female	**75,174**	**51%**	**84,365**	**51%**	**91,472**	**52%**	**91,083**	**51%**
0-14	11,550	8%	12,690	8%	12,963	7%	13,718	7%
15-24	8,418	6%	9,115	6%	10,037	6%	11,032	5%
25-64	39,791	27%	41,915	26%	44,116	25%	44,674	25%
65+	15,415	10%	20,645	13%	24,357	14%	21,659	14%
Male	**71,641**	**49%**	**79,879**	**49%**	**86,057**	**48%**	**96,645**	**49%**
0-14	11,615	8%	12,767	8%	13,017	7%	13,644	7%
15-24	9,242	6%	9,782	6%	10,840	6%	10,228	6%
25-64	37,598	26%	39,878	24%	41,676	23%	47,086	24%
65+	13,186	9%	17,452	11%	20,524	12%	25,687	12%

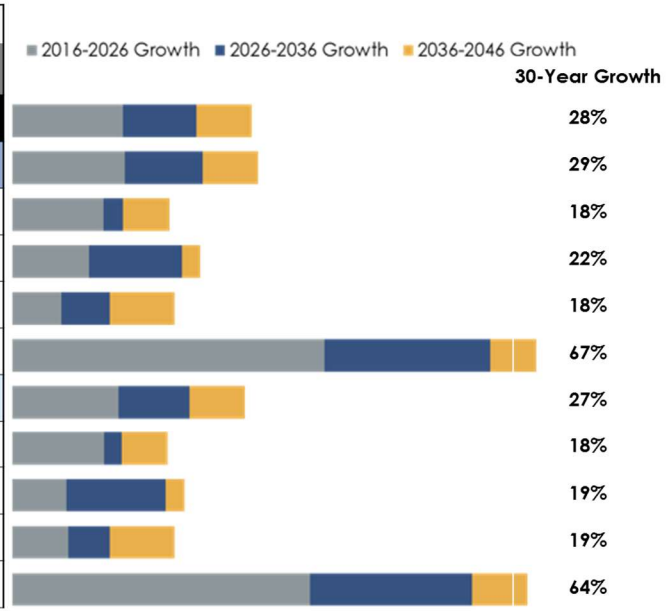


Diagram 27: PEI 30-Year Population Growth Projections
Source: Prince Edward Island Statistics Bureau

Step 2 – Determining Use Rates

Health PEI's Health Information Unit worked closely with CannonDesign to establish the appropriate data metrics to determine the baseline utilization for mental health and addiction services in Prince Edward Island. Visits were analyzed by age, gender, type of program, and primary diagnosis across acute, community, day treatment, and residential settings. The table below describes the visit groupings used in our analysis by site of service and shows the baseline 2016/17 volumes used to determine use baseline use rates. Please note that the data presented does not include latent (unmet) demand in the system. Also note that inpatient baseline visits in the table below include both ALC and non-ALC clients. Both nuances were considered during later steps in the forecasting process.

Special Populations – Forensic

Health PEI serves a small but complex population of forensic mental health clients. Forensic mental health clients have historically been underserved – many inmates with underlying mental health or addictions symptoms do not receive proper care and would greatly benefit from further mental health and addictions services. The provincial government of Prince Edward Island has taken special interest in better serving this unique population, dedicating time and funds to provide care to this complex population. In 2016/17, Prince Edward Island saw 28 forensic mental health discharges which accounts for less than 0.1% of all inpatient mental health and addictions discharges across the Island.

Special Populations – ALC Clients

An Alternate Level of Care (ALC) client is a term used to describe a patient who currently occupies an acute care inpatient bed but does not require the intensity of resources or services provided in a hospital setting. ALC clients typically still require some form of low-acuity or long-term care. A provincial prospective study tracking ALC clients found that, on any given day, between 27% to 40% of all inpatient beds are occupied by ALC-designated clients. For the sake of this analysis, CannonDesign assumed an overall average ALC client occupancy rate of 35%. Using data provided in the prospective study in conjunction with the ALC client occupancy rate, CannonDesign estimated the number of ALC discharges for 2016/17. This information was vetted with and validated by Health PEI's clinical and administrative leadership.

Step 3 – Validating Baseline Forecast

The baseline forecast used for planning purposes is a population-driven methodology for estimating future utilization. A baseline forecast was established by applying the previously found baseline use rates to provincial population projections. This baseline forecast provides a "do-nothing" scenario option that estimates client volumes if Health PEI's Mental Health and Addictions program were to remain in its current state, which is not recommended. Because the baseline forecast is solely based on population estimates, shifts in provincial population demographics will have the most significant impact on the forecast. The baseline forecast used for this analysis can be found within Chart 1 in Appendix 1. The chart lists 2016/17 actual volumes and 2026/27 baseline volume projections by service type, age cohort, and gender.

Step 4–Conduct Research and Explore Service Delivery Innovations and Their Impact to Prevalence Rates

The next step of the forecasting process was to incorporate Health PEI's vision for a new model of mental health and addictions care and apply the impact of this new model to the original baseline forecast.

CannonDesign completed extensive research to find both Canadian and global examples of operational, technology, workforce and clinical care innovations applicable to PEI and its vision for a future-state care model. After a series of rapid design sprints, Health PEI selected a total of 12 innovations that would support realization of the all future vision for mental health and addictions services across PEI. These innovations are illustrated in Table 6.

Site of Service	Age Cohort	Baseline Visits 2016 / 17
Community Mental Health and Addictions		
Community Mental Health and Addictions	0-14	2,933
	15-24	2,241
	25-64	7,856
	65+	1,232
Community Mental Health and Addictions: Community MMTP	All	1,952
Community Mental Health and Addictions: Walk-In Clinics	All	466
Community Mental Health and Addictions Total		**16,680**
Community Housing		
Community Housing	0-14	-
	0-17	15
	15-24	-
	18-29	40
	25-64	-
	65+	-
Community Housing – Deacon House	All	1,237
Community Housing Female	0-14	11
	15-24	8
	25-64	34
	65+	-
Community Housing Male	0-14	15
	15-24	12
	25-64	105
	65+	3
Community Housing Total		**1,480**
Emergency Department		
Emergency Department	0-17	1,452
	18-64	8,382
	65+	1,836
Emergency Department – Crisis Consults	All	1,817
Emergency Department Total		**13,487**
Inpatient		
Inpatient Mental Health	0-17	175
	18-64	562
	65+	285
Inpatient Mental Health – Concurrent	All	231
Inpatient Addictions – Detox	All	1,332
Inpatient Addictions – Transition Unit	All	397
Inpatient – All Other Patients	All	195
Inpatient Total[1]		**3,177**
Grand Total		**34,824**

Table 5: FY 2016/17 Baseline Use Rates by Site of Service and Age Cohort

Armed with these agreed-upon innovations, Health PEI collaborated with CannonDesign to develop a six-year implementation roadmap designed to ensure the proper implementation of all 27 innovations. The innovations were sequenced based on Health PEI's stated goal of taking occupancy of a replacement facility for Hillsborough Hospital in 2023. To ensure that the replacement facility is sized to reflect the new model of care and the dramatic shifts in demand and utilization anticipated, it was agreed that all innovations must be implemented prior to the completion and occupancy of the replacement facility.

CannonDesign and Health PEI agreed that each innovation would begin exerting an impact on demand and utilization upon the first year of implementation. While each innovation is distinct, Health PEI and CannonDesign chose to view each innovation as one part of a comprehensive new model of care. Over time, innovations will build off one another. Certain innovations are also reliant on the phased implementation of others. The implementation of one innovation does not negate the impact of another, nor its effect necessarily additive at the level that would be expected if the innovation were implemented in isolation. For example, if two distinct innovations have been shown to decrease inpatient admissions by 20%, the combination of the two will likely not result in an overall reduction of inpatient admission of 40%. Rather, the impact will likely fall somewhere between the 20% and 40% range. This is because a number of clients would benefit from either innovation. Unfortunately, without deep retrospective chart reviews beyond the scope of this engagement, it is impossible to determine who those clients would be and how many of them interact with the Health PEI mental health and addictions system.

Health PEI chose to consider FY 2018/19 as "Year 1" of the implementation roadmap, as certain improvement projects such as Student Well-Being Teams and mobile crisis team planning have already begun. Most innovations will begin implementation by Year 3. To adhere to Health PEI's future state vision, innovations focused heavily on moving care out of acute settings and into the community and addressing latent demand for services that is not being met at present. As a result, community care utilization is projected to experience the most significant innovation-related impact. By 2026, community mental health visits and community addictions visits are expected to grow by 250% and 150%, respectively. By contrast, mental health inpatient volumes are expected to decrease by 40% during the same period. The tables below detail each innovation's year of implementation and expected impact on a projected 10-year volume forecast.

Innovation	YEAR OF IMPLEMENTATION
Crisis Response Team	2
Psychiatric Hospitalist	2
Telehealth in Emerge	2
ACT / Intensive Case Management	3
Advanced Scheduling	3
Day Programming	3
Outpatient Follow-Up / SMS	3
Pre-Discharge Interventions	3
Virtual Peer Coach	3
Psychiatric Emergency Department	4
Telehealth in Community in MH&A	4
Mental Health Specialist in Primary Care	6

Table 6: Innovation Implementation Year

Impact	Fully Realized Weight	YEAR OF IMPLEMENTATION
Mental Health Community Visits	▲ 250%	3
Mental Health IP Utilization	▼ 36%	3
Mental Health IP LOS	▼ 10%	3
Addictions Community Visits	▲ 150%	3
Addictions IP Utilization	▲ 28%	3
Addictions IP LOS	▼ 10%	3
Mental Health Emerge Utilization	▼ 20%	4
Mental Health Emerge LOS	-	-
Addictions Emerge Utilization	▼ 40%	4
Addictions Emerge LOS	-	-
Mental Health Community Housing	-	5
Addictions Community Housing	▲ 28%	5

Table 7: Innovation Fully Realized Weight Impact

Additional information on the phasing of the innovations being incorporated into the model of care can be found in Section 9 of the report.

Step 5 - Assess the Impact of Key Variables

Impacts to utilization will be reflected in a phased approach; all innovations will realize the weight of “full impact” on demand and utilization within three years of initial implementation. To establish customized utilization projections, innovation impacts were applied to baseline utilization to obtain new, customized use rates. Similar to Step 3, new use rates were applied to provincial population projections to obtain volumes and key room needs that reflect Health PEI’s redefined mental health and addictions care system. A summary of the fully realized impact of a combination of various innovations on demand, LOS, and ultimately utilization by service type is shown above in Table 7.

Detailed results of the projections are detailed in Section 6.2.

6.2 Mental Health and Addictions Patient Volume Projections

Community Mental Health and Addictions

By 2026/27, community mental health and addictions volumes are expected to grow by 228%, driven by the impacts of various innovations on community care utilization. Community mental health volumes and community addictions volumes are expected to increase by 270% and 165%, respectively. Two innovations, mental health specialists in primary care settings and ACT/Intensive Case Management, are geared specifically to mental health clients, which explains the larger increase in mental health utilization as a reflection of growth percentage. Mental health visits will see the highest actual volume growth, particularly among clients aged 25 to 64 years, though the largest growth as a reflection of percentage will be seen in clients aged 65 years and older. It is important to note that the introduction of expanded community services is an essential component of realizing projected reductions in emergency department and inpatient utilization. **If expanded community services are not implemented, projected emergency department and inpatient utilization patterns become invalid.**

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Community Mental Health					
Community Mental Health	0 -14	2,295	5,399	8,477	269%
	15-24	1,749	3,921	6,486	271%
	25-64	4,641	10,716	16,815	262%
	65+	958	2,330	3,930	310%
	Walk-In Clinics	466	1,086	1,743	274%
Community Mental Health Total		**10,109**	**23,452**	**37,451**	**270%**
Community Addictions					
Community Addictions	0 -14	638	1,167	1,683	164%
	15-24	492	858	1,303	165%
	25-64	3,215	5,773	8,320	159%
	65+	274	518	802	193%
MMTP Counseling	All	1,952	3,539	5,216	167%
Community Addictions Total		**6,571**	**11,855**	**17,324**	**165%**
Community Grand Total		**16,680**	**35,307**	**54,775**	**228%**

Table 8: Ten-Year Community Visits, Custom Forecast

Community MH&A Data Assumptions

- *To account for underreporting, 2016/17 community mental health visits were increased 60%*
- *Community data was obtained using referral data for mental health and addictions visits.*

Selected Innovations Driving Impact

- *ACT /Intensive Case Management*
- *MH Specialist in Primary Care*
- *SMS Reminder Services*
- *Telehealth in Community*
- *Virtual Peer Coach/Peer Coach*
- *Online Appointment Scheduling*

Day Treatment

Currently, Health PEI only offers day treatment programming for child and adolescent mental health clients through its Insight Program, leaving large swaths of mental health and addictions clients without any viable sub-acute alternatives for inpatient treatment. Volume growth will be driven by the introduction of day treatment programs for all client age cohorts with mental health or addictions needs in FY 2023/24. Mental health clients will drive most of the volume growth, particularly among clients between 25 to 64 years of age. It is important to note that the introduction of expanded day treatment programs is an essential component of realizing projected reductions in emergency department and inpatient utilization. **If expanded day programming is not implemented, projected emergency department and inpatient utilization patterns become invalid.**

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Mental Health Day Treatment					
Mental Health Day Services	0 -14	26	28	29	12%
	15-24	20	20	93	365%
	25-64	0	0	243	N/A
	65+	0	0	63	N/A
Mental Health Day Treatment Total		**46**	**48**	**428**	**830%**
Addictions Day Services					
Addictions Day Services	0 -14	0	0	125	N/A
	15-24	0	0	93	N/A
	25-64	0	0	243	N/A
	65+	0	0	63	N/A
Addictions Day Treatment Total		**0**	**0**	**524**	**N/A**
Day Treatment Grand Total		**46**	**48**	**952**	**1,970%**

Table 9: Ten-Year Day Service Visits, Custom Forecast

Day Treatment Data Assumptions

- *Day treatment impact assumes 25% of inpatient discharges can be served in day treatment settings by 2024/25*
- *25% of inpatient mental health discharges for clients from 0-14 years of age are not captured in day treatment settings*
- *Day treatment baseline year (year of implementation) assumes PEI will capture 100% of suitable inpatient discharges (i.e. 25% of potential inpatient discharges)*
- *Insight client volumes are included in volume projections*

Selected Innovations Driving Impact

- *Day Treatment*

Emergency Department

Emergency department encounters for mental health and addictions needs are expected to decrease by 33% over the next ten years. Addictions clients will drive volume reductions, primarily among clients between 18 to 64 years of age. Addictions emergency department volumes will decrease by 46%, and mental health acute crisis and stabilization volumes will decrease by 14%. Volume decreases will be driven by several innovations that improve community mental health and addictions care to reduce episodes of decompensation and prevent repeated emergency department visits. In addition, a reimagined addictions treatment care model with a focus on intensive case management and outpatient services is expected to reduce addictions clients' visits to emergency departments across the Island. As previously highlighted, projected emergency department utilization is dependent on the implementation expanded community-based services and day treatment programming, among other proposed innovations. **If these actions are not undertaken, Health PEI will need to reforecast emergency department utilization.**

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Mental Health Emergency Department					
Mental Health Emergency Department	0-17	581	476	502	-14%
	18-64	3,353	2,751	2,798	-17%
	65+	734	635	724	-1%
	All – Crisis Consults	727	602	633	-13%
Mental Health Emergency Department Total		**5,395**	**4,465**	**4,657**	**-14%**
Addictions Emergency Department					
Addictions Emergency Department	0-17	871	446	470	-46%
	18-64	5,029	2,580	2,623	-48%
	65+	1,102	595	679	-38%
	All – Crisis Consults	1,090	565	594	-46%
Addictions Emergency Department Total		**8,092**	**4,186**	**4,366**	**-46%**
Emergency Department Grand Total		**13,487**	**13,952**	**9,024**	**-33%**

Table 10: Ten-Year Emergency Department Visits, Custom Forecast

Emergency Department Data Assumptions

- *Emergency department data was provided by Health PEI and includes crisis consults*
- *Provided 2016/17 volumes were increased by a factor of 3 to account for underreporting of mental health and addictions visits*
- *Emergency department visits were broken out by mental health and addictions by applying inpatient mental health and addictions case mix to volumes*

Selected Innovations Driving Impact

- *ACT / Intensive Case Management*
- *Mobile Crisis Teams*
- *Psychiatric Emergency Department*
- *Telehealth in the Community*

Inpatient

Non-ALC Patients

Overall, non-ALC inpatient volumes are expected to increase by approximately 13% over the next decade, driven by innovations that impact inpatient utilization and length of stay. Impacts to inpatient mental health and inpatient addictions volumes differ sharply; while inpatient mental health volumes are expected to decrease by 31% over the next decade, inpatient addictions volumes are expected to grow by almost 42% during the same time. Inpatient mental health volume reductions will be driven primarily by adult clients, and inpatient addictions volume growth will be driven by clients of all ages. As previously highlighted, projected inpatient demand and utilization is dependent on the implementation of expanded community-based services and day treatment programming, among other proposed innovations. **If these actions are not undertaken, Health PEI will need to reforecast inpatient demand and utilization.**

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Inpatient Mental Health					
Inpatient Mental Health	Child and Adolescent	128	107	86	-33%
	Adult	410	344	272	-34%
	Geriatric	208	184	156	-25%
	Concurrent	168	143	115	-32%
Inpatient Mental Health Total		**914**	**778**	**629**	**-31%**
Inpatient Addictions					
Inpatient Addictions	Detox	917	1,147	1,329	45%
	Transition Unit	289	384	396	40%
	All Other	142	189	194	39%
Inpatient Addictions Total		**1,348**	**1,720**	**1,919**	**42%**
Inpatient Grand Total		**2,262**	**2,498**	**2,548**	**13%**

Table 11: Ten-Year Non-ALC Inpatient Visits, Custom Forecast

Inpatient Data Assumptions

- *Inpatient discharge data was obtained from DAD extracts. Summary volumes from PATF and Units 5, 7, and 8 were added so all units are included in analysis*
- *Provided concurrent volumes did not have age level detail. The analysis will reflect the Island need for all age groups*

Selected Innovations Driving Impact

- *ACT / Intensive Case Management*
- *Day Treatment*
- *Crisis Response Team*
- *MH Specialist in Primary Care*
- *Psychiatric Emergency Department*
- *Psychiatric Hospitalist*
- *Telehealth in Community*
- *Telehealth in ED*
- *Virtual Peer Coach / Peer Coach*

Special Populations – ALC Patients

By FY 2026/27, ALC patient volumes are expected to grow by approximately 8%. Volume growth will be driven exclusively by addictions ALC patient volumes, which will grow by 37% over the next ten years. Mental health ALC patient volumes will decrease by 31% during the same time. As stated in Section 6.1, an overall ALC patient occupancy rate of 35% was used to estimate overall ALC patient volumes. The ALC patient volumes presented in Table 10 represent projected 10-year ALC volumes if there were no supportive or long-term housing options available for ALC patient placement, which would force ALC patients to remain on inpatient units. Despite the increase in overall ALC patient volumes, Health PEI hopes to significantly reduce the number of ALC patients residing on inpatient units. Decanting ALC patients to more suitable supportive or long-term care housing options is dependent on the creation and implementation of additional supportive and long-term housing options across the Island, along with expanded community-based services and day treatment programming. **If these actions are not taken, Health PEI will need to reforecast ALC patient demand and utilization.**

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Inpatient Mental Health ALC					
Inpatient Mental Health ALC	Child and Adolescent	61	51	41	-33%
	Adult	196	166	130	-34%
	Geriatric	100	88	75	-25%
	Concurrent	63	53	43	-32%
Inpatient Mental Health ALC Total		**420**	**358**	**289**	**-31%**
Inpatient Addictions ALC					
Inpatient Addictions ALC	Detox	361	426	494	37%
	Transition Unit	139	164	190	37%
	All Others	68	81	93	37%
Inpatient Addictions ALC Total		**568**	**671**	**777**	**37%**
ALC Patient Grand Total		**988**	**1,029**	**1,066**	**8%**

Table 12: Ten-Year ALC Patient Visits, Custom Forecast

ALC Patient Assumptions

- *ALC April 2018 Analysis was used to determine by care setting the additional facilities needed for patients designated as ALC. Long term care and dual diagnosis patients in units 5 and 7 respectively were also included to determine ALC decant*
- *Assumed overall ALC inpatient occupancy rate of 35%*

Selected Innovations Driving Impact

- *ACT / Intensive Case Management*
- *Day Treatment*
- *Crisis Response Team*
- *MH Specialist in Primary Care*
- *Psychiatric Emergency Department*
- *Psychiatric Hospitalist*
- *Telehealth in Community*
- *Telehealth in ED*
- *Virtual Peer Coach / Peer Coach*

Special Populations – Forensic

The forensic patient population on PEI will grow by approximately 11% over the next decade. The slight uptick in forensic volumes is exclusively due to projected population growth. Forensic volumes for this analysis were unable to be grouped by service area or age cohort because historical forensic patient data is recorded as summary-level data only.

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Inpatient Forensic					
Inpatient Forensic	All	17	18	19	11%
Inpatient Forensic Grand Total		**17**	**18**	**19**	**11%**

Table 13: Ten-Year Forensic Visits, Custom Forecast

Long-Term Housing

By FY 2026/27, community housing volumes are expected to grow by 22%. Because of the difficulty estimating true community housing need, CannonDesign assumed that approximately 20% of all mental health inpatient clients are able to be treated in community housing settings upon discharge. Community housing for mental health clients will begin in FY 2023/24. Although none of the 12 innovations listed in Section 6.1 are directly related to community housing, CannonDesign assumed that a combination of the 12 innovations would lead to a projected 28% increase in addictions community housing utilization over a ten-year period, matching the expected increase in addictions inpatient utilization driven by various innovation impacts. Projected community housing demand and utilization is dependent on the implementation of expanded community housing facilities, expanded community-based services, and day treatment programming, among other proposed innovations. **If these actions are not undertaken, Health PEI will need to reforecast community housing demand and utilization.**

Area	Age Cohort	FY 2016/17	FY 2021/22	FY 2026/27	10-Year Growth
Mental Health Community Housing					
Community Housing	0 -14	0	0	12	N/A
	15-24	0	0	9	N/A
	25-64	0	0	57	N/A
	65+	0	0	6	N/A
Mental Health Community Housing Total		**0**	**0**	**84**	**N/A**
Addictions Community Housing					
Addictions Community Housing Female	0 -14	12	12	16	33%
	15-24	8	8	12	50%
	25-64	34	35	46	35%
	65+	0	0	0	N/A
Addictions Community Housing Male	0 -14	16	17	22	38%
	15-24	12	12	17	42%
	25-64	105	109	143	36%
	65+	3	3	5	67%
Deacon House	All	1,209	1,283	1,353	12%
Strength Program	0-17	15	16	21	40%
	18-29	40	42	55	38%
Addictions Community Housing Total		**1,454**	**1,573**	**1,690**	**16%**
Community Housing Grand Total		**1,454**	**1,537**	**1,774**	**22%**

Table 14: Ten-Year Community Housing Visits, Custom Forecast

Long-Term Housing Assumptions

- *Residential care data and volumes include Talbot House, Lacey House, and the Strength Program*
- *Assumes 20% of all mental health inpatient clients can be treated in community housing upon discharge*
- *Assumes a 28% growth in addictions community housing utilization*
- *Mental health community housing baseline year (year of implementation) assumes PEI will capture 100% of suitable inpatient discharges (i.e. 20% of potential inpatient discharges)*

Selected Innovations Driving Impact

- *None*

7. Putting it All Together: Creating a Service Delivery Strategy

7.1 The Future Model of Care: Overview

The goal of the mental health and addictions client journey is to promote mental, social and functional health and wellness, while protecting dignity and de-stigmatizing mental health and addictions services. As outlined in Section 4, there are key areas where Health PEI can improve upon the delivery of mental health and addictions programming across the province.

ACCESS	Access is challenged by lack of resources and a geographically dispersed population that makes it difficult to link the right care at the right time and right place and to transition a greater number of clients into community settings.
QUALITY	Widely variable performance in metrics related to quality of care highlights lack of placement options and inconsistency in applying evidenced-based models of care.
COMMUNICATION, COORDINATION AND TECHNOLOGY	Barriers to communication, IT standardization and coordination prevents ability of system to seamlessly coordinate home, community, ambulatory, acute stabilization and long-term management resources.
CLIENT EXPERIENCE	Growing demand for services coupled with need for education of available resources leads to highly variable client experiences by site of care.
WORKFORCE	Critical shortage of qualified mental health and addictions personnel and lack of staff coverage in rural areas creates challenges in maintaining continuity of care.
FACILITY DESIGN	Aging facilities and infrastructure are functionally obsolete and not conducive to current clinical, safety, quality, and workforce MHA best practices.

Table 15: Health PEI Current State Themes

Reframed, these opportunity areas identify the challenges for which the new model of mental health and addictions care must solve as the future condition is developed.

As a part of the Outcomes-Based Visioning™ process, the Health PEI interdisciplinary visioning team engaged in a series of future-focused visioning activities to reimagine the future of mental health and addictions programming. Respecting the transformation principles established and the performance metrics outlined as those indicating programmatic success, the visioning team established a clear point-of-view regarding future models of care for mental health and addictions programming. This point-of-view is based a number of core tenets that will underpin the execution of all experiential, strategic, operational, technologic, workforce and built environment initiatives related to the new model of care.

ONE ISLAND SERVICE

1. The right care delivered in the right place, at the right time with the right resources and the right experience with a resultant decrease in reliance on high-acuity inpatient services.

2. A community-based model emphasizing the delivery of convenient, readily accessible services developed with sites of community- based services that mitigate the hardships that can be experienced when accessing care in rural communities.

3. Communications, technologies, clinical documentation platforms and operational models supporting integrated and collaborative models of care between Health PEI and non-Health PEI providers and across all physical and virtual sites of service on the island, ensuring immediate situational awareness regarding any client, anywhere, anytime.

4. Remote engagement strategies maximized to offer clients physical, digital and virtual access to providers who, in employing these resources, can improve their productivity from current levels.

5. Clinical and supportive services considered best practice not currently provided or not provided in adequate abundance in Prince Edward Island introduced across the island to provide clients needed services in their local communities, where possible.

6. Mental health and addictions clinical providers evolving their roles supporting a philosophy of operating to the top of their training / licensure thereby enhancing their ability to provide the most impactful clinical services, free of distraction from activities that can be provided by others.

7 Technology and physical assets modernized to reflect contemporary standards and philosophies of care that embrace community- based services, client empowerment and dignity over high-acuity institutional-based philosophies of care.

Understanding that to be maximally effective, mental health and addictions services must be integrated into the daily lives of clients: a model of care emphasizing a heavy investment in services located in close proximity to clients and where they conduct their daily lives. In other words, a community-based model underscored by the decentralization of resources establishing a matrix of care, as opposed to a traditional hub and spoke network. This matrix of care will be created with the intention of ensuring complete situational awareness of the condition, needs and management plans for all clients regardless of when or where the client engages the mental health and addictions system. In addition, to further establish a model emphasizing convenient services for clients, a new emphasis on virtual services available anywhere, anytime will be a heavy focus of the future-state model of care. Additionally, the future model of care has been optimized to ensure that information regarding ongoing treatment of clients flows bi- directionally between different providers and sites of service with real-time interfaces and information updates taking place.

Recognizing that different client types may share the same overarching goal of wellness but are impacted by different fears, barriers and psychosocial determinants of health, five distinct client journeys were developed. These specific client cohorts represent a sizeable portion of clients seeking services and include:

1. Adult mental health
2. Child and adolescent mental heath
3. Geriatric mental health
4. Forensic mental health
5. Addictions services

In reviewing each client cohort type, it is important to understand that the intention of the following sections is to demonstrate one potential journey a client might follow over the course of their interactions with mental health and addictions programming in Prince Edward Island. No two journeys are alike and, while the goal of the future condition is to create a shared set of expectations with respect to the way mental health and addictions services will be delivered and the outcomes expected, the order, frequency and duration of interactions will vary considerably, based on the unique needs of each individual client. This customization of the process and resources utilized will be co-created by the client, their support network and the care team involved in supporting the client.

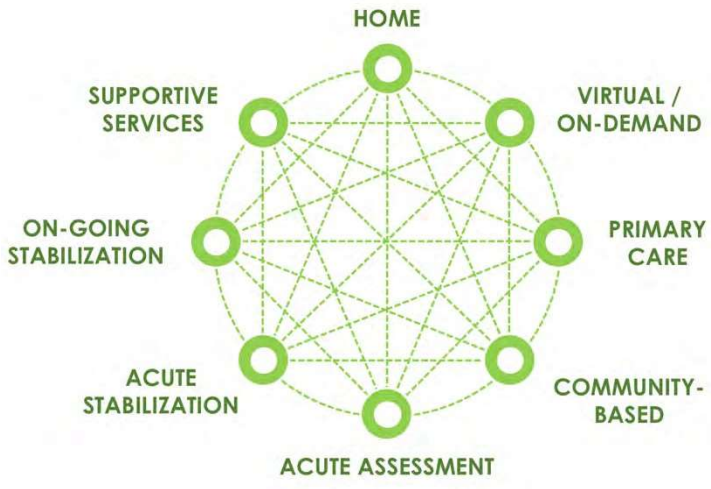


Diagram 28: Health PEI Future Model of Care by Site of Service

The development of client journeys understands that the mental health and addictions model of care does not occur along a linear process where all clients follow the same steps in the same order. Rather, the future mental health and addictions model of care will exist as a matrix of care enabling clients to move seamlessly across sites based on their needs at any given moment. The develop of a matrix of care also ensures that all sites of service, both physical and virtual, are connected with one another in manner that enables both clients and information to flow freely and bi- directionally across sites. Matrix models such as this represent the future of all healthcare delivery models that seek to deliver on the promise of a population health-based philosophy.

As the future-state model of care is considered, it is also important to understand that the vision for the future-state model of care is intended to be iterated as Health PEI learns more during implementation. The recommendations advanced for the future state of mental health and addictions programming in Prince Edward Island are based on the collective experiences of all stakeholders engaged in the process. Understanding that, the mental health and additional milieu in Prince Edward Island is unique and its own ecosystem unto itself. Innovations and care models that have proven successful in other ecosystems within or external to Canada may not necessarily perform similarly in Prince Edward Island when faced with new realities of resource availability; client, provider and community expectations; interactions with other aspects of the model of care; and, culture.

As the reader of the report reviews the following client journeys the text may appear repetitive in nature. This in intentional and is a direct reflection of the desire of Health PEI to create client experiences that are consistent and repetitive across different client types. This standardization of processes and experiences will result in a more predictable and consistent model of care that will enable both clients and providers to develop proactive approaches to mental health and addictions care. A secondary reason for the repetitive nature of the text is all each of the subsequent sections to function as a stand-alone document to illustrate the client journey for the constituency under consideration in its entirety and without having to reference back to a master journey elsewhere in the report.

7.2 Adult Mental Health Client Journey

Overview

As previously stated, the goal of the mental health and addictions client journey is to promote mental, social and functional health and wellness, while protecting dignity and de- stigmatizing mental health and addictions services.

The adult mental health services model of care will apply to all clients aged 24 – 64 seeking mental health services. While it is understood that many clients with mental health needs will present with concomitant substance abuse issues requiring attention, those who present with mental health needs deemed to be in excess of their substance abuse needs will be assumed to follow the mental health client journey with considerable support and collaboration provided from substance abuse treatment teams.

Clients between the ages of 18 and 24 who have been previously engaged with the child and adolescent mental health system will be transitioned from child and adolescent services to adult service providers as deemed appropriate by the client's care team. New entrants to the system between the ages of 18 and 24 will begin their journey utilizing adult mental health services.

Client Access

The adult mental health client journey will begin with the client, a healthcare provider, or member of the client's support network, identifying a need for the client to seek mental health services. This may occur as a result of the acknowledgement that something is different and not right. Supported by resources such as Internet and mobile phone app-based self-screening tools, islanders will have access to comprehensive information regardless of the time of day or location in Prince Edward Island. This will be supplemented by a Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre staffed by mental health and addictions experts and offering on-demand information and resource guidance via phone, chat and video.

Scheduling a client for an initial assessment will be accelerated through the use of on-line appointment scheduling services that will provide clients with a comprehensive list of available appointment, enable the client to select the one most convenient for them. Short Message Service (SMS) text message confirmations and reminders for clients with access to a mobile phone will provide a reminder of schedule services and all the client to confirm or cancel an appointment should their needs evolve.

On-line scheduling provides a convenient 24/7 scheduling option for clients, facilitating appointment scheduling at times more convenient for the client, reducing the potential for appointment cancellations and no-shows. It has the potential to be implemented across community-based services where it can increase compliance with community-based programming. In addition, on-line self-scheduling holds the potential to reduce staffing costs associated with this function while providing a real-time scheduling solution.

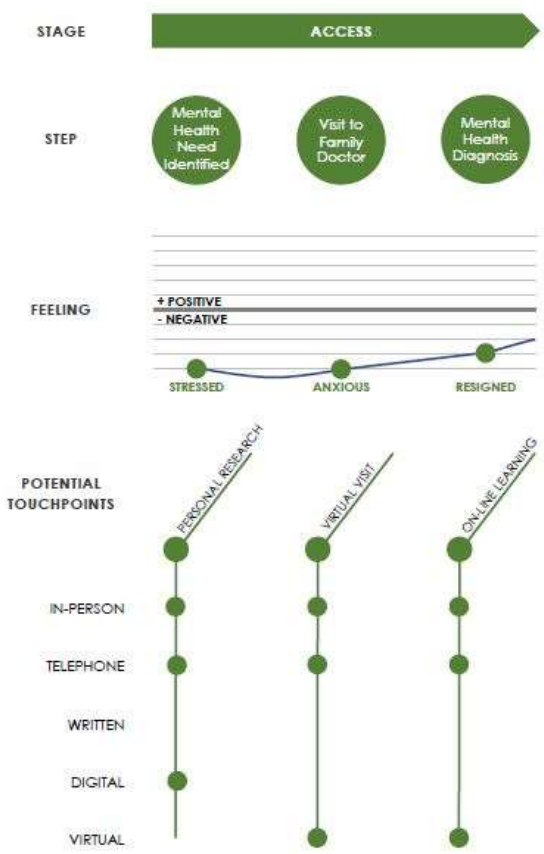


Diagram 30: Adult Mental Health Client Journey – Client Access

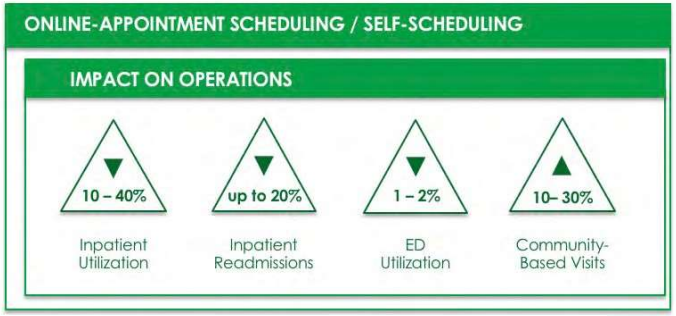


Diagram 31: Innovation Impact - Online Appointment Scheduling
Adult Mental Health Client Journey

Implementation of SMS technology to improve outpatient follow up will facilitate improved client outcomes by improving overall attendance rate to therapy sessions and/or program meetings. This innovation is expected to reduce the number of no-show and missed appointments and reduce wait times to see therapists by opening up available appointment slots when clients are unable to attend their scheduled appointment.

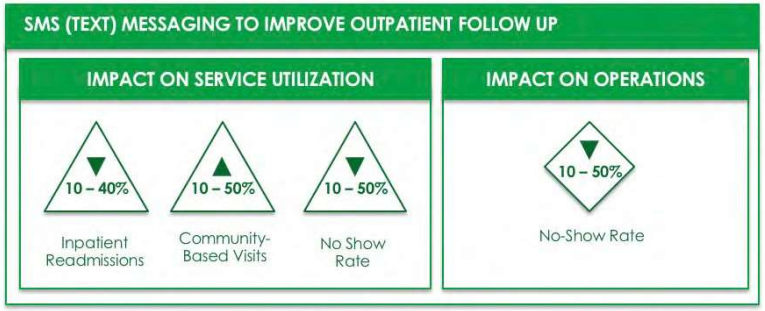


Diagram 32: Innovation Impact – SMS (Text) Messaging to Improve Outpatient Follow-Up
Adult Mental Health Client Journey

If the client is expressing suicidal or homicidal ideations, arrangements are made for immediate and safe transport to the closest emergency department for assessment and disposition to the appropriate levels of service.

Once a need has been identified, clients not considered to be a threat to themselves or others can safely enter the metal health and addiction matrix of care through their family physician, should they have one. Here, the client will be able to discuss their concerns while their family physician engages in a medical screening process to ensure the presenting complaint is not one that requires a medical as opposed to mental health intervention.

With the future model of care recognizing that the family (primary care) physician is a critical node in the matrix of mental health and addictions programming, their clinics will have real-time access to a host of mental health and addictions resources. This will include immediate access to consultation with a mental health provider for further guidance / reassurance on the plan of care developed for the client. This real-time access will be provided through either the in-clinic presence of mental health and addictions specialists in the case of high-volume clinics, through conversations with the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre, or vis-à-vis care-to-face consultation using tele-mental health services.

Integrating mental health specialist in primary care walk-in clinics and/or community teams provides a pathway for effective, quicker diagnosis of mental health illnesses and ability to provide team –based collaborative approach to client, inclusive of physical and mental health. Expected outcomes include reduced emergency department utilization and an increase in overall outpatient visits.

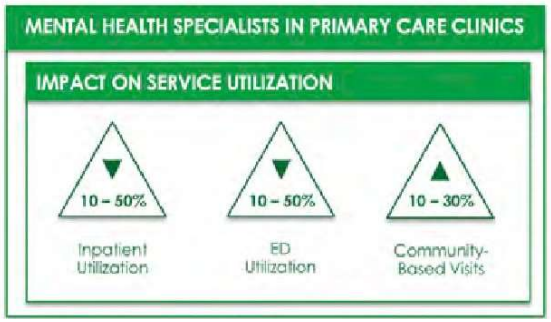


Diagram 33: Innovation Impact – MH Specialist in Primary Care
Adult Mental Health Client Journey

It is expected that all primary care clinics will be provided access to tele-mental health services that can be easily achieved using a high-speed Internet connection with end-to-end encryption or next-generation wireless mobile phone connections offering the same levels of encryption. In addition, family (primary care) physicians will be afforded access to on-line resources providing standardized clinical pathways for a number of common mental health complaints. These pathways, developed and enhanced through continuous artificial intelligence and machine learning technologies, will provide the physician with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care.

Implementation of tele-mental health services in the primary care setting and providing app- based tele-mental health services allows mental health professionals to deliver their expert services to clients in hard to reach areas and provide specialist consultation to the primary care providers in rural areas. This innovation is expected to improve overall self-reported symptoms, decrease emergency department utilization and improve psychiatrist access.

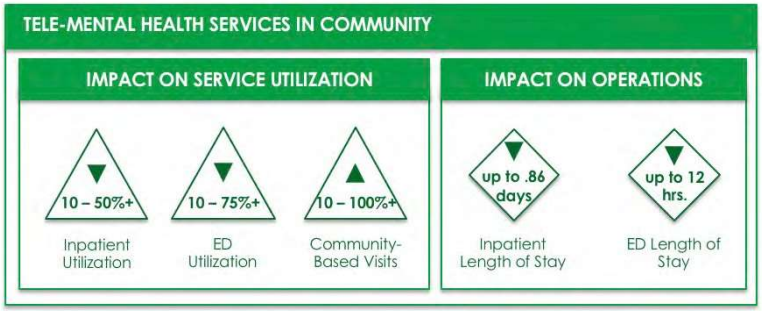


Diagram 34: Innovation Impact – MH Services in Community
Adult Mental Health Client Journey

Once a client is diagnosed with a mental health condition, they will begin their journey through a matrix of care intended to provide them with life-long support as their condition warrants. Notification of a new client will be electronically sent to the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre which will serve an access facilitation role, working to match new clients with appropriate resources in their community while the client is still in the clinic. An electronic summary of the client history, diagnosis and preliminary management plan will be sent to any mental health services required by the client. Additionally, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps.

Community-Based Services

Once the client has completed their initial encounter with their family (primary care) physician and a diagnosis of a mental health condition has been made, the client will be under the auspices of a shared care model that will promote collaborations between primary care and mental health and addictions professionals.

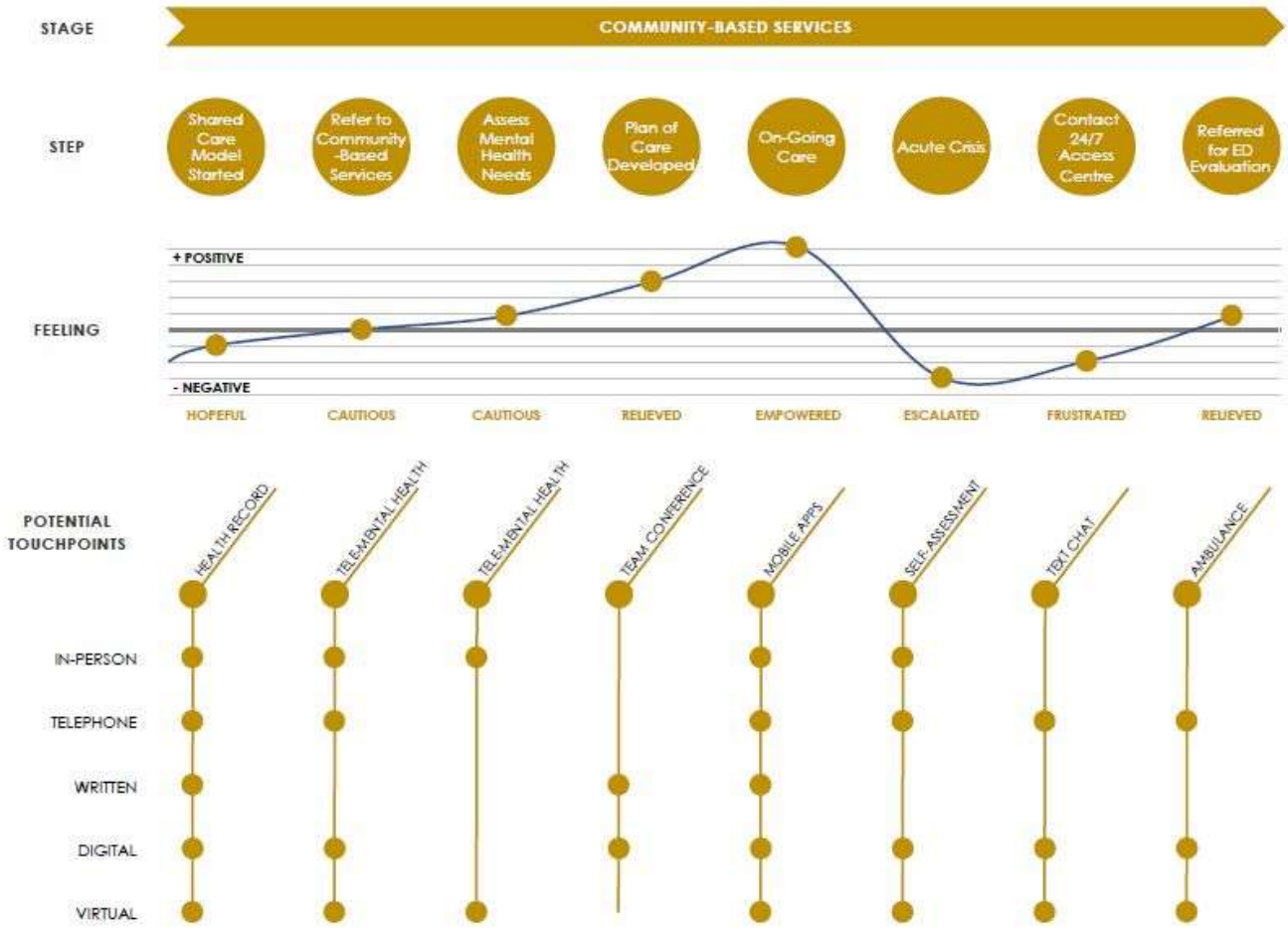


Diagram 35: Adult Mental Health Client Journey – Community-Based Services

In the shared care model, the family doctor and mental health team will co-manage client's condition. Shared clinical documentation and communication platforms will be leveraged to ensure seamless communications and situational awareness for all providers involved in the client's care, while clients with on-going access to community mental health providers will benefit from the community mental health team sending monthly care update to the family physician. At the same time, the client will be provided with access to web / mobile care portal to actively participate in their on-going care.

As the client begins their life-long journey to mental wellness, they will be provided with a number of resources intended to promote engagement and activation in their own journey. Resources such as virtual peer coaches and on-line / app-based mindfulness tools have both been shown to improve wellness, decrease the severity of symptoms and provide an overall benefit to the client. Studies have shown that peer coaches / support have helped decrease client depression when they are part of this support. Offering peer coaches / support continues to round out a comprehensive community-based model of care, providing clients with an additional resource to successfully manage their condition in the community setting.

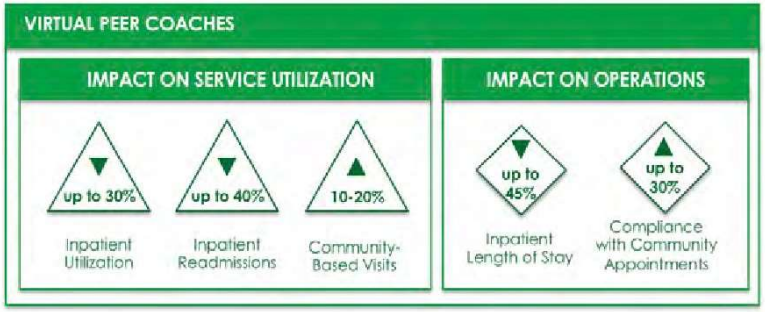


Diagram 36: Innovation Impact – Virtual Peer Coaches
Adult Mental Health Client Journey

For clients referred to community-based mental health services, the intake process will be completed in-person or through a virtual visit within three (3) business days of an initial referral. As with the initial visit to the family (primary care) physician, scheduling a client for initial intake will be accelerated through the use of on-line appointment scheduling services that will provide clients with a comprehensive list of available appointments, enabling the client to select the one most convenient for them. Short Message Service (SMS) text message confirmations and reminders for clients with access to a mobile phone will provide a reminder of scheduled services and allow the client to confirm or cancel an appointment should their needs evolve.

To accelerate the intake process, the client portion of the referral intake will be provided on-line prior to the intake meeting, if possible. For those with special considerations that make traveling to a community mental health and addictions centre or use of a virtual option unrealistic, Health PEI will provide an in-home intake service to these individuals. Virtual intake will be provided using tele-mental health services, which can be easily achieved using a high-speed Internet connection with end- to-end encryption or next-generation wireless mobile phone connections offering the same levels of encryption.

During the initial intake process, multi- disciplinary standardized assessment tools will be used to identify the client's mental health, addictions and psychosocial needs. The intake process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools

will leverage artificial intelligence and machine learning technologies that will provide the mental health care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care.

Upon completion of the intake process a plan of care will be formalized. This plan of care may include:

- Medication management and education
- Psychoeducation
- Individual therapy
- Group therapy
- Family or couple's therapy
- Cognitive behavioral therapy
- Dialectical behavioral therapy
- Trauma-focused therapy
- Day hospital programming
- Bidirectional family support
- Psycho-social needs
- Stressors management plan
- Community-based mental wellness team

An electronic summary of the client history, diagnosis and preliminary management plan will be sent to the client's family (primary care) physician and any mental health or social service providers required by the client. In addition, the client will receive written, on-line and / or app- based educational information on their diagnosis, management plan, medications and next steps. Any client requiring therapy sessions can expect, on average, to have access to their first therapy session within two (2) business days from the day of request.

For clients who engaged in an in-person intake screening and will require prescriptions medication to manage their new diagnosis, they will be supplied with medication "to-go" packs with a three (3) day supply of medications to be dispensed to the client at discharge to accelerate the initiation of therapy.

On-going care for the client will be provided per the treatment plan developed. Regularly scheduled engagement between the client and the appropriate resources will occur with frequencies based on the individual needs of the client. The plan of care will emphasize self- assessment of well-being with digital feedback to community-based mental wellness team. This self-assessment can quickly alert the treatment team to a potential decline in mental health, enabling proactive engagement prior to the development of an acute crisis necessitating a higher level of care. In addition, the community-based team will proactively contact clients determined to be non-compliant with medications. they will also proactively contact clients to ensure follow-up, organize transportation resources if needed and

provide monthly updates to the client's family (primary care) doctor.

For clients with complex mental health needs, health PEI will leverage an intensive care management model. Intensive case management is an evidenced-based practice that offers treatment, rehabilitation, and support services, using a person-centered, recovery-based approach, to individuals diagnosed with a severe and persistent mental illness. Intensive case management can reduce hospital bed utilization, avoidable admission of high inpatient users and increase hospitalization for clients who need inpatient care. Studies have showed that using intensive case management can have significant impacts on inpatient utilization and length of stay. This treatment approach is ideal for clients who require robust support social and medical resources using a team –based community –focused approach.

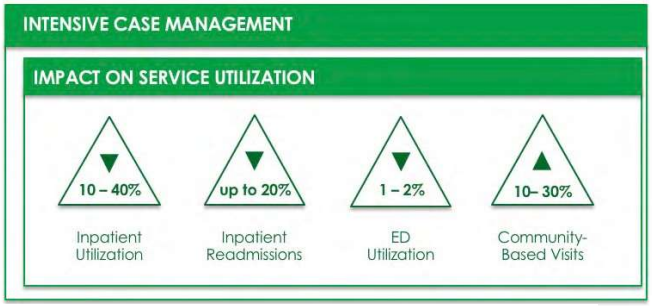


Diagram 37: Innovation Impact – Intensive Case Management
Adult Mental Health Client Journey

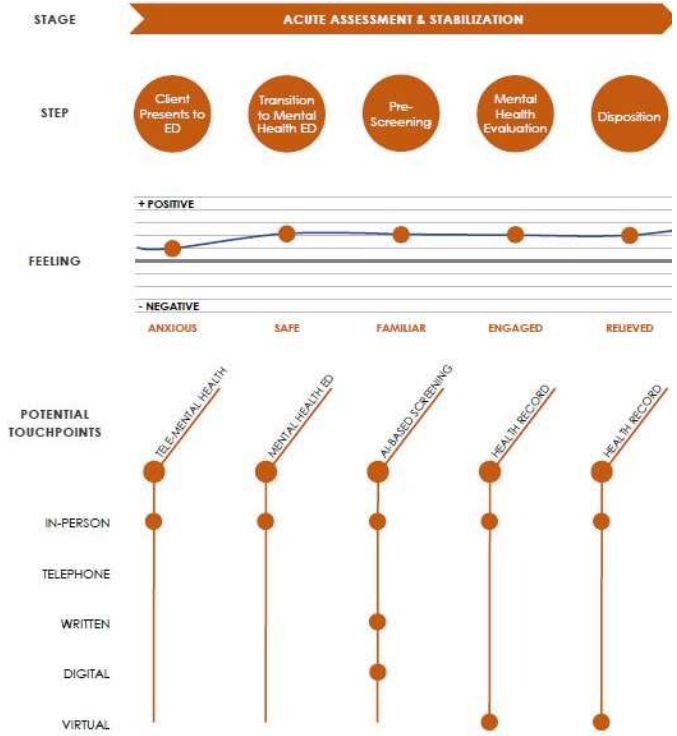
Unfortunately, from time–to-time client will experience an acute decompensation in their mental health and well-being that will necessitate rapid assessment and disposition. When this occurs, the client and their support network will have access to resources such as Internet and mobile phone app-based self-screening tools providing comprehensive information regardless of the time of day or location in Prince Edward Island.

Should the need arise, the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre staffed by mental health and addictions experts will be available to help in determining if the client requires an acute assessment. The Access Centre will be able to review the client's electronic health record to gain quick contextual awareness of the client and their mental health history. Using standardized assessment tools, they will determine the next appropriate steps. If the client is deemed to be an immediate threat to themselves or others, EMS and / or law enforcement officials will be dispatched for immediate response and to transport the client to closest emergency department. If the client is not an immediate threat to themselves or others but they require a more comprehensive assessment, the Access Centre will have the ability to dispatch a mobile crisis response team to the client's location or refer the client to the closest emergency department. If the client is being referred to the mobile crisis response team or the emergency department, the Access Centre will forward a "snapshot" communication to the relevant parties, making them aware of the client, their history and the current situation.

Implementation of crisis response teams in the community will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an ED staffed with an in-person mental health evaluator. This innovation is expected to reduce utilization of emergency department and inpatient encounters by providing assessment, disposition and transfer to a higher level of care, when appropriate.

Diagram 38: Innovation Impact – Crisis Response Team
Adult Mental Health Client Journey

Acute Assessment and Stabilization



Clients presenting to the emergency department for acute assessment routinely require both a medical and a mental health assessment to ensure all potential causes of the current situation have been considered and to ensure the client is not referred to mental health site of service that is not equipped to manage complex medical situations. Historically, these have been provided sequentially with medical clearance occurring before a mental health assessment has been provided. This operational model has proven to have its advantages and disadvantages with the greatest concerns centered around the ability of emergency department staff not trained in the management of mental health crises to successfully de- escalate agitated clients, and the delays associated with initiating mental health assessment and its impact on the overall operations of the emergency department. In the new model of care, a new operational model has been envisioned to address both concerns while accelerating care and ensuring client safety.

Upon presentation to the emergency department, the client will be provided with an accelerated medical screening. Using a standardized medical clearance screening tool, the emergency department staff will identify those clients who require a limited medical screening and those who pose a higher right of the presence of a co-morbid medical condition requiring a comprehensive medical assessment and clearance. Clients deemed medically clear based on the limited medical screening will be eligible for immediate mental health evaluation. Clients requiring a more complex medical assessment who do not present with altered mental status will be eligible for medical and mental health assessment in parallel, while clients who present with altered mental status will await mental health assessment until the causes

Diagram 39: Adult Mental Health Client Journey – Acute Assessment & Stabilization

of the altered mental status have been identified and managed. Clients determined to have a medical condition requiring inpatient hospitalization for management will be admitted to a medical inpatient unit with consultation support for their mental health complaint provided by psychiatry until such time as the client is medically clear for transfer to a mental health environment or the mental health condition has been appropriately stabilized.

The emergency departments at Queen Elizabeth Hospital and Prince County Hospital as well as the urgent care centres at Kings County Memorial Hospital and Western Hospital will be outfitted with a number of safe and secure ligature-free treatment stations. These stations will ensure a safe environment for clients awaiting mental health evaluation. In addition, the emergency department at Prince County Hospital and the urgent care centres at Kings County Memorial Hospital and Western Hospital will be equipped with tele-mental health equipment, enabling clients at these sites of service to be connected with a mental health provider at the mental health emergency department at Queen Elizabeth Hospital via an end-to-end encrypted video connection.

Implementation of tele-mental health services in the medical emergency department for outlying sites in Prince Edward Island will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an emergency department staffed with an in-person mental health evaluator. This innovation is expected to reduce unnecessary interfacility transfers and inpatient hospitalizations for clients who can be safely managed in the community. Emergency department based tele-mental health services has been shown to have a number of benefits, including proven impacts on inpatient utilization, overall length of inpatient hospitalization and emergency department length of stay.

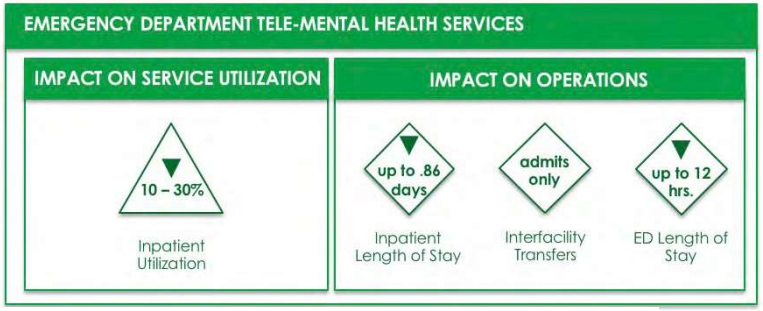


Diagram 40: Innovation Impact – ED Tele-Mental Health
Adult Mental Health Client Journey

Mental health evaluations at Queen Elizabeth Hospital will be provided in-person through a new mental health emergency department that will be staffed around the clock. Mental health emergency departments are environments designed to provide acute assessment services for clients presenting with an acute mental health or addiction crisis. The staff, educated and trained to provide mental health and addiction services, provide prompt mental health assessments, stabilization and treatment with rapid disposition to the appropriate care setting.

The unit will be physically connected to Queen Elizabeth Hospital and will consist of a combination of traditional safe and secure rooms and a “living room” environment, providing clients who can contract for safety with a calm, inviting environment free of the institutional look and feel commonly seen in mental health environments. Throughout the client’s stay in the mental health emergency department or outlying centre, the client’s support network will be able to remain with the client unless situation warrants alternative considerations be made.

Developing a dedicated mental health emergency department will allow clients to experience safe, efficient, high-quality mental health and addictions acute assessments and disposition. When paired with other innovations focused on accelerating and coordinating care, a dedicated psychiatric emergency department holds the promise of reduced length of stay, lower cost of care and improved care coordination.

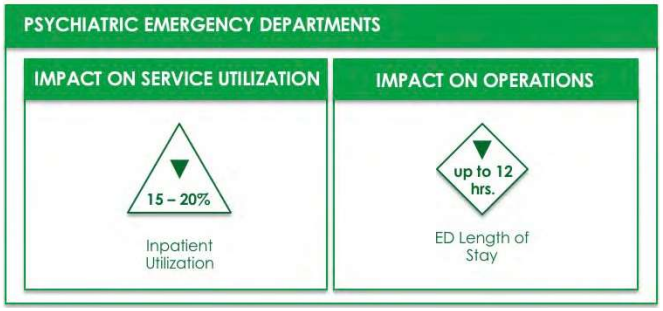


Diagram 41: Innovation Impact – Psychiatric Emergency Departments
Adult Mental Health Client Journey

The mental health assessment will be provided by a qualified mental health assessor. Prior to the client interview the assessor will review client's electronic health record for their history of mental illness, co-morbid medical conditions and their psycho-social determinants of health. At the same time, the client will complete a standardized self-assessment tool. During the formal acute crisis assessment process, a multi-disciplinary standardized assessment tools will be used to identify the client's mental health, addictions and psycho-social needs. The assessment process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the mental health care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care. Should the assessment identify that immediate consultation with a psychiatrist is warranted this will be provided using tele-mental health services.

Once the acute assessment has been completed there are six possible disposition pathways for the client:

- No intervention indicated
- No intervention indicated, continue current treatment plan
- Initiate treatment with referral to community-based services
- Day treatment
- Admit to acute stabilization unit
- Placement into supportive housing

For all client encounters, an electronic summary of the client history, diagnosis and preliminary management plan will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication "to-go" packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow- up visit within two (2) business days and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

Inpatient Care

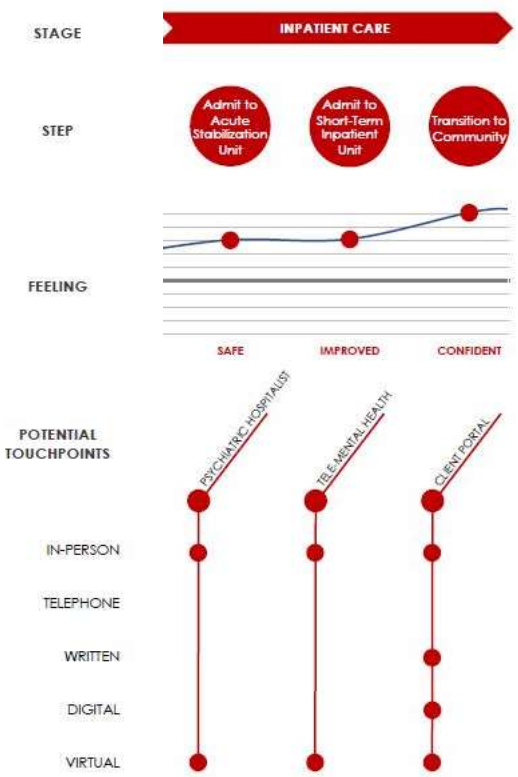


Diagram 42: Adult Mental Health Client Journey – Inpatient Care

For clients requiring acute stabilization services that exceed the capabilities of the mental health emergency department, they will be admitted to the Acute Stabilization Unit. This short-stay inpatient environment will be staffed by an interdisciplinary team of mental health providers expert in acute stabilization strategies. A secure, locked unit, the Acute Stabilization Unit will operate on a model of a targeted 72-hour length of stay and staffed around the clock by an on-site psychiatric hospitalist. The unit will engage in interdisciplinary care planning, employ a rapid intervention model and focus on discharge planning from the moment the client arrives onto the unit. Tele- mental health services will be available to connect clients with specialized mental health needs with providers expert in those services.

Discharge planning is a process used to decide what a client needs for a smooth segue from one level of care to another. Pre-discharge planning can include psycho-social education, treatment plan created, structured needs assessments, medication reconciliation/education, transition managers, and has been shown to be effective in reducing repeat hospitalizations. The new mental health and addictions model of care will benefit from a redesigned discharge process. The goal of the process will be to begin discharge planning on inpatient day zero (0), working to anticipate the post-inpatient needs of the clients long before discharge in order to avoid unnecessary inpatient days related to care transition and discharge planning.

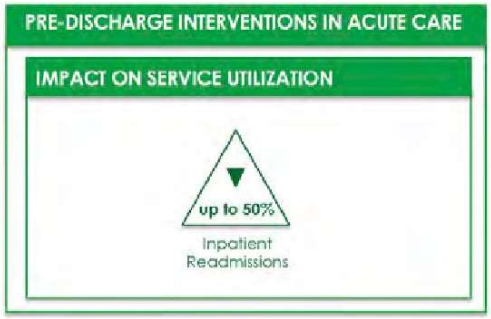


Diagram 43: Innovation Impact – Pre-Discharge Interventions in Acute Care Adult Mental Health Client Journey

Psychiatric hospitalists in the inpatient mental health and addictions setting are used to providing consistent care to the inpatients, ensuring that clients receive timely evidence-based care. The hospitalists will establish, implement and monitor a plan of care throughout the duration of the inpatient hospitalization, orchestrating the coordination of all resources necessary for provide necessary care. Implementation of a psychiatric hospitalist program will facilitate the standardization of many plans-of-care for routine inpatient presentations. This will increase quality, reduce avoidable delays and create a more operationally efficient clinical environment. In addition, the program frees community psychiatrists from the disruption of daily rounding and inpatient on-call schedules.

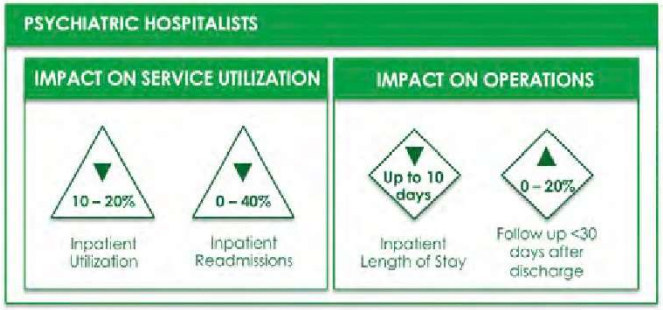


Diagram 44: Innovation Impact – Psychiatric Hospitalists
Adult Mental Health Client Journey

If a client has not been stabilized to a point where they can be safely transitioned to a community or supportive housing setting within 72 hours of arrival onto the Acute Stabilization Unit they will be transferred to the Short-Term Inpatient Unit. This unit will be targeted to care for clients for up to thirty (30) days though the targeted average length of stay will be considerably shorter. The unit will engage in interdisciplinary care planning, employ a rapid intervention model and focus on discharge planning from the moment the client arrives onto the unit. Tele- mental health services will be available to connect clients with specialized mental health needs with providers expert in those services.

Once the client is ready for transition to a different site of care, an electronic summary of the client history, diagnosis and course of inpatient treatment will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication "to- go" packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow-up visit within one (1) business day and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

Return to Community-Based Services

From time to time, a mental health patient may require a level of care that exceeds what can be provided in a traditional community- based setting but is not intensive enough to require inpatient hospitalization. To meet the unique needs of these clients, intensive day hospital programming will be introduced in Prince Edward Island to meet the needs of this client group.

Day programming, or partial hospitalization programming, is a level of care that provides clients with access to a safe, structured treatment environment without total disruption of their daily routines while reducing the reliance on inpatient hospitalization for lower acuity clients. Day programs allow clients to live in the community and received structured intensive outpatient treatment daily. Implementation of day programming services will provider alternative options to clients who would otherwise be admitted to an inpatient unit.

In addition to impacting inpatient utilization, day programming provides a comfortable medium for those who need more counseling support than that offered through traditional outpatient treatment. Day programming has been shown to have a number of benefits, including proven impacts on inpatient utilization and overall length of inpatient hospitalization for those who do require inpatient services.

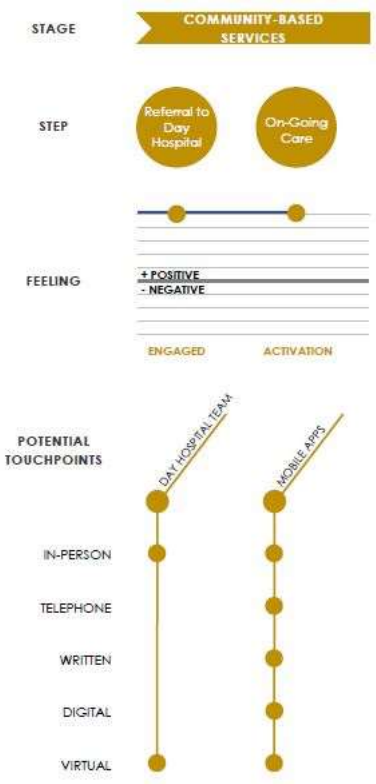


Diagram 45: Adult Mental Health Client Journey – Return to Community-Based Services

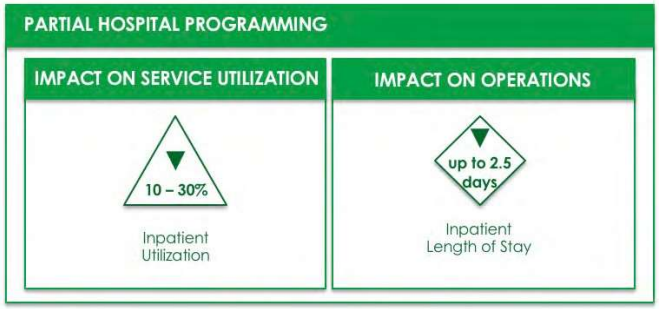


Diagram 46: Innovation Impact – Psychiatric Hospitalists Adult Mental Health Client Journey

On-going care for the client will be provided per the treatment plan developed. Regularly scheduled engagement between the client and the appropriate resources will occur with frequencies based on the individual needs of the client. The plan of care will emphasize self- assessment of well-being with digital feedback to community-based mental wellness team. This self-assessment can quickly alert the treatment team to a potential decline in mental health, enabling proactive engagement prior to the development of an acute crisis necessitating a higher level of care. Furthermore, the community-based team will proactively contact clients determined to be non-compliant with medications. they will also proactively contact clients to ensure follow-up, organize transportation resources if needed and provide monthly updates to the client's family (primary care) doctor.

7.3 Child & Adolescent Mental Health Client Journey

Overview

The goal of the mental health and addictions client journey is to promote mental, social and functional health and wellness, while protecting dignity and de-stigmatizing mental health and addictions services.

The child & adolescent mental health services model of care will apply to all clients under the age of 18 years seeking mental health services. While it is understood that many clients with mental health needs will present with concomitant substance abuse issues requiring attention, those who present with mental health needs deemed to be in excess of their substance abuse needs will be assumed to follow the mental health client journey with considerable support and collaboration provided from substance abuse treatment teams.

Clients between the ages of 18 and 24 who have been previously engaged with the child and adolescent mental health system will be transitioned from child and adolescent services to adult service providers as deemed appropriate by the client's care team. New entrants to the system between the ages of 18 and 24 will begin their journey utilizing adult mental health services.

Client Access

The child and adolescent mental health client journey will begin with the client, a healthcare provider, a member of the client's family or support network or a member of the school system identifying a need for the client to seek mental health services. This may occur as a result of the acknowledgement that something is different and not right or overt gestures or statements indicating the need for further evaluation. Supported by resources such as Internet and mobile phone app-based self-screening tools, islanders will have access to comprehensive information regardless of the time of day or location in Prince Edward Island. This will be supplemented by a Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre staffed by mental health and addictions experts and offering on-demand information and resource guidance via phone, chat and video.

* *In general, the child and adolescent journey will follow a similar path to that of the adult mental health client. To illustrate important nuances the child and adolescent client journey outlined in this section will assume that the client's mental health needs have been identified within an educational setting and elevated to school officials for consideration and intervention.*

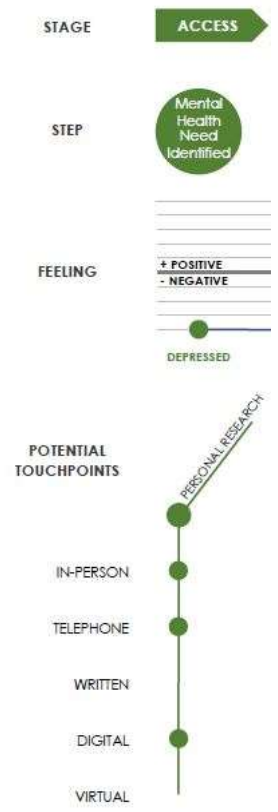


Diagram 47: Child & Adolescent Mental Health Client Journey – Client Access

Community-Based Resources

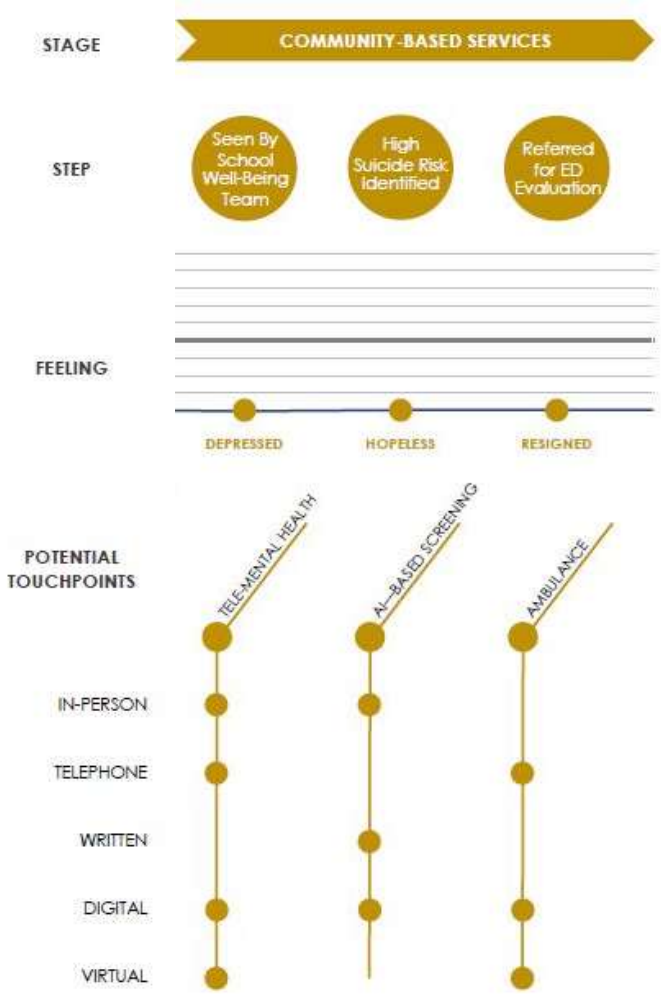


Diagram 48: Child & Adolescent Mental Health Client Journey – Community-Based Resources

All educational environments on Prince Edward Island have policies and procedures in place to identify and intervene when a student is believed to be struggling with a mental health condition. Once the school has been made aware of a concern either by the client, another student, an educator or any other concerned party the school's student well-being team will be contacted and activated. The student well-being team will gather relevant information and meet with the client to assess the situation and engage the client's parents or guardians as appropriate to make them aware of the situation and to assist with organizing access to community services.

Once a need has been identified, clients not considered to be a threat to themselves or others can safely enter the metal health and addiction matrix of care through their family physician, should they have one. Here, the client will be able to discuss their concerns while their family physician engages in a medical screening process to ensure the presenting complaint is not one that requires as opposed to mental health intervention. If the client is expressing suicidal or homicidal ideations, arrangements are made for immediate and safe transport to the closest emergency department for assessment and disposition to the appropriate level of service. This will occur in parallel with communication with the client's parents or guardians.

With the future model of care recognizing that the family (primary care) physician is a critical role in the matrix of mental health and addictions programming, their clinics will have real-time access to a host of mental health and addictions resources. This will include immediate access to consultation with a mental health provider for further guidance / reassurance on the plan of care developed for the client. This real-time access will be provided through either the in-clinic presence of mental health and addictions specialists in the case of high-volume clinics, through conversations with the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre, or vis-à-vis care-to-face consultation using tele-mental health services.

Integrating mental health specialist in primary care walk-in clinics and/or community teams provides a pathway way for effective, quicker diagnosis of mental health illnesses and ability to provide team –based collaborative approach to client, inclusive of physical and mental health. Expected outcomes include reduced emergency department utilization and an increase in overall outpatient visits.

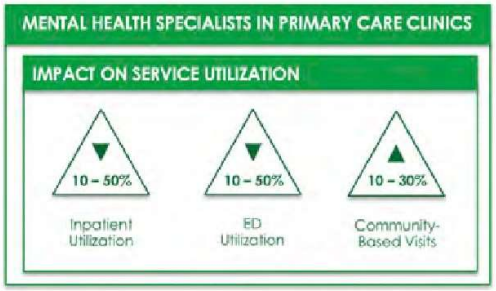


Diagram 49: Innovation Impact – MH Specialist in Primary Care Clinics
Child & Adolescent Mental Health Client Journey

It is expected that all primary care clinics will be provided access to tele-mental health services that can be easily achieved using a high-speed Internet connection with end-to-end encryption or next-generation wireless mobile phone connections offering the same levels of encryption. In addition, family (primary care) physicians will be afforded access to on-line resources providing standardized clinical pathways for a number of common mental health complaints. These pathways, developed and enhanced through continuous artificial intelligence and machine learning technologies, will provide the physician with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care.

Implementation of tele-mental health services in the primary care setting and providing app- based tele-mental health services allows mental health professionals to deliver their expert services to clients in hard to reach areas, and also provide specialist consultation to the primary care providers in rural areas. This innovation is expected to improve overall self-reported symptoms, decrease ED utilization and improve psychiatrist access.

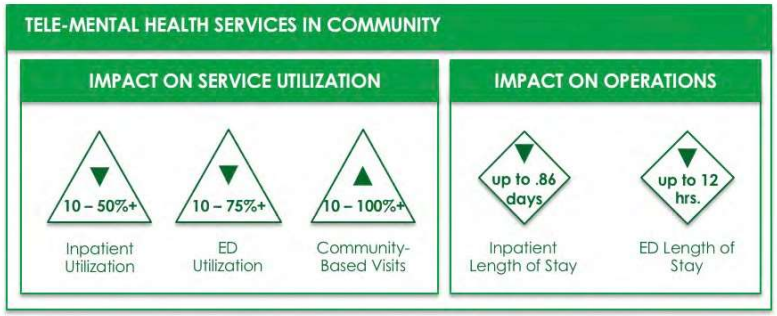


Diagram 50: Innovation Impact – Tele-Mental Health Services in Community
Child & Adolescent Mental Health Client Journey

Once a client is diagnosed with a mental health condition they will being their journey through a matrix of care intended to provide them with life-long support. Notification of a new client will be electronically sent to the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre which will serve an access

facilitation role, working to match new clients with appropriate resources in their community while the client is still in the clinic. An electronic summary of the client history, diagnosis and preliminary management plan will be sent to any mental health services required by the client. Additionally, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps.

For clients who will require prescription medication to manage their new diagnosis, the clinic will be supplied with medication "to-go" packs with a three (3) day supply of medications to be dispensed to the client at discharge to accelerate the initiation of therapy.

Acute Assessment and Stabilization

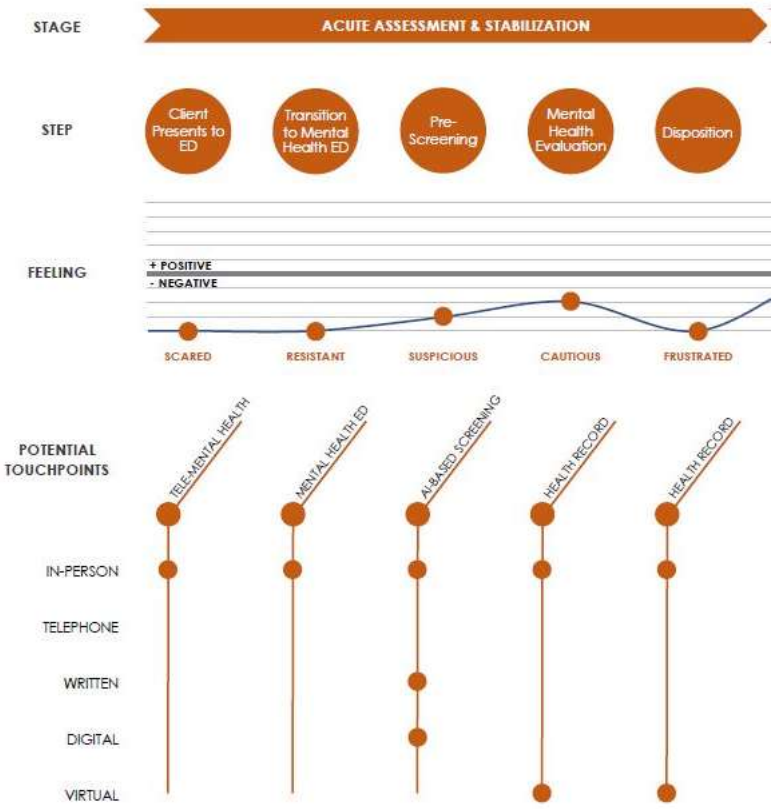


Diagram 51: Child & Adolescent Mental Health Client Journey – Acute Assessment & Stabilization

Clients presenting to the emergency department for acute assessment routinely require both a medical and a mental health assessment to ensure all potential causes of the current situation have been considered and to ensure the client is not referred to mental health site of service that is not equipped to manage complex medical situations.

Historically, these have been provided sequentially, with medical clearance occurring before a mental health assessment has been provided. This operational model has proven to have its advantages and disadvantages, with the greatest concerns centered around the ability of emergency department staff not trained in the management of mental health crises to successfully de-escalate agitated clients, and the delays associated with initiating mental health assessment and its impact on the overall operations of the emergency department. In the new model of care, a new operational model has been envisioned to address both concerns while accelerating care, ensuring client safety and engaging the client's parents or guardians throughout the process.

Upon presentation to the emergency department the client will be provided with an accelerated medical screening. Using a standardized medical clearance screening tool, the emergency department staff will identify those clients who require a limited medical screening and those who pose a higher right of the presence of a co-morbid medical condition requiring a comprehensive medical assessment and clearance. Clients deemed medically clear based on the limited medical screening will be eligible for immediate mental health evaluation. Clients requiring a more complex medical assessment who do not present with altered mental status will be eligible for medical and mental health assessment in parallel, while clients who present with altered mental status will await mental health assessment until the causes of the altered mental status have been identified and managed. Clients determined to have a medical condition requiring inpatient hospitalization for management will be admitted to a medical inpatient unit with consultation support for their mental health complaint provided by psychiatry until such time as the client is medically clear for transfer to a mental health environment or

the mental health condition has been appropriately stabilized.

The emergency departments at Queen Elizabeth Hospital and Prince County Hospital, along with the urgent care centres at Kings County Memorial Hospital and Western Hospital, will be outfitted with a number of safe and secure ligature-free treatment stations. These stations will ensure a safe environment for clients awaiting mental health evaluation. In addition, the emergency department at Prince County Hospital and the urgent care centres at Kings County Memorial Hospital and Western Hospital will be equipped with tele-mental health equipment, enabling clients at these sites of service to be connected with a mental health provider at the mental health emergency department at Queen Elizabeth Hospital via an end-to-end encrypted video connection.

Implementation of tele-mental health services in the medical emergency department for outlying sites in Prince Edward Island will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an emergency department staffed with an in-person mental health evaluator. This innovation is expected to reduce unnecessary interfacility transfers and inpatient hospitalizations for clients who can be safely managed in the community. Emergency department based tele-mental health services has been shown to have many benefits, including proven impacts on inpatient utilization, overall length of inpatient hospitalization and emergency department length of stay.

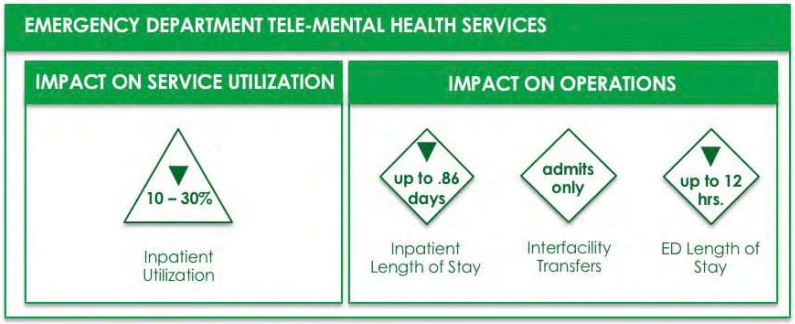


Diagram 52: Innovation Impact – ED Tele-Mental Health Services
Child & Adolescent Mental Health Client Journey

Mental health evaluations at Queen Elizabeth Hospital will be provided in-person through a new mental health emergency department that will be staffed around the clock. Mental health emergency departments are environments designed to provide acute assessment services for clients presenting with an acute mental health or addiction crisis. The staff, educated and trained to provide mental health and addiction services, provide prompt mental health assessments, stabilization and treatment with rapid disposition to the appropriate care setting. The unit will be physically connected to Queen Elizabeth Hospital and will consist of a combination of traditional safe and secure rooms and a “living room” environment, providing clients who can contract for safety with a calm, inviting environment free of the institutional look and feel commonly seen in mental health environments. Throughout the client’s stay in the mental health emergency department or outlying centre, the client’s parents or guardians will be able to remain with the client unless situation warrants alternative considerations bemade.

Developing a dedicated mental health emergency department will allow clients to experience safe, efficient, high-quality mental health and addictions acute assessments and disposition. When paired with other innovations focused on accelerating and coordinating care, a dedicated psychiatric emergency department

holds the promise of reduced length of stay, lower cost of care and improved care coordination.

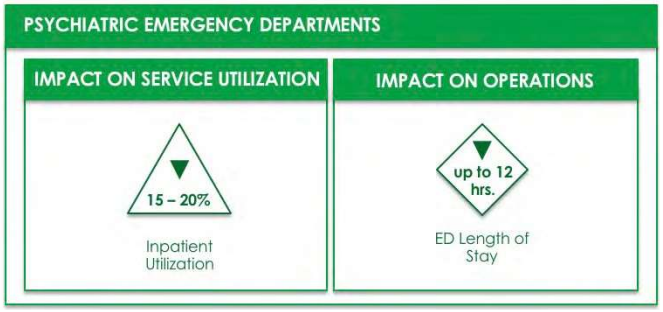


Diagram 53: Innovation Impact – Psychiatric Emergency Departments
Child & Adolescent Mental Health Client Journey

The mental health assessment will be provided by a qualified mental health assessor. Prior to the client interview the assessor will review client's electronic health record for their history of mental illness, co-morbid medical conditions and their psycho-social determinants of health. At the same time, the client will complete a standardized self-assessment tool. During the formal acute crisis assessment process, a multi-disciplinary standardized assessment tools will be used to identify the client's mental health, addictions and psycho-social needs. The assessment process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the mental health care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care. Should the assessment identify that immediate consultation with a child and adolescent psychiatrist is warranted this will be provided using tele-mental health services.

Once the acute assessment has been completed there are six possible disposition pathways for the client:

- No intervention indicated
- No intervention indicated, continue current treatment plan
- Initiate treatment with referral to community-based services
- Day treatment
- Admit to child and adolescent inpatient centre of excellence
- Placement into supportive housing

For all client encounters, an electronic summary of the client history, diagnosis and preliminary management plan will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written,

on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication “to-go” packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow- up visit within two (2) business days and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

Inpatient Care

For clients requiring acute stabilization services that exceed the capabilities of the mental health emergency department, they will be admitted to the child and adolescent inpatient centre of excellence. This inpatient environment will be staffed by an interdisciplinary team of child and adolescent mental health providers. A secure, locked unit, the child and adolescent inpatient centre of excellence will operate on a model of a targeted short length of stay. It will have 24/7 access to a child and adolescent psychiatrist through in-person or tele-mental health staffing strategies. The unit will engage in interdisciplinary care planning, employ a rapid intervention model and focus on discharge planning from the moment the client arrives onto the unit. Tele-mental health services will be available to connect clients with specialized mental health needs with providers expert in those services.

The child and adolescent centre of excellence will be designed to provide a therapeutic milieu specific to child and adolescent clients. In addition, educational spaces will be included to allow clients to continue their academic pursuits while in the inpatient environment. Further, the child and adolescent centre of excellence will be separate and distinct from adult inpatient environments, ensuring these client populations are segregated from one another at all times. Another key feature of the child and adolescent inpatient centre of excellence will be environments intended to ensure parental and guardian engagement in the care delivery process to the extent possible and appropriate.

Discharge planning is a process used to decide what a client needs for a smooth segue from one level of care to another. Pre-discharge planning can include psycho-social education, treatment plan created, structured needs assessments, medication reconciliation/education, transition managers, and has been shown to be effective in

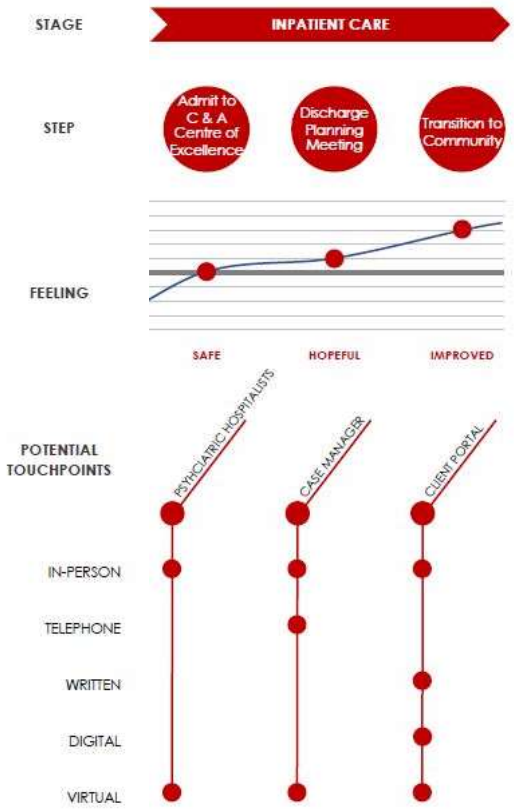


Diagram 54: Child & Adolescent Mental Health Client Journey – Inpatient Care

reducing repeat hospitalizations. The new mental health and addictions model of care will benefit from a redesigned discharge process. The goal of the process will be to begin discharge planning on inpatient day zero (0), working to anticipate the post-inpatient needs of the clients long before discharge to avoid unnecessary inpatient days related to care transition and discharge planning.

Diagram 55: Innovation Impact – Pre-Discharge Interventions in Acute Care
Child & Adolescent Mental Health Client Journey

Psychiatric hospitalists in the inpatient mental health and addictions setting are used to providing consistent care to the inpatients, ensuring that clients receive timely evidence-based care. The hospitalists will establish, implement and monitor a plan of care throughout the duration of the inpatient hospitalization, orchestrating the coordination of all resources necessary for provide necessary care. Implementation of a psychiatric hospitalist program will facilitate the standardization of many plans-of-care for routine inpatient presentations. This will increase quality, reduce avoidable delays and create a more operationally efficient clinical environment. In addition, the program frees community psychiatrists from the disruption of daily rounding and inpatient on-call schedules.

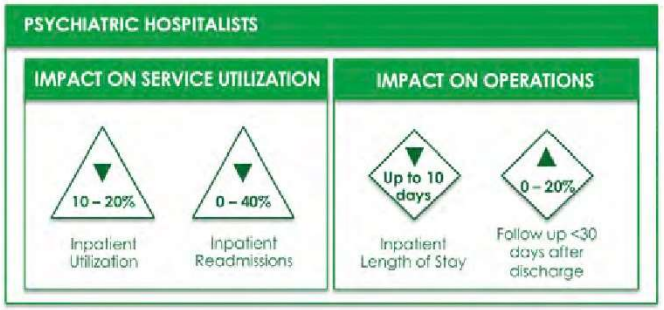


Diagram 56: Innovation Impact – Psychiatric Hospitalists
Child & Adolescent Mental Health Client Journey

Once the client is ready for transition to a different site of care, an electronic summary of the client history, diagnosis and course of inpatient treatment will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication "to- go" packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow-up visit within one (1) business day and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

Return to Community-Based Services

From time to time, a mental health client may require a level of care that exceeds what can be provided in a traditional community-based setting but is not intensive enough to require inpatient hospitalization. To meet the unique needs of these clients, intensive day hospital programming will be introduced in Prince Edward Island to meet the needs of this client group.

Day programming, or partial hospitalization programming, is a level of care that provides clients with access to a safe, structured treatment environment without total disruption of their daily routines while reducing the reliance on inpatient hospitalization for lower acuity clients. Day programs allow clients to live in the community and received structured intensive outpatient treatment daily. Implementation of day programming services will provider alternative options to clients who would otherwise be admitted to an inpatient unit. In addition to impacting inpatient utilization, day programming provides a comfortable medium for those who need more counseling support than that offered through traditional outpatient treatment. Day programming has been shown to have a number of benefits, including proven impacts on inpatient utilization and overall length of inpatient hospitalization for those who do require inpatient services.

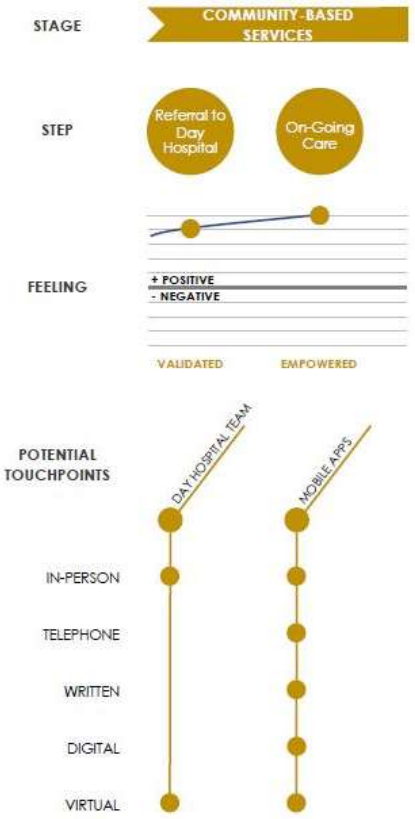


Diagram 57: Child & Adolescent Mental Health Client Journey – Community-Based Services

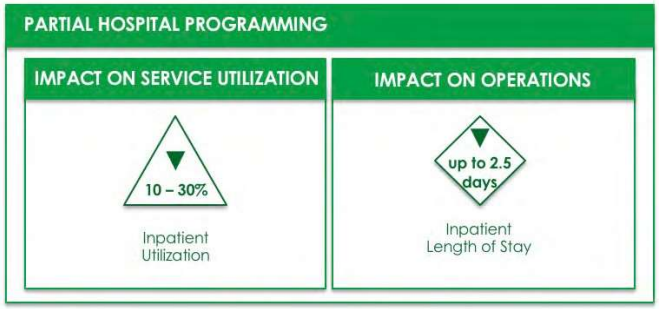


Diagram 58: Innovation Impact – Partial Hospital Programming
Child & Adolescent Mental Health Client Journey

On-going care for the client will be provided per the treatment plan developed. Regularly scheduled engagement between the client and the appropriate resources will occur with frequencies based on the individual needs of the client. The plan of care will emphasize self- assessment of well-being with digital feedback to community-based mental wellness team. This self-assessment can quickly alert the treatment team to a potential decline in mental health, enabling proactive engagement prior to the development of an acute crisis necessitating a higher level of care. Furthermore, the community-based team will proactively engage clients and their parents or guardians determined to be non-compliant with medications. They will also proactively contact clients and their parents or guardians to ensure follow-up, organize transportation resources if needed and provide monthly updates to the client's family (primary care) doctor.

7.4 Geriatric Mental Health Client Journey

Overview

The goal of the mental health and addictions client journey is to promote mental, social and functional health and wellness, while protecting dignity and de-stigmatizing mental health and addictions services.

The geriatric mental health services model of care will apply to all clients age 65 years and older seeking mental health services. While it is understood that many clients with mental health needs will present with concomitant substance abuse issues requiring attention, those who present with mental health needs deemed to be in excess of their substance abuse needs will be assumed to follow the mental health client journey with considerable support and collaboration provided from substance abuse treatment teams.

Clients aged 65 and older who have been previously engaged with the general adult mental health system will be transitioned from general adult services to geriatric service providers as deemed appropriate by the client's care team.

Client Access

The geriatric mental health client journey will begin with the client, a healthcare provider, or member of the client's support network, identifying a need for the client to seek mental health services. This may occur as a result of the acknowledgement that something is different and not right. Supported by resources such as Internet and mobile phone app-based self-screening tools, islanders will have access to comprehensive information regardless of the time of day or location in Prince Edward Island. This will be supplemented by a Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre staffed by mental health and addictions experts and offering on-demand information and resource guidance via phone, chat and video.

* *In general, geriatric client journey will follow a similar path to that of the adult mental health client. To illustrate important nuances, geriatric client journey outlines in this section will assume that the client's mental health needs have been identified in the home environment and the client or their support network have elected to access mental health services independent of the community with the family (primary care) doctor.*

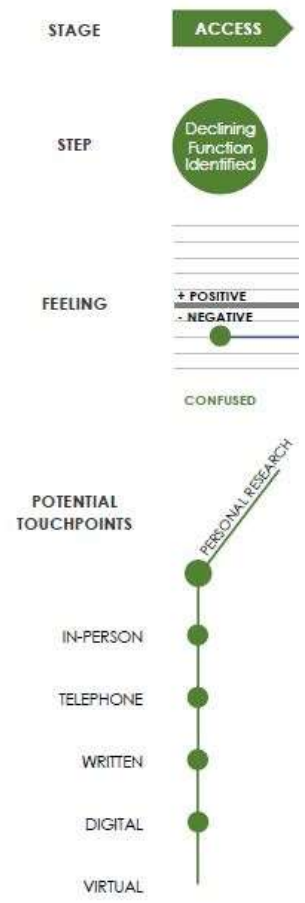


Diagram 59: Geriatric Mental Health Client Journey – Client Access

Community-Based Resources

Scheduling a client for an initial in-home assessment can be accelerated through coordination with the client's support network and the use of on-line appointment scheduling services that will provide clients and their support network with a comprehensive list of available appointment, enabling them client to select the one most convenient. Short Message Service (SMS) text message confirmations and reminders for clients or members of their support network with access to a mobile phone will provide a reminder of schedule services and all the client to confirm or cancel an appointment should their needs evolve.

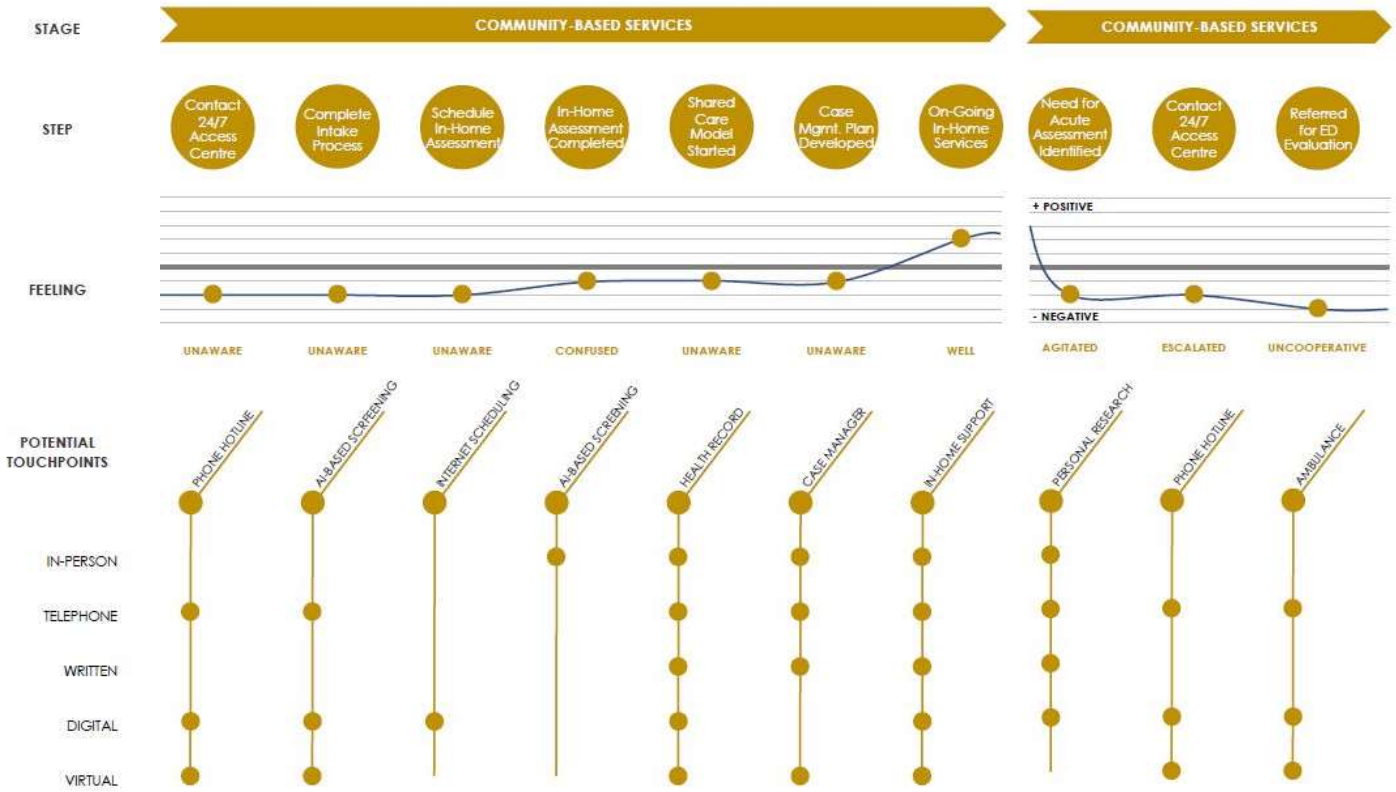


Diagram 60: Geriatric Mental Health Client Journey – Community-Based Resources

On-line scheduling provides a convenient 24 / 7 scheduling option for clients, facilitating appointment scheduling at times more convenient for the client, reducing the potential for appointment cancellations and no-shows. It has the potential to be implemented across community-based services where it can increase compliance with community-based programming. In addition, on-line self-scheduling holds the potential to reduce staffing costs associated with this function while providing a real-time scheduling solution.

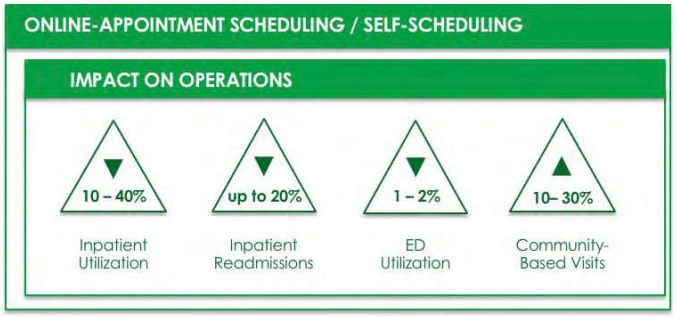


Diagram 61: Innovation Impact – Online-Appointment Scheduling / Self-Scheduling
Geriatric Mental Health Client Journey

Implementation of SMS technology to improve outpatient follow up will facilitate improved client outcomes by improving overall attendance rate to therapy sessions and/or program meetings. This innovation is expected to reduce the number of no-show and missed appointments and reduce wait times to see therapists by opening up available appointment slots when clients are unable to attend their scheduled appointment.

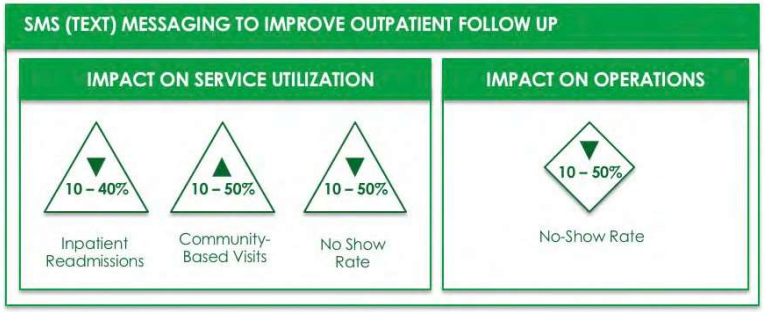


Diagram 62: Innovation Impact – SMS (Text) Messaging to Improve Outpatient Follow-Up
Geriatric Mental Health Client Journey

During the in-home assessment, a mental health assessor will travel to the client's home in an attempt to develop a clear understanding of the client's mental health needs as well as their psycho-social needs. Part of the assessment will focus on understanding what services are necessary and where they need to be delivered to ensure the client can remain as functional and independent as possible and to ensure they can remain in their own home for as long as reasonably

possible.

The intake process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the mental health care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care. If the client is expressing suicidal or homicidal ideations, arrangements are made for immediate and safe transport to the closest emergency department for assessment and disposition to the appropriate levels of service.

Upon completion of the intake process a plan of care will be formalized. This plan of care may include:

- Medication management and education
- Psychoeducation
- Individual therapy
- Group therapy
- Family or couple's therapy
- Cognitive behavioral therapy
- Dialectical behavioral therapy
- Trauma-focused therapy
- Day hospital programming
- Bidirectional family support
- Psycho-social needs
- Stressors management plan
- Community-based mental wellness team

For clients who will require prescription medication to manage their new diagnosis, the clinic will be supplied with medication "to-go" packs with a three (3) day supply of medications to be dispensed to the client at discharge to accelerate the initiation of therapy.

Once a need has been identified, clients not considered to be a threat to themselves or others can safely enter the metal health and addiction matrix of care through their family physician, should they have one. Here, the client will be able to discuss their concerns while their family physician engages in a medical screening process to ensure the presenting complaint is not one that requires a medical as opposed to mental health intervention.

Once the client has completed their initial encounter with their family (primary care) physician and a diagnosis of a mental health condition has been made, the

client will be under the auspices of a shared care model that will promote collaborations between primary care and mental health and addictions professionals. In the shared care model, the family doctor and mental health team will co-manage client's condition. Shared clinical documentation and communication platforms will be leveraged to ensure seamless communications and situational awareness for all providers involved in the client's care, while clients with on-going access to community mental health providers will benefit from the community mental health team sending monthly care update to the family physician. At the same time, the client and any designated members of their support network will be provided with access to web / mobile care portal to actively participate in their on-going care.

With the future model of care recognizing that the family (primary care) physician is a critical node in the matrix of mental health and addictions programming, their clinics will have real-time access to a host of mental health and addictions resources. This will include immediate access to consultation with a mental health provider for further guidance / reassurance on the plan of care developed for the client. This real-time access will be provided through either the in-clinic presence of mental health and addictions specialists in the case of high-volume clinics, through conversations with the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre, or vis-à-vis care-to-face consultation using tele-mental health services.

Integrating mental health specialist in primary care walk-in clinics and/or community teams provides a pathway way for effective, quicker diagnosis of mental health illnesses and ability to provide team –based collaborative approach to client, inclusive of physical and mental health. Expected outcomes include reduced ED utilization and an increase in overall outpatient visits.

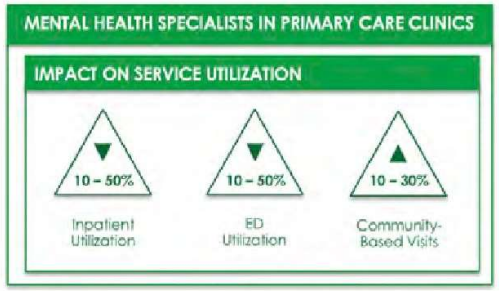


Diagram 62: Innovation Impact – MH Specialists in Primary Care
Geriatric Mental Health Client Journey

It is expected that all primary care clinics will be provided access to tele-mental health services that can be easily achieved using a high-speed Internet connection with end-to-end encryption or next-generation wireless mobile phone connections offering the same levels of encryption. In addition, family (primary care) physicians will be afforded access to on-line resources providing standardized clinical pathways for a number of common mental health complaints. These pathways, developed and enhanced through continuous artificial intelligence and machine learning technologies, will provide the physician with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care.

Implementation of tele-mental health services in the primary care setting and providing app- based tele-mental health services allows mental health professionals to deliver their expert services to clients in hard to reach areas, and also provide specialist consultation to the primary care providers in rural areas. This innovation is expected to improve overall self-reported symptoms, decrease emergency department utilization and improve psychiatrist access.

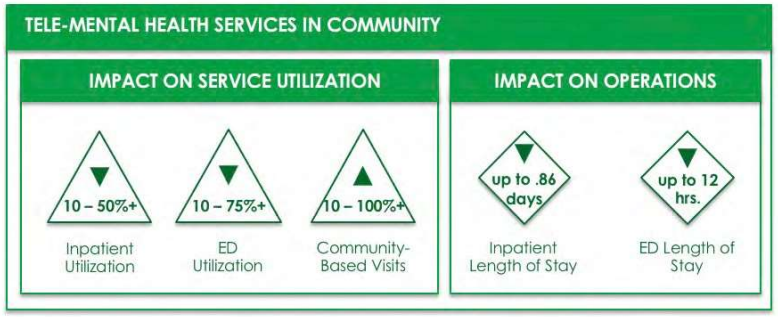


Diagram 63: Innovation Impact – Tele-Mental Health Services in Community
Geriatric Mental Health Client Journey

Acute Assessment and Stabilization

Clients presenting to the emergency department for acute assessment routinely require both a medical and a mental health assessment to ensure all potential causes of the current situation have been considered and to ensure the client is not referred to mental health site of service that is not equipped to manage complex medical situations. Historically, these have been provided sequentially with medical clearance occurring before a mental health assessment has been provided. This operational model has proven to have its advantages and disadvantages with the greatest concerns centered around the ability of emergency department staff not trained in the management of mental health crises to successfully de-escalate agitated clients, and the delays associated with initiating mental health assessment and its impact on the overall operations of the emergency department. In the new model of care, a new operational model has been envisioned to address both of these concerns while accelerating care, ensuring client safety and engaging the client's support network throughout the process.

Upon presentation to the emergency department the client will be provided with an accelerated medical screening. Using a standardized medical clearance screening tool, the emergency department staff will identify those clients who require a limited medical screening and those who pose a higher right of the presence of a co-morbid medical condition requiring a comprehensive medical assessment and clearance. Clients deemed medically clear based on the limited medical screening will be eligible for immediate mental health evaluation. Clients requiring a more complex medical assessment who do not present with altered mental

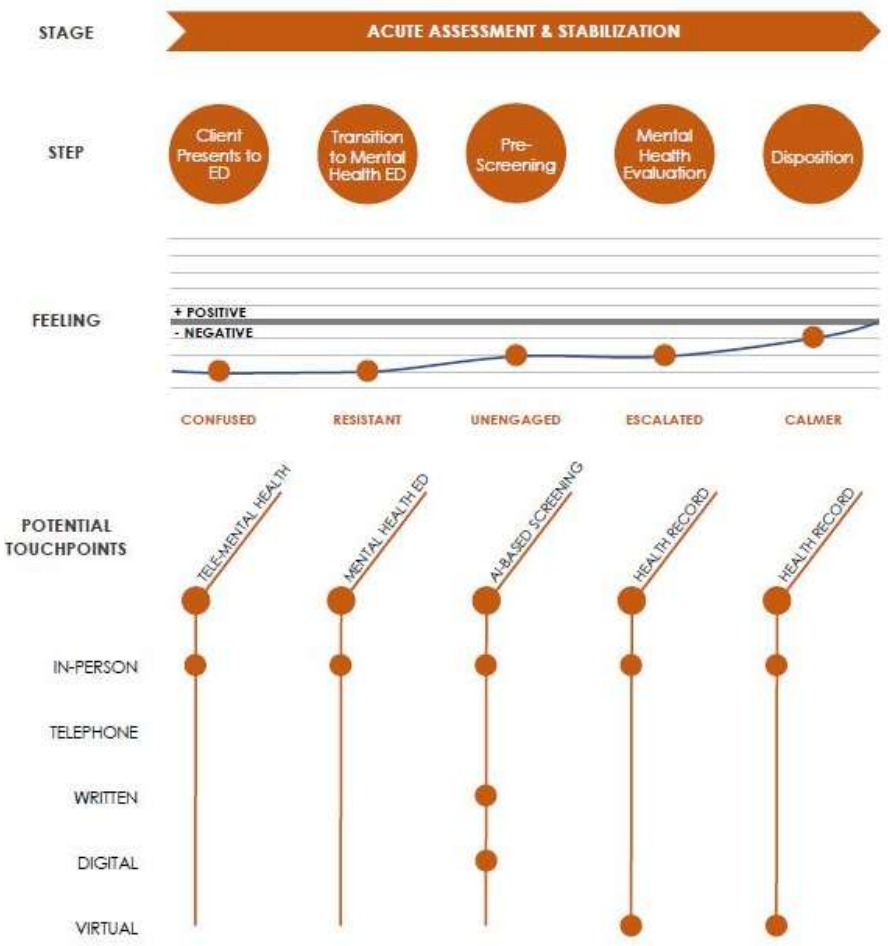


Diagram 64: Geriatric Mental Health Client Journey – Acute Assessment & Stabilization

status will be eligible for medical and mental health assessment in parallel, while clients who present with altered mental status will await mental health assessment until the causes of the altered mental status have been identified and managed. Clients determined to have a medical condition requiring inpatient hospitalization for management will be admitted to a medical inpatient unit with consultation support for their mental health complaint provided by psychiatry until such time as the client is medically clear for transfer to a mental health environment or the mental health condition has been appropriately stabilized.

The emergency departments at Queen Elizabeth Hospital and Prince County Hospital, along with the urgent care centres at Kings County Memorial Hospital and Western Hospital, will be outfitted with a number of safe and secure ligature-free treatment stations. These stations will ensure a safe environment for clients awaiting mental health evaluation. In addition, the emergency department at Prince County Hospital and the urgent care centres at Kings County Memorial Hospital and Western Hospital will be equipped with tele-mental health equipment, enabling clients at these sites of service to be connected with a mental health provider at the mental health emergency department at Queen Elizabeth Hospital via an end-to-end encrypted video connection.

Implementation of tele-mental health services in the medical emergency department for outlying sites in Prince Edward Island will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an emergency department staffed with an in-person mental health evaluator. This innovation is expected to reduce unnecessary interfacility transfers and inpatient hospitalizations for clients who can be safely managed in the community. Emergency department based tele-mental health services has been shown to have a number of benefits, including proven impacts on inpatient utilization, overall length of inpatient hospitalization and emergency department length of stay.

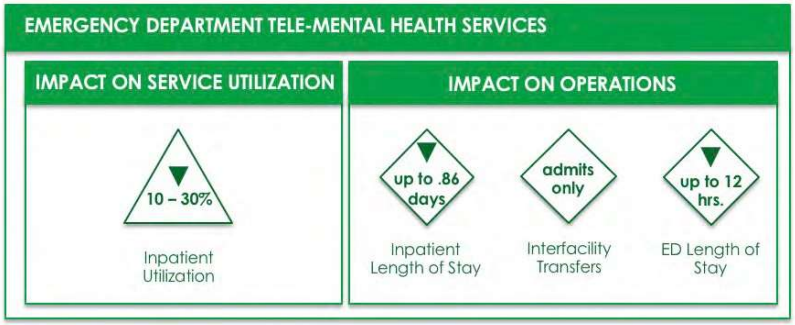


Diagram 65: Innovation Impact – ED Tele-Mental Health Services
Geriatric Mental Health Client Journey

Mental health evaluations at Queen Elizabeth Hospital will be provided in-person through a new mental health emergency department that will be staffed around the clock. Mental health emergency departments are environments designed to provide acute assessment services for clients presenting with an acute mental health or addiction crisis. The staff, educated and trained to provide mental health and addiction services, provide prompt mental health assessments, stabilization and treatment with rapid disposition to the appropriate care setting.

The unit will be physically connected to Queen Elizabeth Hospital and will consist of a combination of traditional safe and secure rooms and a "living room" environment, providing clients who can contract for safety with a calm, inviting environment free of the institutional look and feel commonly seen in mental health environments. Throughout the client's stay in the mental health emergency department or outlying centre, the client's support network will be able to remain with the client unless situation warrants alternative considerations be made.

Developing a dedicated mental health emergency department will allow clients to experience safe, efficient, high-quality mental health and addictions acute assessments and disposition. When paired with other innovations focused on accelerating and coordinating care, a dedicated psychiatric emergency department holds the promise of reduced length of stay, lower cost of care and improved care coordination.

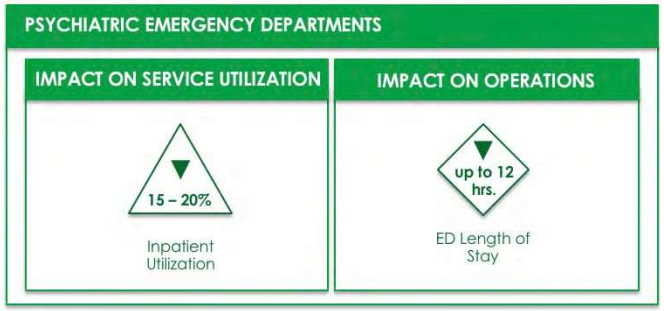


Diagram 66: Innovation Impact – Psychiatric Emergency Department
Geriatric Mental Health Client Journey

The mental health assessment will be provided by a qualified mental health assessor. Prior to the client interview the assessor will review client's electronic health record for their history of mental illness, co-morbid medical conditions and their psycho-social determinants of health. At the same time, the client will complete a standardized self-assessment tool. During the formal acute crisis assessment process, a multi-disciplinary standardized assessment tools will be used to identify the client's mental health, addictions and psycho-social needs. The assessment process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the mental health care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care. Should the assessment identify that immediate consultation with a geriatric psychiatrist is warranted this will be provided using tele-mental health services.

Once the acute assessment has been completed there are six possible disposition pathways for the client:

- No intervention indicated
- No intervention indicated, continue current treatment plan
- Initiate treatment with referral to community-based services
- Day treatment
- Admit to geriatric inpatient centre of excellence
- Placement into supportive housing

For all client encounters, an electronic summary of the client history, diagnosis and preliminary management plan will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication "to-go" packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow- up visit within two (2) business days and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

Inpatient Care

For clients requiring acute stabilization services that exceed the capabilities of the mental health emergency department, they will be admitted to the geriatric inpatient centre of excellence. This inpatient environment will be staffed by an interdisciplinary team of geriatric mental health providers. A secure, locked unit, the geriatric inpatient centre of excellence will operate on a model of a targeted short length of stay. It will have 24/7 access to a geriatric psychiatrist through in-person or tele- mental health staffing strategies. The unit will engage in interdisciplinary care planning, employ a rapid intervention model and focus on discharge planning from the moment the client arrives onto the unit. Tele- mental health services will be available to connect clients with specialized mental health needs with providers expert in those services.

The geriatric centre of excellence will be designed to provide a therapeutic milieu specific to geriatric clients. The geriatric centre of excellence will be separate and distinct from adult inpatient environments, ensuring these client populations are segregated from one another at all times. Another key feature of the geriatric inpatient centre of excellence will be environments intended to ensure support network engagement in the care delivery process to the extent possible and appropriate and interiors designs appropriate to the geriatric population.

Discharge planning is a process used to decide what a client needs for a smooth segue from one level of care to another. Pre-discharge planning can include psycho-social education, treatment plan created, structured needs assessments, medication reconciliation/education, transition managers, and has been shown to be effective in reducing repeat hospitalizations. The new mental health and addictions model of care will benefit from a redesigned discharge process. The goal of the process will be to begin discharge planning on inpatient day zero (0), working to anticipate the post-inpatient needs of the clients long before discharge to avoid unnecessary inpatient days related to care transition and discharge planning.

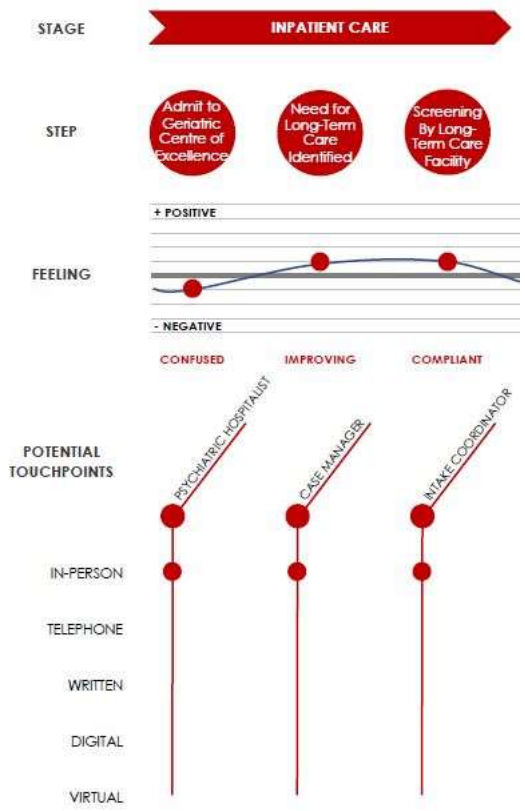


Diagram 67: Geriatric Mental Health Client Journey – Inpatient Care

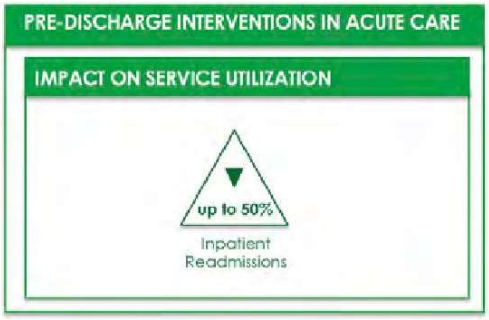


Diagram 68: Innovation Impact – Pre-Discharge Interventions in Acute Care
Geriatric Mental Health Client Journey

Psychiatric hospitalists in the inpatient mental health and addictions setting are used to providing consistent care to the inpatients, ensuring that clients receive timely evidence-based care. The hospitalists will establish, implement and monitor a plan of care throughout the duration of the inpatient hospitalization, orchestrating the coordination of all resources necessary for provide necessary care. Implementation of a psychiatric hospitalist program will facilitate the standardization of many plans-of-care for routine inpatient presentations. This will increase quality, reduce avoidable delays and create a more operationally efficient clinical environment. In addition, the program frees community psychiatrists from the disruption of daily rounding and inpatient on-call schedules.

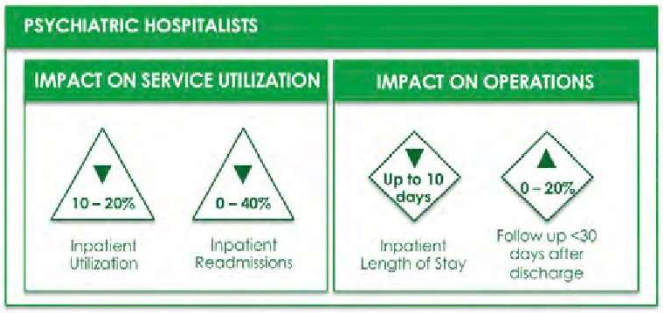


Diagram 69: Innovation Impact – Psychiatric Hospitalists
Geriatric Mental Health Client Journey

Once the client is ready for transition to a different site of care, an electronic summary of the client history, diagnosis and course of inpatient treatment will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication "to- go" packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all

clients being transitioned back to community-based services will be scheduled with a follow-up visit within one (1) business day and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

For a subset of the geriatric mental health population, it will be difficult if not impossible to safely return them to independent living environments. When this potential exists, the client will be evaluated for placement into supportive housing or a long-term care manor setting appropriate for clients with a mental health condition and / or dementia. The assessment will be completed by representatives from the supportive housing or a long-term care manor. The process will ensure appropriate levels of engagement from the client's inpatient care team as well as appropriate members of the support network.

Long-Term Care

Should the client be deemed appropriate for a post-acute care environment every effort will be made to place the client in a location as close to their on-island support network as possible. The long-term care environment appropriate for geriatric clients will provide a residential environment with the appropriate therapeutic services necessary to ensure client are able to remain as independent as possible.

On-going care for the client will be provided for the client per the treatment plan developed. Regularly scheduled engagement between the client and the appropriate resources will occur with frequencies based on the individual needs of the client. The plan of care will emphasize self-assessment of well-being with feedback to the community-based mental wellness team and the client's medical providers. Furthermore, the community-based team will proactively engage clients determined to be non- compliant with medications or treatment recommendation. They will also proactively ensure follow-up, organize transportation resources if needed and provide monthly updates to the client's family (primary care) doctor.

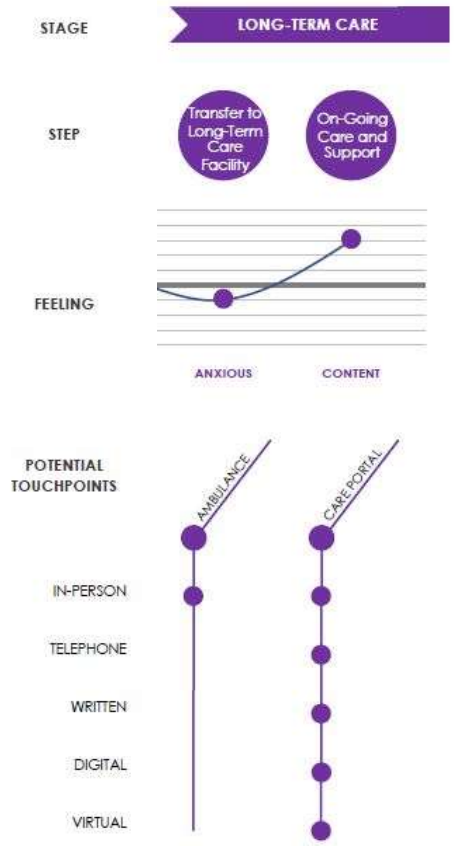


Diagram 70: Geriatric Mental Health Client Journey – Long-Term Care

7.5 Forensic Mental Health Client Journey

Overview

The goal of the mental health and addictions client journey is to promote mental, social and functional health and wellness, while protecting dignity and de-stigmatizing mental health and addictions services.

The forensic mental health services model of care will apply to all clients with an identified mental health need who are currently under the jurisdiction of the criminal justice system. While it is understood that many clients with mental health needs will present with concomitant substance abuse issues requiring attention, those who present with mental health needs deemed to be in excess of their substance abuse needs will be assumed to follow the mental health client journey with considerable support and collaboration provided from substance abuse treatment teams.

Client Access

Access to the mental health matrix of care will be initiated as the client enters into the criminal justice system. It is standard procedure that individuals entering the criminal justice system are assessed for potential medical and mental health concerns that warrant immediate stabilization and management. In the case of mental health conditions, this assessment is essential to determine if the individual is competent to proceed through the criminal responsibility fitness process in order to determine innocence or guilt for the alleged crimes committed.

Access to the mental health system can be initiated by the client, representatives of law enforcement, the criminal justice system or by a healthcare provider involved in the medical and mental health screening process during the intake process.

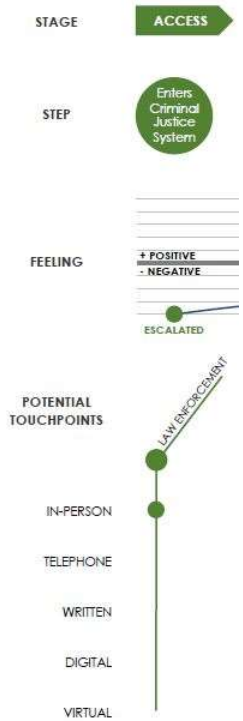


Diagram 71: Forensic Mental Health Client Journey – Client Access

Correctional Services

To ensure the safety of the client, staff and the community at-large, the bulk of mental health services programming will be provided within secure sites under the operation of the criminal justice system. Once a client has been identified as requiring a mental health assessment the client will meet with the nurse responsible for performing medical screening evaluations for new entrants into the criminal justice system. This is typically an in-person, face- to-face assessment and will be conducted by a registered nurse with appropriate competencies in addressing the potential presence of a mental health condition.

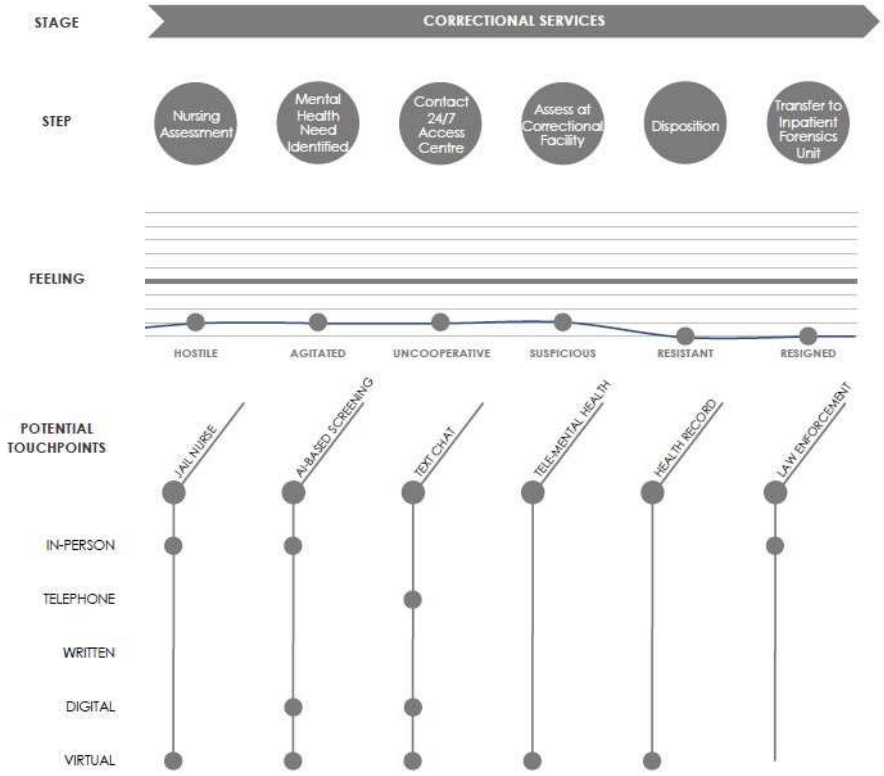


Diagram 72: Forensic Mental Health Client Journey – Correctional Services

Once a mental health need is identified or the client requests a mental health evaluation, the nurse assessor will contact the Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre. The centre, staffed by mental health and addictions experts, will offer on-demand information and resource guidance via phone, chat and video. In addition, the access centre will be able to coordinate a formal mental health evaluation for the client. This evaluation will be completed by a qualified mental health evaluator and, in the interests of efficiency and safety, will be provided via tele-mental health services with the client remaining in

protective custody under the purview of law enforcement officials.

During the intake assessment, a mental health assessor will attempt to develop a clear understanding of the client's mental health needs as well as their psycho-social needs. Part of the assessment will focus on understanding what services are necessary and where they need to be delivered to ensure the safety of the client, staff and the community at-large is protected at all times. The intake process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the mental health care team with information on recommended medication management, client- focused resources and information on when and where to refer clients requiring a higher level of care. If the client is expressing suicidal or homicidal ideations, arrangements are made for immediate and safe transport to the closest emergency department for assessment and disposition to the appropriate levels of service. Should the assessment identify that immediate consultation with a psychiatrist is warranted this will be provided using tele-mental health services.

Once the acute assessment has been completed there are four possible disposition pathways for the client:

- Client competent, no intervention indicated
- Client competent, no intervention indicated, continue current treatment plan
- Client competent, initiate treatment with referral to appropriate services
- Client requires competency evaluation, admit to Health PEI inpatient forensics centre of excellence

All clients considered to be competent can be safely maintained in law enforcement facilities, including those who require continuous monitoring for suicide risk. Client that require further evaluation for competency will be transferred to the Health PEI inpatient forensics centre of excellence. The transfer will be completed either by sheriff or corrections with accompanying law enforcement officials with the goal of ensuring client, staff and community at-large safety and to reduce the risk of client elopement.

For all client encounters, an electronic summary of the client history, diagnosis and preliminary management plan will be sent to representatives of the criminal justice system with specific notation of competency any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. If a client requires a competency evaluation and transfer to the Health PEI inpatient forensics centre of excellence a summary of the initial assessment and immediate mental health needs will be forwarded to the inpatient forensics centre of excellence so that they may prepare for the client's arrival.

Forensic Inpatient Services

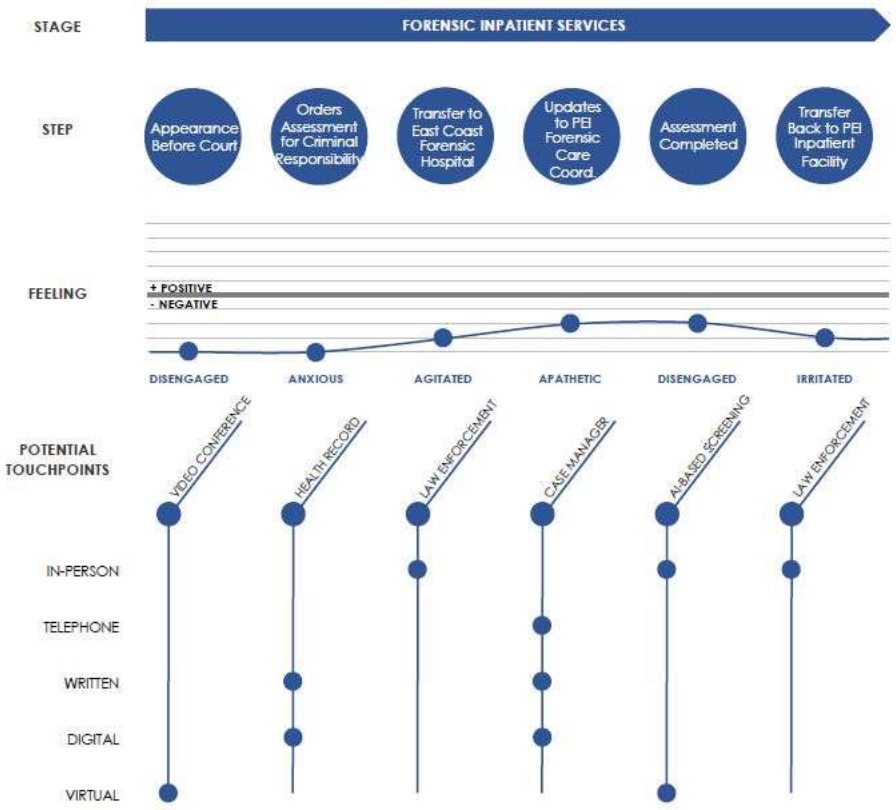


Diagram 73: Forensic Mental Health Client Journey –Inpatient Services

The inpatient forensics centre of excellence will function as a maximum-security locked inpatient unit. Clients admitted to this unit will remain segregated from all other client population at all times. Any therapeutic and recreational activities will be provided on the inpatient unit in order to ensure the safety of the client, staff and community at- large and to reduce the risk of client elopement.

Once the client has arrived at the inpatient forensics centre of excellence the case manager assigned to the unit will meet with the client in order to under the situation and their needs. The client will participate in a court appearance per the routine of the criminal justice system. This appearance will occur in a courtroom located on the inpatient unit with a video link to the judge enabling their remote appearance. If the judge determines that a competency evaluation is necessary and a court order for said evaluation is initiated, the case manager will begin the process of organizing the assessment.

Competency assessments will be conducted by the team of forensics mental health experts at the East Coast Forensics Hospital in Nova Scotia. When East Coast Forensics Hospital is ready to receive the client, a transfer will occur via law enforcement or ambulance with law enforcement participation. This decision will be made by all parties involved and will based on determining the safest and most efficient mode of transfer to Nova Scotia.

Once the client has arrived at East Coast Forensics hospital the competency assessment will be completed per the facility's routine. During the competency assessment, the Health PEI case manager will serve as a critical link between East Coast Forensics Hospital, Health PEI and the criminal justice system. The competency assessment will result in one of two potential outcomes:

- Client deemed competent, return client to criminal justice system for adjudication
- Client deemed incompetent, return client to Health PEI inpatient forensics centre of excellence for on-going mental health management until competency has been restored

The case manager will partner with East Coast Forensics Hospital and law enforcement to ensure the efficient and safe transfer of the client back to the appropriate destination in Prince Edward Island. When East Coast Forensics Hospital is ready to receive the client, a transfer will occur via law enforcement or ambulance with law enforcement participation. This decision will be made by all parties involved and will based on determining the safest and most efficient mode of transfer to

Prince Edward Island.

Correctional Services

Clients deemed incompetent will be returned to the Health PEI inpatient forensics centre of excellence for on- going evaluation and management. The care provided will be per the routine for the client's diagnosis. Should specialized expertise be required that is not available in Prince Edward Island the client's case manager will coordinate access to these services either through an in- person evaluation by the appropriate specialist or, more likely, via tele-mental health services. It is expected that most clients deemed incompetent to have their alleged crimes adjudicated will have lengths of stay on the inpatient unit that will range from weeks, to months to years. Once a client has been returned to a state of competency, they will be transferred back to the criminal justice system for adjudication. On-going mental health care and support will be provided at the client's location, regardless of where it is on Prince Edward Island.

The addition of a psychiatrist with formal training in forensic mental health is an identified need within Health PEI. Understanding that this is skill set in high demand yet with a limited supply across Canada, it is reasonable to assume that Health PEI may experience a delay in recruiting such a resource. Until such time as a forensic psychiatrist has been recruited to Health PEI, forensic mental health services will need to be provided in partnership with an out of province care provider such as East Coast Forensics in Nova Scotia.

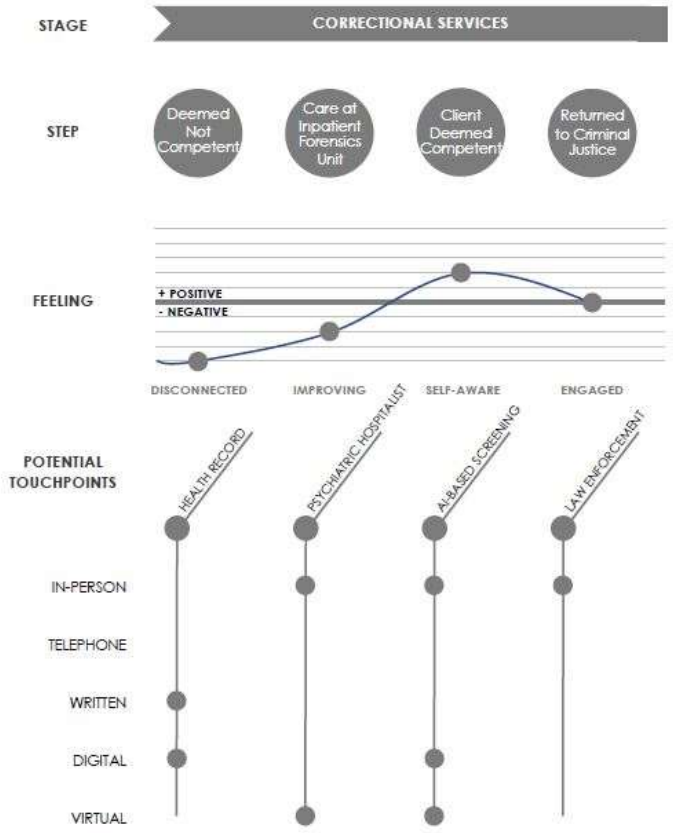


Diagram 74: Forensic Mental Health Client Journey –Correctional Services

7.6 Addictions Services Client Journey

Overview

The goal of the mental health and addictions client journey is to promote mental, social and functional health and wellness, while protecting dignity and de-stigmatizing mental health and addictions services.

The addictions services model of care will apply to all clients with an identified substance abuse issue regardless of age. It is understood that many clients with substance abuse needs also present with concomitant mental health needs. Client determined to have a primary substance abuse need with secondary mental health needs will be managed via the substance abuse model of care with active support from mental health providers. Clients determined to have a primary mental health need with secondary substance abuse needs will be managed via the mental health model of care with active support from substance abuse providers.

Client Access

The addictions client journey will begin with the client, a healthcare provider, or member of the client's support network, identifying a need for the client to seek addictions services. Supported by resources such as Internet and mobile phone app-based self-screening tools, islanders will have access to comprehensive information about substance abuse, identifying the need for interventions and a list of available resources, regardless of the time of day or location in Prince Edward Island. This will be supplemented by a Health PEI 24/7 Island-Wide Mental Health & Addictions Access Centre staffed by mental health and addictions experts and offering on- demand information and resource guidance via phone, chat and video.

* *There are a number of different pathways that an addictions client may follow to access services based on a number of factors. In each case, the type of substance the client is using will have a direct impact on the course of treatment, particularly during the acute detoxification phase. While it is entirely likely that a client will present to their family (primary care) doctor or community-based program requesting addictions support, this client journey will focus on the client who is referred to the emergency department for formal evaluation and management.*

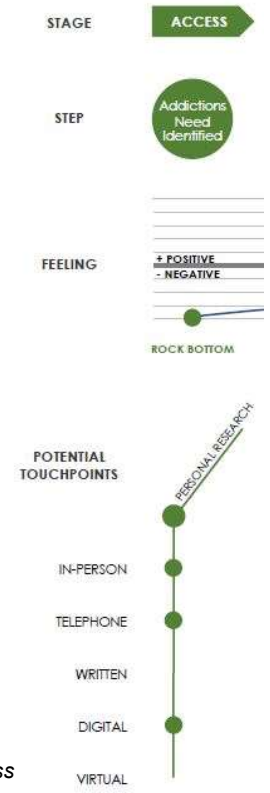


Diagram 75: Addictions Services Client Journey –Client Access

Community-Based Services

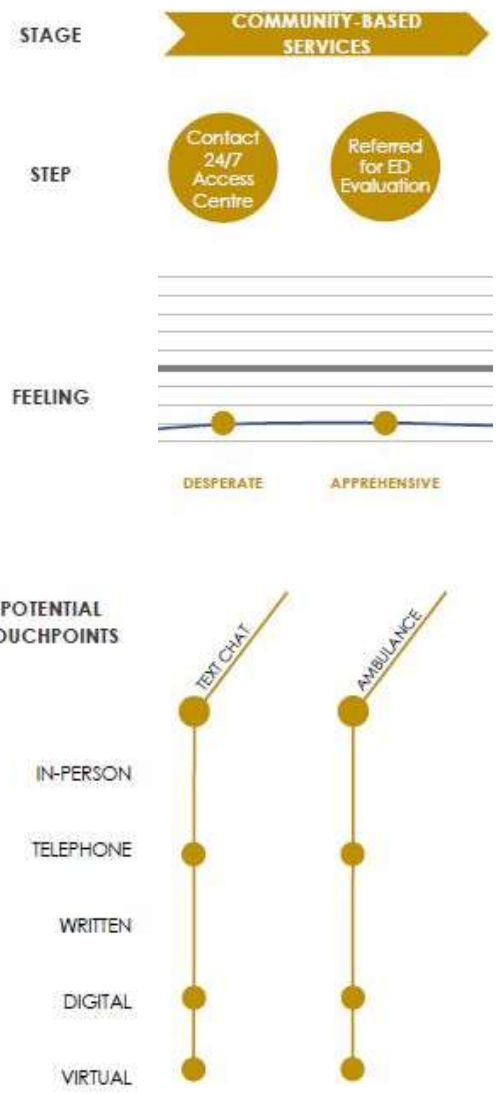


Diagram 76: Addictions Services Client Journey –Community-Based Services

Access to the community- based services may occur through a number of different pathways, either through self-referral, referral from a healthcare provider or by the client or a member of their support network contacting the Health PEI 24/7 Island- Wide Mental Health & Addictions Access Centre. In the event the access centre is contact, an intake coordinator with expertise in evaluating substance abuse issues will complete a standardized assessment to develop a clear understanding of the client's addictions needs as well as their psycho-social needs. Part of the assessment will focus on understanding what services are necessary and where they need to be delivered to ensure the client can remain as functional and independent as possible, to identify the presence of any complicating mental health issues and to establish if the client is using a substance that has the possibility of life-threatening withdrawal if not managed safely.

The intake process will also screen for concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the addictions care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care. If the client is expressing suicidal or homicidal ideations, arrangements are made for immediate and safe transport to the closest emergency department for assessment and disposition to the appropriate levels of service.

Acute Assessment and Stabilization

Clients presenting to the emergency department for acute assessment routinely require both a medical and a mental health assessment to ensure all potential causes of the current situation have been considered and to ensure the client is not referred to an addictions site of service that is not equipped to manage complex medical situations or life- threatening withdrawal. Historically, these have been provided sequentially with medical clearance occurring before a mental health assessment has been provided. This operational model has proven to have its advantages and disadvantages with the greatest concerns centered around the ability of emergency department staff not trained in the management of addictions crises and the emotional despair that can accompany these crises to successfully de-escalate agitated clients, and the delays associated with initiating an addictions assessment and its impact on the overall operations of the emergency department. In the new model of care, a new operational model has been envisioned to address both of these concerns while accelerating care, ensuring client safety and engaging the client's support network throughout the process.

Upon presentation to the emergency department the client will be provided with an accelerated medical screening. Using a standardized medical clearance screening tool, the emergency department staff will identify those clients who require a limited medical screening and those who pose a higher right of the presence of acute intoxication, a co-morbid medical condition or potentially life-threatening withdrawal symptoms requiring a comprehensive medical assessment and clearance. Clients deemed medically clear based on the limited medical screening will be eligible for immediate addictions evaluation. Clients requiring a more complex medical assessment will be eligible for medical and addictions assessment in parallel, while clients who present with acute intoxication will await mental health assessment until the client is no longer acutely intoxicated. Clients determined to have a medical condition requiring inpatient hospitalization for management, include potentially life-threatening withdrawal, will be admitted to a medical inpatient unit with consultation support for their addictions needs provided by psychiatry until such time as the client is medically clear for transfer to an addictions environment or the mental health condition has been appropriately stabilized.

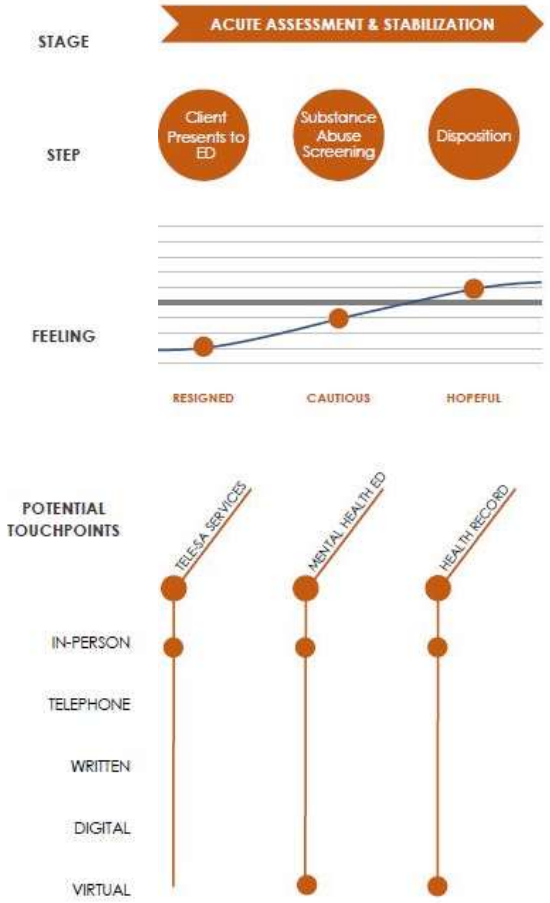


Diagram 77: Addictions Services Client Journey – Acute Assessment & Stabilization

The emergency department at Prince County Hospital and the urgent care centres at Kings County Memorial Hospital and Western Hospital will be equipped with tele-mental health equipment, enabling clients at these sites of service to be connected with an addictions provider at the mental health emergency department at Queen Elizabeth Hospital via an end- to-end encrypted video connection.

Implementation of tele-mental health services in the medical emergency department for outlying sites in Prince Edward Island will facilitate rapid evaluation by a qualified addictions provider without requiring the client be transferred to an emergency department staffed with an in-person addictions evaluator. This innovation

is expected to reduce unnecessary interfacility transfers and inpatient hospitalizations for clients who can be safely managed in the community. Emergency department based tele-mental health services has been shown to have a number of benefits, including proven impacts on inpatient utilization, overall length of inpatient hospitalization and emergency department length of stay.

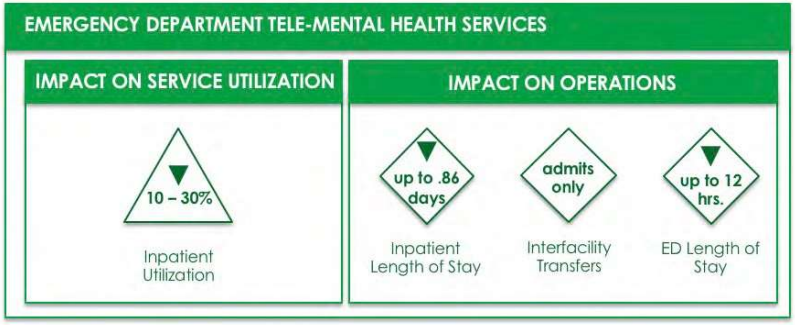


Diagram 78: Innovation Impact – ED Tele-Mental Health Services

Addictions Services Client Journey

Addictions evaluations at Queen Elizabeth Hospital will be provided in-person through a new mental health emergency department that will be staffed around the clock. Mental health emergency departments are environments designed to provide acute assessment services for clients presenting with an acute addiction crisis. The staff, educated and trained to provide mental health and addiction services, provide prompt addictions assessments, stabilization and treatment with rapid disposition to the appropriate care setting. The unit will be physically connected to Queen Elizabeth Hospital and will consist of a combination of traditional safe and secure rooms and a "living room" environment, providing clients who can contract for safety with a calm, inviting environment free of the institutional look and feel commonly seen in mental health and addictions environments. Throughout the client's stay in the mental health emergency department or outlying centre, the client's support network will be able to remain with the client unless situation warrants alternative considerations be made.

The addictions assessment will be provided by a qualified addictions assessor. Prior to the client interview the assessor will review client's electronic health record for their history of addictions, mental illness, co-morbid medical conditions and their psycho-social determinants of health. At the same time, the client will complete a standardized self-assessment tool. During the formal acute crisis assessment process, a multi-disciplinary standardized assessment tools will be used to identify the client's addictions, mental health and psycho-social needs. The assessment process will also screen for substance abuse and other concerns that might impact the client's mental health and wellness. The screening tools will leverage artificial intelligence and machine learning technologies that will provide the addictions care team with information on recommended medication management, client-focused resources and information on when and where to refer clients requiring a higher level of care. Should the assessment identify that immediate consultation with an addictions specialist is warranted this will be provided using tele-mental health services.

Once the acute assessment has been completed there are four possible disposition pathways for the client:

- No intervention indicated

- Initiate treatment with referral to community-based services
- Admit to inpatient addictions centre of excellence for acute detoxification
- Placement into supportive housing

For all client encounters, an electronic summary of the client history, diagnosis and preliminary management plan will be sent to any mental health services required by the client as well as the client's existing mental health treatment team, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis, they will be supplied with medication "to-go" packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow- up visit within two (2) business days and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

Inpatient Services

Clients requiring initiation of an opioid replacement therapy to manage opioid addiction will receive therapy initiation in the community setting. Inpatient detoxification services will be provided for alcohol withdrawal and for other substances appropriate for medically-supervised inpatient detoxification. Inpatient services will also be provided for clients who are determined to be appropriate for a 28-day inpatient substance abuse treatment program. Follow-up transitional services will be offered for treatment-ready clients for the direct admission. There are several types of inpatient programs, including:

- Therapy-based programs
- 12-step programs
- Multimodality programs

The addictions inpatient environment will be staffed by an interdisciplinary team of addictions providers. The addictions inpatient unit will operate on a model of a targeted short length of stay. It will have 24/7 access to an addictions physician through in-person or tele-mental health staffing strategies. The unit will engage in interdisciplinary care planning, employ a rapid intervention model and focus on discharge planning from the moment the client arrives onto the unit. Tele-mental health services will be available to connect clients with specialized addictions or mental health needs with providers expert in those services.

Discharge planning is a process used to decide what a client needs for a smooth segue from one level of care to another. Pre-discharge planning can include psycho-social education, treatment plan created, structured needs assessments, medication reconciliation/education, transition managers, and has been shown to be effective in reducing repeat hospitalizations. The new mental health and addictions model of care will benefit from a redesigned discharge process. The goal of the process will be to begin discharge planning on inpatient day zero (0), working to anticipate the post-inpatient needs of the clients long before

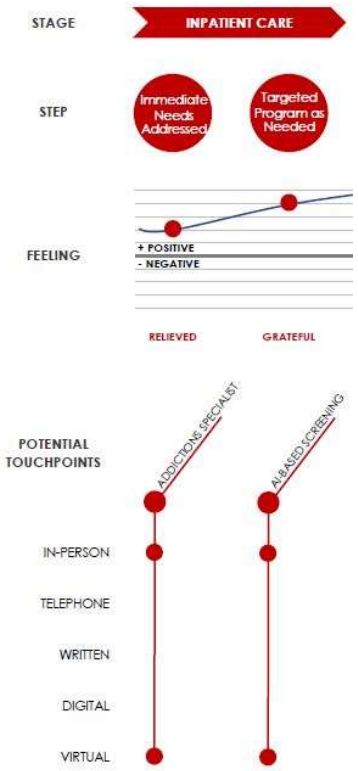


Diagram 79: Addictions Services Client Journey – Inpatient Services

discharge in order to avoid unnecessary inpatient days related to care transition and discharge planning.

Diagram 80: Innovation Impact – Pre-Discharge Interventions in Acute Care
Addictions Services Client Journey

Hospitalists in the inpatient mental health and addictions setting are used to providing consistent care to the inpatients, ensuring that clients receive timely evidence-based care. The hospitalists will establish, implement and monitor a plan of care throughout the duration of the inpatient hospitalization, orchestrating the coordination of all resources necessary for provide necessary care. Implementation of a hospitalist program will facilitate the standardization of many plans- of-care for routine inpatient presentations. This will increase quality, reduce avoidable delays and create a more operationally efficient clinical environment. In addition, the program frees community addictions specialists from the disruption of daily rounding and inpatient on-call schedules.

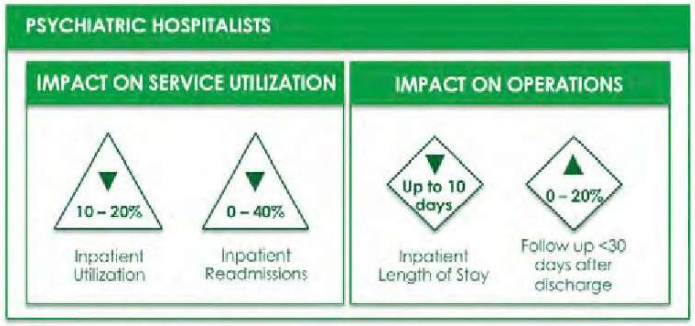


Diagram 81: Innovation Impact – Psychiatric Hospitalists
Addictions Services Client Journey

Once the client is ready for transition to a different site of care, an electronic summary of the client history, diagnosis and course of inpatient treatment will be sent to any addictions and mental health services required by the client as well as the client's existing addictions and mental health treatment teams, including their family (primary care) physician. In addition, the client will receive written, on-line and / or app-based educational information on their diagnosis, management plan, medications and next steps. For clients being transitioned back to community-based services who will require prescriptions medication to manage their diagnosis,

they will be supplied with medication “to-go” packs with a three (3) day supply of any newly prescribed medications and any medications they may require to be refilled. In addition, all clients being transitioned back to community-based services will be scheduled with a follow-up visit within one (1) business day and electronic alerts will be sent to community agencies needed to provide psycho-social support services.

For a subset of the addictions population, it will be difficult if not impossible to safely return them to independent living environments. When this potential exists, the client will be evaluated for placement into an appropriate supportive housing environment. The assessment will be completed by representatives from the supportive housing site. The process will ensure appropriate levels of engagement from the client’s inpatient care team as well as appropriate members of the support network.

Return to Community-Based Services

From time to time, an addictions client may require a level of care that exceeds what can be provided in a traditional community-based setting but is not intensive enough to require inpatient hospitalization. To meet the unique needs of these clients, intensive day hospital programming will be introduced in Prince Edward Island to meet the needs of this client group.

Day programming, or partial hospitalization programming, is a level of care that provides clients with access to a safe, structured treatment environment without total disruption of their daily routines while reducing the reliance on inpatient hospitalization for lower acuity clients. Day programs allow clients to live in the community and received structured intensive outpatient treatment daily. Implementation of day programming services will provider alternative options to clients who would otherwise be admitted to an inpatient unit. In addition to impacting inpatient utilization, day programming provides a comfortable medium for those who need more counseling support than that offered through traditional outpatient treatment. Day programming has been shown to have a number of benefits, including proven impacts on inpatient utilization and overall length of inpatient hospitalization for those who do require inpatient services.

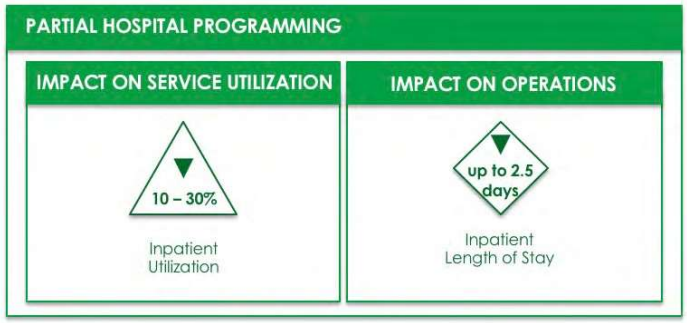


Diagram 82: Innovation Impact – Partial Hospital Programming
Addictions Services Client Journey

As the client begins their life-long journey to recovery, they will be provided with a number of resources intended to promote engagement and activation in their own journey. Resources such as virtual peer coaches and on-line / app-based mindfulness tools have both been shown to improve wellness, decrease the severity of symptoms and provide an overall benefit to the client. Studies have shown that peer coaches / support have helped decrease client depression when they are part of this support. Offering peer coaches / support continues to round out a comprehensive community-based model of care, providing clients with an additional resource to successfully manage their recovery in the community setting.

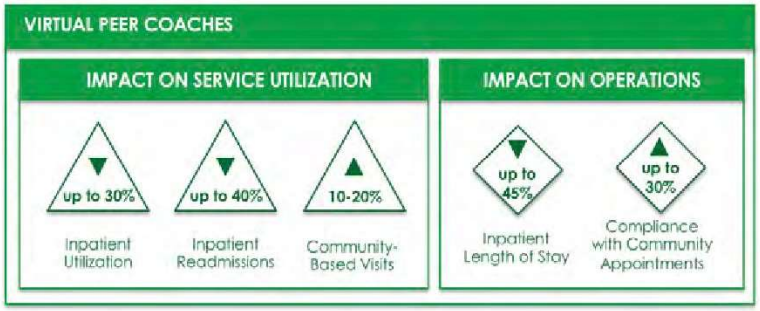


Diagram 83: Innovation Impact – Virtual Peer Coach
Addictions Services Client Journey

On-going care for the client will be provided per the treatment plan developed. Regularly scheduled engagement between the client and the appropriate resources will occur with frequencies based on the individual needs of the client. The plan of care will emphasize self- assessment of well-being with digital feedback to community-based mental wellness team. This self-assessment can quickly alert the treatment team to a potential relapse in substance use, enabling proactive engagement prior to the development of an acute crisis necessitating a higher level of care. They will also proactively contact clients to ensure follow-up, organize transportation resources if needed and provide monthly updates to the client's family (primary care) doctor.

8. Translating Future Vision into Future Facility Needs

As Prince Edward Island's mental health and addictions model of care continues its transitions away from an institutional model and towards community-based care, Health PEI must rethink where to provide care for a quickly changing client demographic that requires ease of access, convenience and solutions that respond to some of the psychosocial determinants of health that can present very real barriers to seeking out and remaining compliant with mental health and addictions care.

Using custom volume projections outlined in Section 6 and the future-state model of care introduced in Section 7 that forms the basis of future demand and utilization projections, CannonDesign facilitated a series of design sprints with Health PEI stakeholders to determine where services should be provided in the future. This enabled the development of a key room need forecast by service type.

Key rooms are defined as spaces in which client or patient medical care physically takes place – examples of key rooms are inpatient beds, Emergency Department bays, group or individual therapy rooms, and transitional housing beds. The key room need analysis estimates the physical space needed to appropriately treat future patient volumes while adhering to Health PEI's vision for a new model of mental health and addictions care. The projections in this section should be interpreted as approximations of future key room need. Projections should be used to aid in planning rather than to define exact need. The key room need presented in the following sections defines only total need for the redesigned model of care and reflects both existing space and proposed new build needed to care for clients. As the planning process is further refined and final sites of service are selected, final key room counts will need to be established.

8.1 Establishing a Site of Service Strategy

To advance the vision of "One Island Service", the new model of care for mental health and addictions services must be accompanied by a complete rethinking of where services will be provided across Prince Edward Island beyond simply replacing or modernizing what already exists. One of the core tenets of the future state model of care is that mental health and addictions services should be integrated into the daily lives of clients in a way that is easily accessible, convenient and that promotes client activation and engagement in their care as a partner with an interdisciplinary team of mental health and addictions experts. This focus on improved access, convenience and interdisciplinary care translates into a plan where enhancing investments in community-based service located where people work and live will be an important aspect of planning future environments of care.

The number and geographic distribution of services for each phase of the continuum of care will vary and is based on aligning community demand, anticipated resource availability, client tolerance for frequency and distance of travel, quality objectives and cost implications. Efforts have been made to ensure the site of service recommendations will have the greatest impact on the largest number of clients. Further, the site of service strategy understands that when community-based services are optimized and existing unmet demand for such services is addressed, utilization of higher acuity services such as acute assessment, stabilization and inpatient services will be reduced, further mitigating the impact of needing to travel for high-acuity services.

The location of map coverage areas in the information that follows should not be interpreted as firm recommendation with respect to the exact geographic location of the service under consideration. Rather, it is intended to represent how services that will be housed in multiple community-based locations might be distributed to optimize service coverage and reduce travel distances for clients. Further engagement with clients, community-based providers and other key stakeholders should be completed in the next phase of capital planning.

8.2 Prince Edward Island Mental Health and Addictions Access Centre

The Prince Edward Island Mental Health and Addictions Access Centre is one of the cornerstones of the access strategy for any potential or existing client or other interested stakeholder interested in seeking information or access to resources. Operating 24 hours a day, 7 days a week, 365 days a year, the Mental Health and Addictions Access Centre will be a vital link in the coordination of services for would-be clients and those experiencing an acute crisis. As the primary forms of contact with the Mental Health and Addictions Access Centre will be via phone or other virtual means such as internet or mobile-based video.

As a built environment, he Prince Edward Island Mental Health and Addictions Access Centre should be designed to the specifications commonly seen in any modern call centre. The focus will be on ensuring proper security, technology and privacy are in place. The Access Centre could be designed as a free-standing facility or located alongside almost any other service, provided there is access to the appropriate technologies, internet bandwidth and security solutions. The environment will require space for Access Centre specialists who will be available 24/7/365 to respond to requests for support. Routine support spaces for the team will also be necessary, as will meting and education space.

Another option could be to operate the Mental Health and Addictions Access Centre could function virtually, with members of the team working from anywhere in Prince Edward Island, or elsewhere across Canada, connected through virtual means.

Diagram 84: Mental Health and Addictions Access Centre Location

8.3 Community Mental Health and Addictions Centres Hubs

The goal of the community mental health and addictions centres is to provide clients with access to comprehensive community-based mental health and addictions services reflective of community demand. These centres are intended to bring together existing services that are often disparate and uncoordinated into a singular environment that will promote accelerated and convenient access, interdisciplinary models of care, seamless coordination and transition of care and the ability to provide clients with a one-stop shop for their community-based needs. Modeled after other centres of excellence, the Community mental health and addictions centres will function as a hub for community-based mental health and addictions care, bringing more services into communities across Prince Edward Island, particularly benefitting rural communities where accessing some services typically meant long drives to Charlottetown.

Diagram 85: Community Mental Health and Addictions Centre Locations

A series of up to four Community mental health and addictions centres have been proposed as part of the mental health and addictions strategy for Prince Edward Island. These centres, located close to where clients live and work, are intended to provide comprehensive community-based mental health and addictions programming, particularly as it related to higher-acuity community services that require a larger population from which to draw clients. Scattered across Prince Edward Island, the Community mental health and addictions centres would be distributed across the island such that a sizeable majority of islanders will reside or work within a 30-minute drive of a Community mental health and addictions centre. This drive-time strategy is intended to respond to higher travel distances currently encountered by clients living outside of the major urban centres on Prince Edward Island.

The key room counts and facility sizing will vary depending on the final number of Community mental health and addictions centres selected for operation, their location and proposed catchment area. At a minimum, these sites should include environments that support initial intake and assessment, cognitive behavioral therapy, dialectical behavioral therapy, family and group therapy, addictions counseling, intensive day programming, community outreach, meeting / educational space and wrap-around psychosocial support services.

By 2026, Health PEI's community mental health and addictions services will require 50 provider individual therapy spaces to serve a rapidly growing number of client encounters in community-based environments. It's important to note that the projection for over 59,000 annual encounters is reflective of encounters and not individual clients. Clients will have encounter frequencies ranging from intermittent to as regularly as weekly. This is considerable growth from current room counts and is reflective of an operational model where each provider delivering mental health and addictions services has their own space. Within that space it is assumed, based on input from Health PEI, that each provide will provide services to five (5) clients per day, 240 days per year. This translates into 1,200 client visits per office per year. CannonDesign assumed that for every two (2) providers there would be one (1) individual in a support role. This individual could be a case manager, a transportation coordinator, a housing placement specialist, an administrative assistant or any host of other roles that are necessary to successfully deliver on a truly integrated, interdisciplinary community-based model. In addition, CannonDesign assumed that one (1) group therapy room would be required to support the client volumes emanating from five (5) providers. We also assumed that smaller sites would require one (1) conference / educational space, while larger sites would require two (2).

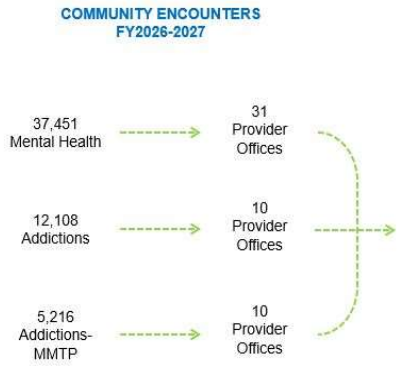
To determine the key rooms counts for each proposed Community mental health and addictions centre, volumes were distributed to each proposed site based on the existing

Community

Key Room Need Assumptions

- *Community mental health and addictions facilities are open and operational for 240 days per year*
- *Each very provider will work a minimum of five clinical hours per day*

distribution of population across PEI, assuming this would approximate demand for planning purposes. To accommodate the goal of easy Community Mental Health and Addictions Centre access for every client, it was assumed there would be one (1) site located in Kings County, one (1) site located in Queens County and two (2) sites located in Prince County. Given the proposed size of the Queens County Community mental health and addictions centre, it may be wise for Health PEI to consider splitting this into two (2) across the county. This would further enhance access without creating a disproportionately large site of service.



COMMUNITY MENTAL HEALTH CENTRE
KEY ROOM REQUIREMENTS
FY2026-2027

	% of Annual Volume	Provider Offices	Support Offices	Group Therapy Rooms	Education/ Conference Rooms
Kings County	12%	6	3	1	1
Queens County	57%	29	15	6	2
Prince County - East	20%	10	5	2	1
Prince County - West	20%	5	3	1	1

Diagram 86: Community Volumes and Mental Health Centre Key Room Requirements, FY 2026/27

While the size of these facilities is a radical departure from existing sites, it is important to remember that the proposal Community mental health and addictions centres will support a significantly expanded scope of services from existing sites of services across Prince Edward Island. Further, it is anticipated that, should Health PEI Mental Health and Addictions providers and staff be receptive to innovative officing strategies that include “hoteling” and touchdown spaces reflective of the preferences of younger workforces, it should be possible to reduce the number of projected key room needs during more detailed planning exercises.

8.4 Day Programming Services

Day programming, or partial hospitalization programming, is a level of care that provides clients with access to a safe, structured treatment environment without total disruption of their daily routines. This model enables client to remain in their home environments during treatment while reducing the reliance on inpatient hospitalization for lower acuity needs. This is achieved by providing structured intensive outpatient treatment daily at a location that is accessible and convenient to the client. Treatment typically involves a combination of individual, family and group activities.

Implementation of day programming services will provide alternative options to clients who may would otherwise be admitted to an acute inpatient unit. In addition to impacting inpatient utilization, day programming provides a comfortable medium for those who need more counseling support than offered through traditional outpatient treatment. It also serves as a well-performing transitional step between inpatient and part-time outpatient treatment programs, reducing unanticipated readmissions to an acute inpatient environment after discharge.

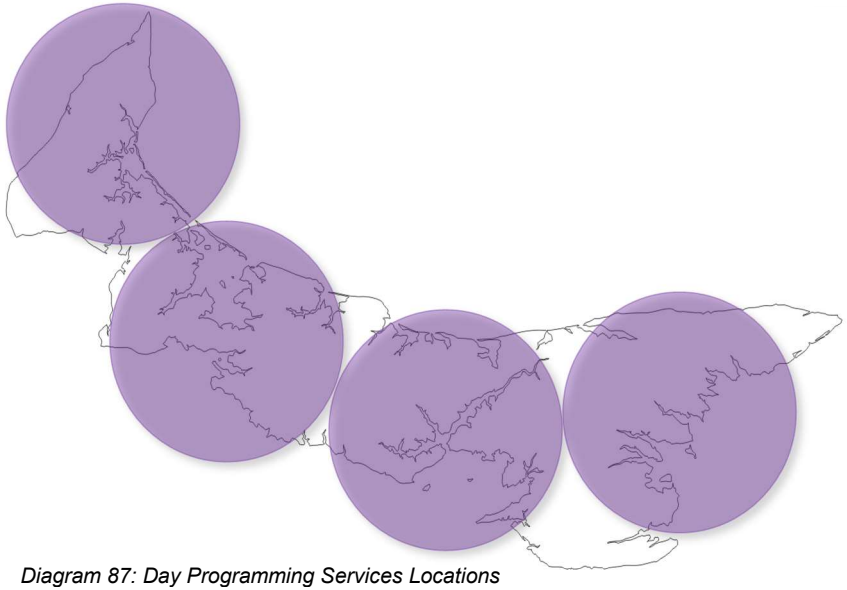


Diagram 87: Day Programming Services Locations

Day Treatment

Key Room Need Assumptions

- *Clients attend day treatment programs for approximately one month (3 to 4 weeks)*
- *Day treatment programs are held in group settings, consisting of 8-10 clients per group*
- *One therapy room can support one day treatment program client group at a time*

It is envisioned that day programming services would be housed in each Community mental health and addictions centre, providing the majority of clients with access to day programming services within a 30-minute drive time. Mental Health and Addictions day programming is intended to function as an open-cohort model, allowing client to enter and graduate the program at any point in time based on their individual needs and program capacity. As a result, the number of day programming services offered at each Community mental health and addictions centre may vary based on local demand.

The key room counts and facility sizing for day programming will vary depending on the final number of sites selected for operation, their location and proposed catchment area. At a minimum, these sites should include environments that support initial intake and assessment, cognitive behavioral therapy, dialectical behavioral therapy, family and group therapy, meeting / educational space and wrap-around psychosocial support services.

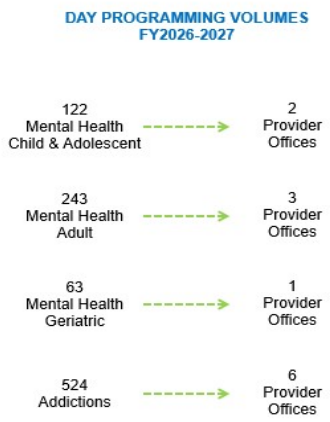


Diagram 88: Day Programming Volumes and Key Room Requirements, FY 2026/27

By 2026, Health PEI's community mental health and addictions services will require 12 provider offices / individual therapy rooms to support projected day programming needs. It's important to note that the projection for over 951 annual clients is reflective of clients and not individual encounters. Clients enrolled in day programming will have a combination of multiple individual therapy, group therapy and other therapeutic activities daily for a duration of 3 to 4 weeks. Within the office needs identified, it is assumed, based on input from Health PEI, that each provider will provide services to five (5) clients per day, 240 days per year. This translates into 1,200 client encounters per office per year. CannonDesign assumed that mental health day programming services would be separated into child and adolescent, adult and geriatric program tracks. CannonDesign further assumed that day treatment services will be co-located with the Community mental health and addictions centres there would be no need for additional group therapy rooms or spaces for conferences and education as these spaces could easily be shared amongst different services throughout the day. In the event providers supporting community-based services are also engaged in providing day programming services, it is expected the total key rooms counts for Community mental health and addictions centres and day programming services will see an overall reduction in total key room needs. Further study will be warranted in the next phase of this engagement to properly understand the facility implications of such an operational decision.

8.5 Mobile Crisis Response Teams

Mobile crisis response teams provide intensive intervention for patients who are experience an acute crisis. These teams are designed to stabilize individuals in psychological distress and engage them in the most appropriate course of treatment. These services are designed to reach people in the community setting along a continuum of access strategies including telephone hotlines, peer crisis services, crisis intervention teams, mobile crisis services, crisis stabilization beds, and more. The mobile crisis response team are expected to work in collaboration with many aspects of the continuum of mental health and addictions care including the Prince Edward Island Mental Health and Addictions Access Centre, Community mental health and addictions centres, Emergency Departments, primary care providers, Student Well-Being Team, law enforcement and emergency medical services, among other stakeholders. Implementation of crisis response teams in the community will facilitate rapid evaluation by a qualified mental health provider

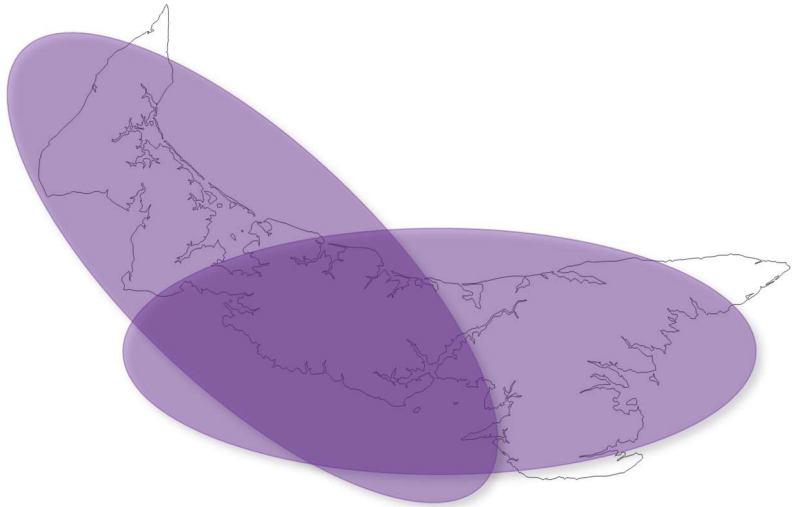


Diagram 89: Mobile Crisis Response Team Locations

without requiring the client be transferred to an ED staffed with an in-person mental health evaluator. This innovation is expected to reduce utilization of emergency department and inpatient encounters by providing assessment, disposition and transfer to a higher level of care, when appropriate.

To balance response times with anticipated demand based on population demographics in Prince Edward Island, it is recommended that two mobile crisis response units be deployed and positioned on the island such that the majority of clients live or work within a one-hour response time from at least one mobile crisis response unit. The most logical location for the mobile crisis response teams will be at Community mental health and addictions centres located proximate to Charlottetown and Summerside. These locations would position the teams near the greatest concentration of the population while also ensuring a less than one-hour drive time to most parts of Prince Edward Island. Further, placing the mobile crisis response team in the Community mental health and addictions centres will supporting the development of strong relationships between the crisis response team and community-based mental health and addictions care teams.

Key room counts and facility sizing for mobile crisis response team will be relatively modest. Each site will require an office and support space for the team, which usually consists of two tam members per crisis response team. Storage and for any necessary equipment and supplies and covered parking in the form of a canopy or enclosed garage for the crisis response vehicle is recommended.

8.6 Tele-Mental Health Services for Acute Assessment and Stabilization

Tele-mental health services in community settings are used to connect clients in an outpatient facility or at home to mental health providers at a different location via an encrypted, secure cellular or internet-based video connection. Using this innovation, the mental health providers are able to provide services such as acute assessment, initial intake, routine appointment encounters, psychotherapy and other relevant services. Implementation of tele-mental health services that incorporates app-based telepsychiatry services enables mental health professionals to their expert services to patients in far reaching areas, while also providing specialist consultation to the primary care providers in the rural areas. This innovation is expected to improve overall self-reported symptoms, decrease emergency department utilization and improve psychiatrist access while reducing travel burdens for clients and providers alike.

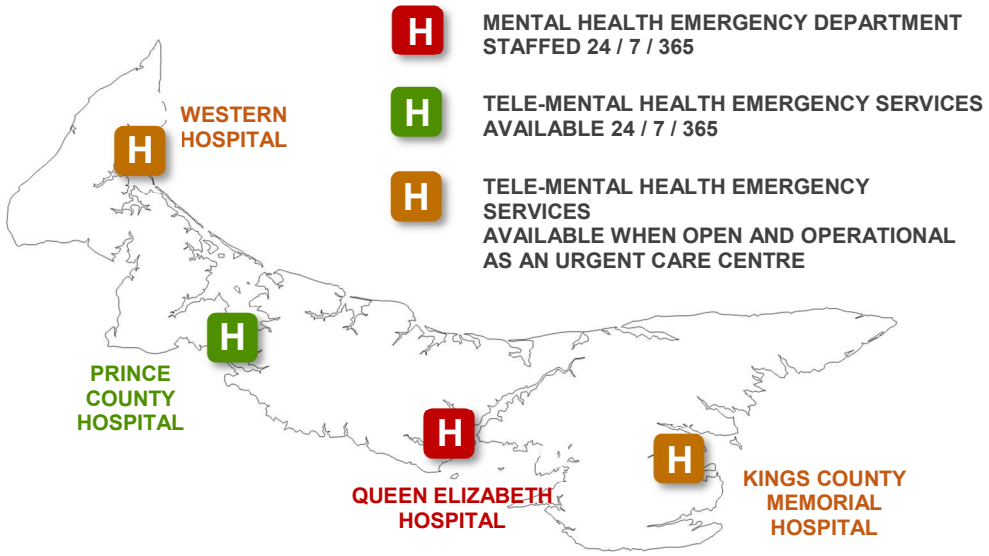


Diagram 90: Tele-Mental Health Service Locations

Research on the use of tele-mental health services has shown considerable benefit across a wide range of different geographic and demographic environments. Understanding this, a broad distribution of tele-mental health technology is recommended for primary care, school-based and low-acuity community-based mental health and addictions sites of care as well as in hospital emergency departments and urgent care centres. Based on the postal code origin of clients seeking acute assessment and stabilization services and the overall population of the island, the Prince County Hospital emergency department and the urgent care centres at Western Hospital and Kings County Memorial Hospital will be equipped with tele-mental health technologies,

linked to mental health evaluators and psychiatrists elsewhere on Prince Edward Island. The tele-mental health station proposed for Queen Elizabeth Hospital is expected to serve as a base station and receiving station for tele-mental health services.

Given the rapidly evolving technology surrounding tele-mental health services and its on-going reduction in size and operational complexity, there are no key room or space requirements beyond storage and battery charging of tele-mental health units. Each tele-mental health unit should require no more than one (1) square metre of space for planning considerations.

8.7 Mental Health Emergency Department

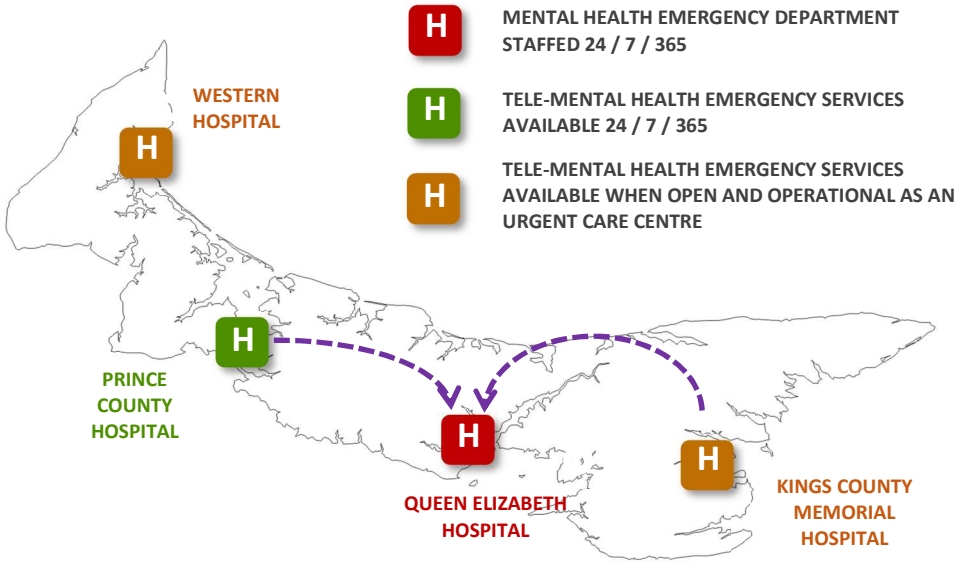


Diagram 91: Mental Health Emergency Department Locations

Mental Health Emergency Departments are environments designed to provide acute assessment and stabilization services for patients presenting with an acute mental health or addictions crisis. The staff, educated and trained to provide mental health and addictions services, provide prompt mental health and addictions assessments, stabilization and treatment with rapid disposition to the appropriate setting for on-going care. These services are typically provided in a safe and secure setting within the confines of a dedicated, locked unit.

Developing a dedicated Mental Health Emergency Department will allow clients to receive safe, efficient, high-quality mental health and addictions assessments and disposition beyond what can be safely provided in the community. When paired with other innovations focused on accelerating and coordinating care, a dedicated Mental Health Emergency Department holds the promise of reduced lengths of stay, lower cost of care and improved care coordination.

Because Queen Elizabeth Hospital is the busiest emergency department on Prince Edward Island and located in proximity to a sizeable portion of its citizens, the Mental Health Emergency Department will be located at Queen Elizabeth Hospital, proximate if not immediately adjacent to the medical emergency department. Clients presenting to outlying urgent care centres or the Emergency Department at Prince County Hospital will be linked to the Mental Health Emergency Department at Queen Elizabeth Hospital via a tele-mental health link. Only those requiring further evaluation and management will be physically transferred to Queen Elizabeth Hospital or another appropriate site of care.

Despite the projected decrease in Emergency Department volume associated with mental health and addictions clients, PEI lacks the appropriate number of mental health compliant Emergency Department bays to safely and efficiently care for anticipated volumes. To best care for its mental health and addictions clients, the Island will require 12 dedicated Mental Health Emergency Department treatment stations at Queen Elizabeth Hospital. The number of treatment station is based

on a planning model that assumes each treatment station will care for 800 clients per year or, roughly, two (2) clients per station per day, representing a substantial decrease in lengths of stay for mental health and addictions clients in the Emergency Department and improved productivity of all treatment stations.

Eight (8) of the 12 treatment stations will be general mental health and addictions treatment stations located within the confines of the locked Mental Health Emergency These stations will be used to quickly screen, evaluate, and treat all acute mental health and addictions client clients. The remaining four (4) Mental Health Emergency Department key rooms, also within the confined of the locked unit, will be high-acuity stabilization beds. These beds will provide access to short-term stabilization / treatment with an intensity that exceeds what is provided in the general eight (8) bed area. This area will be used to initiate immediate pharmacologic therapies that include antipsychotics and psychotropic medications that require close monitor during administration, allowing clients to remain in this area for up to 72 hours.. The area will also be designed to support safe intervention and de-escalation for clients present an immediate risk of harm to themselves and others and will be segregated from the low-acuity treatment stations on the unit. Devoting four (4) key rooms to stabilization unit beds will help divert clients experiencing acute mental health and addictions crises away from lower-acuity Emergency Department clients, to streamline crisis assessment and disposition and reduce Emergency Department wait times. All environments in the Mental Health Emergency Department will be designed to contemporary mental health environment of care and life safety standards, offering a safe and secure environment for clients, their support network, visitors and staff.

Emergency Department

Key Room Need Assumptions

- *Target annual throughput of 800 clients per room used for all dedicated psychiatric Emergency Department rooms*

Diagram 92: QEH ED Encounters and Key Room Need, FY 2026/27

8.8 Inpatient Acute Care Services

Inpatient acute mental health and addictions services provide the highest, most intensive level of care in any model of care. After evaluating the future demand for inpatient services, it has been determined that a single inpatient centre of excellence housing adult; geriatric; child and adolescent; and forensic mental health services be co-located with inpatient addictions programming. While each cohort will have dedicated environments of care within the centre of excellence, co-locating these services into a single building is expected to improve quality, enhance staff competencies and reduce operational redundancies and the overall cost of care.

Reflecting current best practices in inpatient mental health and addictions facility design, each client population (adult; geriatric; child and adolescent; forensics; and addictions services) will have dedicated bedded environments configured in a "neighborhood" model. This model will enable the different cohorts to remain proximate to shared support spaces off-unit while not interacting with or having access to on another in the bedded environments. This will ensure an added level of safety for clients, visitors and staff alike, while providing the flexibility to adapt to unanticipated shifts in demand without disrupting operations or requiring client board in environments not suitable for their needs.

Diagram 93: Mental Health Emergency Department Locations

While it is understood that centralization of inpatient services will increase travel distances for residents in the western half of Prince Edward Island, it is agreed that this will be mitigated by the enhancement of community-based services, addition of intensive day programming and tele-mental health services in the community, urgent care and emergency department settings. These innovations are expected to result in a considerable reduction of demand for inpatient services.

By 2026, Health PEI's inpatient mental health and addictions services will require a total of 88 inpatient beds to serve a declining number of acute care clients. This number was established based on the projected number of inpatient days in 2026 and by setting an average daily occupancy target of 85%, as opposed to current occupancy levels that often exceed 100% across the system and does not include safe and secure rooms used during an acute crisis. These rooms will be necessary and will be accounted for as a part of routine space programming activities that will occur in subsequent phases of planning.

The 88 inpatient beds will enable the inpatient environment to accommodate routine variability in volumes seen at all inpatient facilities. The newly projected inpatient bed reduces Prince Edward Island's inpatient mental health and addictions bed count by 28%, allowing the Island to reallocate the resources associated with 35 of its 123 current inpatient beds to more appropriate services. Dedicating 88 inpatient beds to serve mental health and addictions clients throughout Prince Edward Island falls within the Treatment Advocacy Center's benchmark target for inpatient mental health bed need; the benchmark states that a range of 40 to 60 inpatient mental health and addictions beds are needed for every 100,000 residents. Bed requirements for forensic patients were based on responding to a latent

demand for services that will increase demand by 10%. Detox unit key room need was amended by Health PEI, in conjunction with CannonDesign, to better reflect the impact of best practices soon to be implemented by Health PEI administration.

The considering the future inpatient bed requirements, it is imperative that Health PEI, policy makers and all stakeholders remember that the assumptions underlying the number of inpatient beds required in the future assumes that all innovations related to community-based, intensive day programming, acute assessment and stabilization as well as transitional and supportive housing have been implemented. In the event these innovations are not implemented Health PEI will require more inpatient beds that have been projected as a part of this study.

Inpatient

Key Room Need Assumptions

- *Target utilization rate of 85% used for all inpatient mental health and addictions units*
- *Forensic bed need includes a 10% latent demand cap*

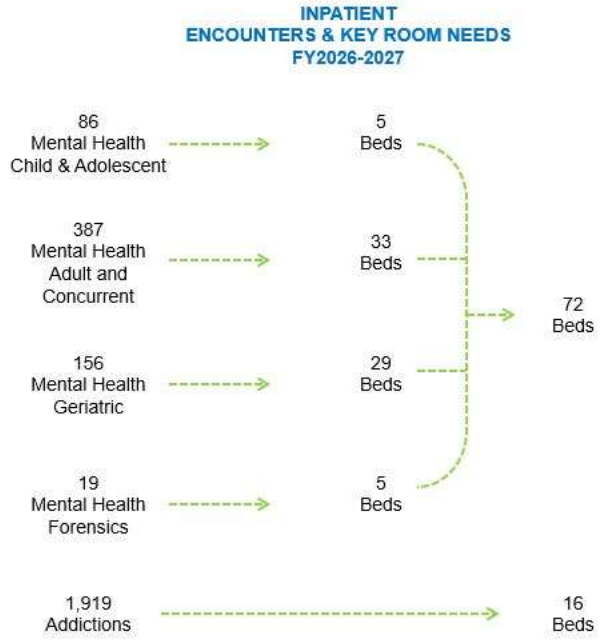
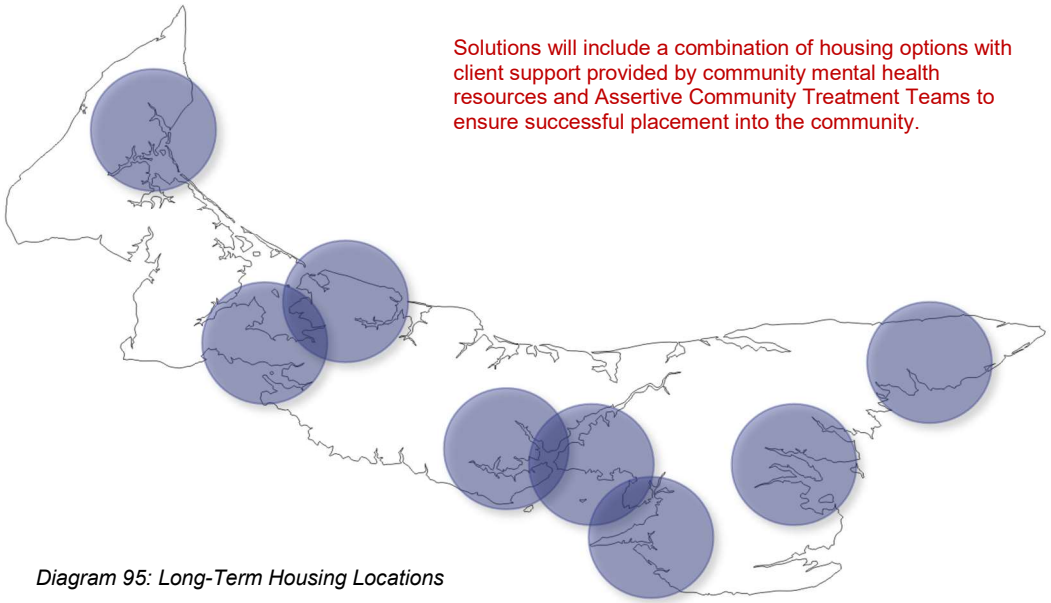


Diagram 94: Inpatient Encounters and Key Room Need, FY 2026/27

8.9 Long-Term Housing



Solutions will include a combination of housing options with client support provided by community mental health resources and Assertive Community Treatment Teams to ensure successful placement into the community.

Diagram 95: Long-Term Housing Locations

Long-term and supportive residential solutions currently represent an area of considerable unmet need in mental health and addictions programming across Prince Edward Island. As a result of the current situation, a considerable number of mental health clients have been housed on inpatient units for an extended period of time, some in excess of 30 years.

Developing a series of residential options for mental health and addictions clients distributed across the island will provide the opportunity to deliver services in a supportive environment that promotes independence. These residential sites hold the opportunity to reposition clients across the island, closer to their families and support networks.

Determining the recommended locations for supportive and long-term housing solutions is a subjective process that is subject to a number of variables could take months to reconcile. Determining the location of where to place supportive housing and long-term care environments requires consideration of the following:

- Demand for services relative to client's home / support network
- Availability of housing stock
- Community receptiveness to presence of this service
- Proximity to community-based services
- Access to transportation infrastructure
- Proximity to available workforce
- Proximity to occupation / vocational opportunities for housed clients

CannonDesign recommends that, to the extent possible, long-term and supportive housing solutions be distributed across Prince Edward Island to provide clients and their support network with multiple options for convenient access to housing options while also using these housing solutions as an opportunity to support local economies in more rural areas of the Island.

Prince Edward Island's current mental health and addictions system lacks a variety of long-term, residential, transitional, and supported care housing for a variety of underserved client populations. Today, Health PEI only offers transitional housing for adolescent and adult male and female addictions clients, and a 14-bed long-term care facility for dual diagnosis clients (Sherwood Home). Many clients, particularly dual diagnosis, ALC, and geriatric clients, are unable to access sub-acute supportive housing upon inpatient discharge simply because there are no such housing options available. These underserved clients languish on inpatient units and limit the number of available inpatient beds. Inpatient bed availability and the Island's high number of ALC days will be partially solved by the development of long-term, transitional, and supportive care housing for clients requiring supportive sub-acute care.

CannonDesign recommended a total of 102 transitional and long-term care beds to serve clients in need of alternative care environments in 2026. Health PEI, with the assistance of CannonDesign, chose a key room need based on current bed availability throughout the system, and settled on a final key room need of 136 beds. The breakdown of residential housing key rooms by service type is listed in the table to the right. With 136 residential housing beds and the programs to support them, Health PEI should be able to place all its ALC clients in more appropriate residential settings. 136 residential beds of various types will support an average occupancy level of 85%, allowing Health PEI to rapid transition clients to long-term and supportive housing environments when appropriate, reducing the number of ALC days substantially, with the resulting impact of lowering the overall cost of care and resource requirements for this client cohort without compromising quality in any way.

Long-Term Housing Assumptions

- *Residential care data and volumes include Talbot House, Lacey House, and the Strength Program*
- *Assumes 20% of all mental health inpatient clients can be treated in long-term housing upon discharge*
- *Assumes a 28% growth in addictions long-term housing utilization*
- *Mental health long-term housing baseline year (year of implementation) assumes PEI will capture 100% of suitable inpatient discharges (i.e. 20% of potential inpatient discharges)*

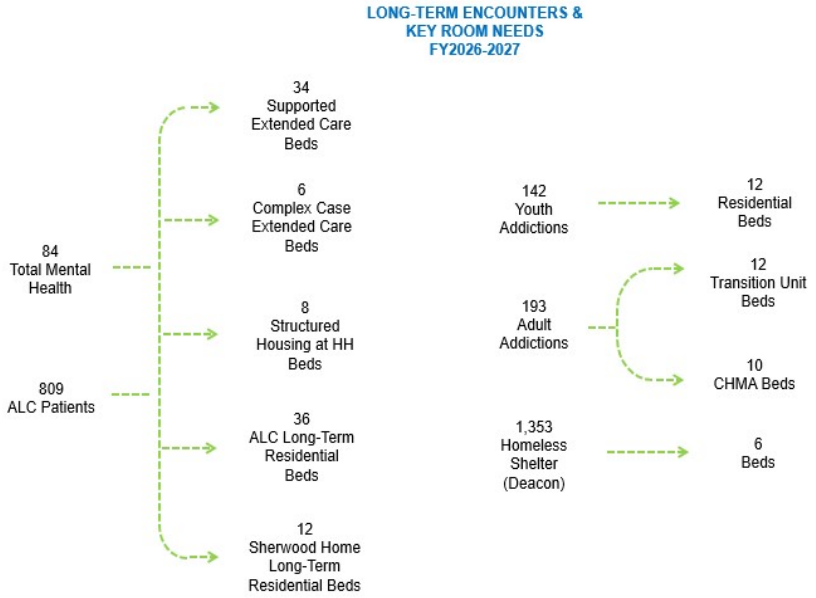


Diagram 96: Long-Term Housing Encounters and Key Room Need, FY 2026/27

9. Establishing an Implementation Roadmap

Health PEI has established the goal of taking occupancy of an inpatient mental health and addictions facility to replace the aging and obsolete Hillsborough Hospital facility as well as the Provincial Addictions Treatment Facility no later than fiscal year 2023/2024. This is an ambitious but achievable goal that will require Health PEI engage in a highly choreographed sequence of activities that are not only related to the design and construction of the new inpatient facility, but also the implementation of 27 other initiatives that, in combination, will facilitate the projected demand and utilization volumes that have been outlined in Section 6 of this report. As previously highlighted, projected inpatient demand and utilization is dependent on the implementation of expanded community-based services and day treatment programming, among the 27 other proposed innovations. **If these actions are not undertaken, Health PEI will need to reforecast inpatient demand and utilization as well as inpatient bed demand for the proposed replacement facility.**

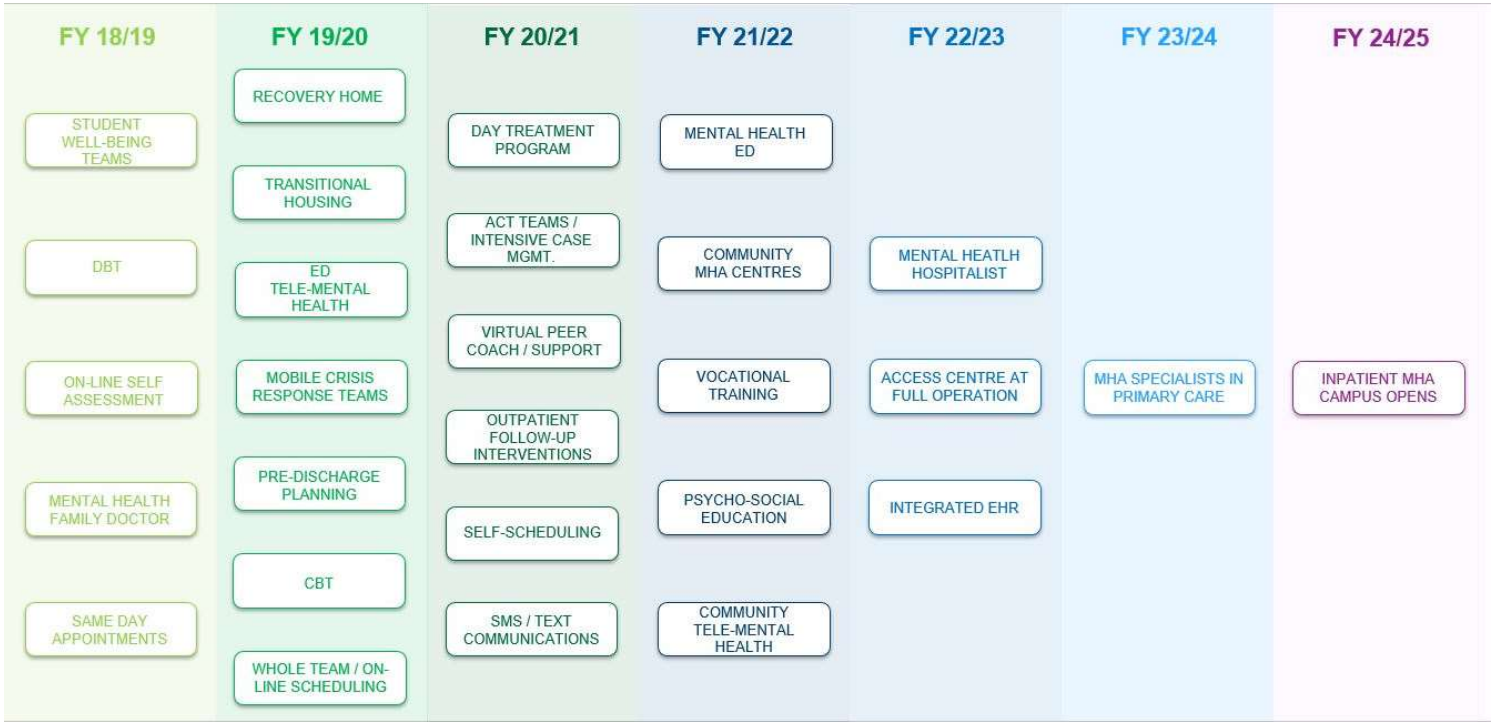


Diagram 97: Implementation Roadmap, Step 1

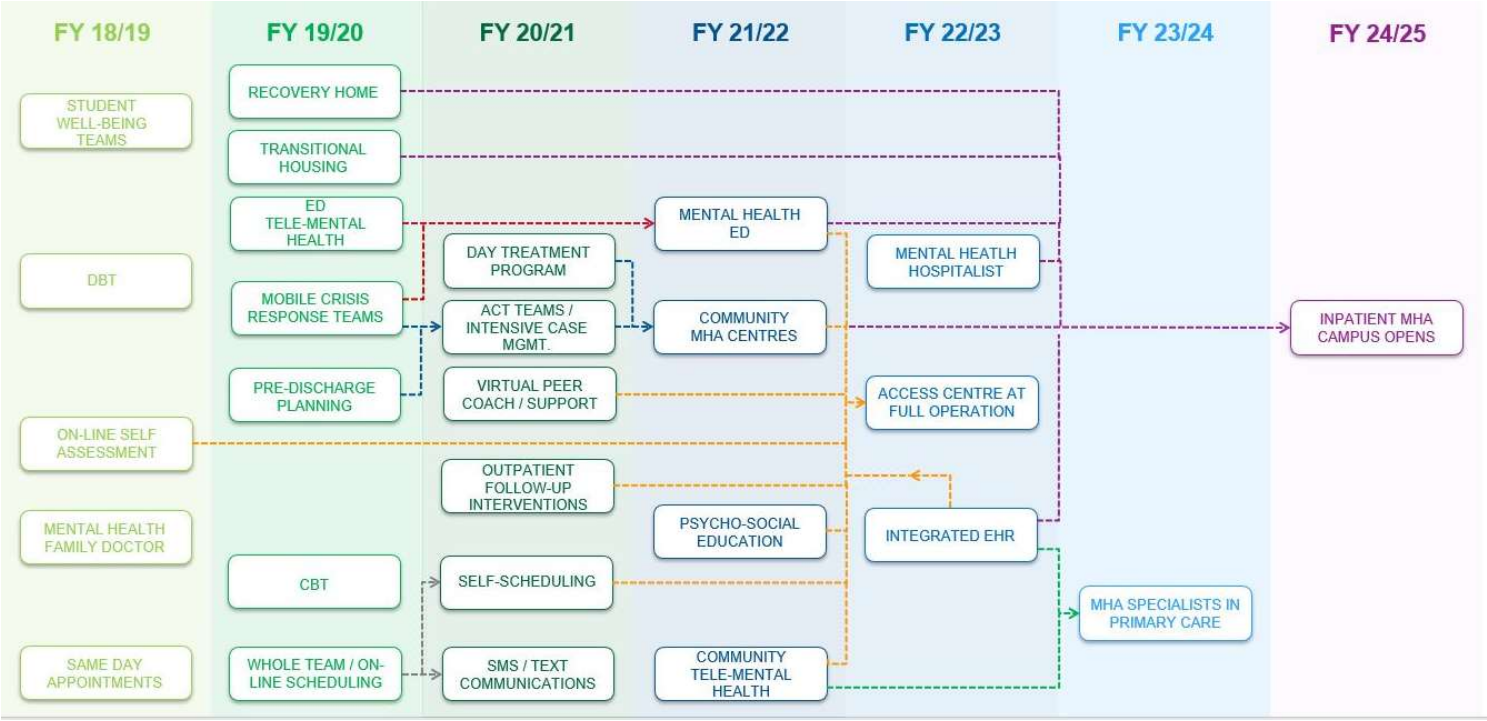


Diagram 98: Implementation Roadmap, Step 2

The 27 innovations recommended for implementation together form the infrastructure necessary to carry the vision of “One Island Service” forward. These innovations will support the continued evolution toward a community-based, interdisciplinary, integrated model of care that activates clients and their support networks as partners in mental health and addictions care. In order to achieve the goal of implementing all 27 innovations successfully, a number of innovations will require that a series of enabling innovations be completed in advance of certain innovations. Section 9.1 will provide a brief overview of each innovation while Section 9.2 will review the specific innovations that require enabling innovations in advance of their implementation.

9.1 Summary of Innovations

Access Centre

A mental health and addictions access centre is a dedicated service equipped to handle the needs clients making contact via phone or electronic means. Access centres operated 24 hours a day, 365 days a year providing services to ranging from providing basic information to assisting with access services to organizing interventions for those in crisis who present with the most complex mental health problems. Contacting the access centre enables a client or referral source to access care by scheduling appointments and locating the most appropriate providers and programs across PEI. The access centre will be electronically networked through a mental health and addictions information system, which allows the staff to identify the most appropriate providers and then schedule assessments during the initial call. Implementation of an access centre has been shown to accelerate intake and screening for clients requesting services while also directing existing clients to the most appropriate site of service.

Assertive Community Treatment Teams / Intensive Case Management

Assertive Community Treatment (ACT) or Intensive Case Management (ICM) is an evidenced-based practice that offers treatment, rehabilitation, and support services, using a person-centered, recovery-based approach, to individuals diagnosed with a severe and persistent mental illness. ACT/ICM can reduce hospital bed utilization, avoidable admission of high inpatient users and increase hospitalization for clients who need inpatient care. Studies have showed that using Assertive Community Treatment or Intensive Case Management approaches to care of clients with the most severe mental illness can have significant impacts to IP utilization and length of stay for patients. This treatment approach is ideal for clients who require robust support social and medical resources using a team – based community–focused approach.

Cognitive Behavioral Therapy

Cognitive behavioral therapy is a form of psychological treatment that involves efforts to change thinking patterns. Implementation of cognitive behavioral therapy has been demonstrated to be effective for a range of problems including depression, anxiety disorders, alcohol and drug use problems, marital problems, eating disorders and severe mental illness. Numerous research studies suggest that cognitive behavioral therapy leads to significant improvement in functioning and quality of life as well as reductions in Emergency Department visits and inpatient hospitalizations. In many studies, cognitive behavioral therapy has been demonstrated to be as effective as, or more effective than, other forms of psychological therapy or psychiatric medications.

Community Mental Health and Addictions Centres

Community mental health and addictions centres are sites of service that provide a wide range of community-based services including, but not necessarily limited to, assessment and intake, prevention and early intervention services, psychotherapy services, vocational training, peer support programming, recovery services, supportive services, day programming services, respite care and tele-mental health services. Community mental health and addictions centre programming is typically customized to the needs of the catchment area and available resources. Implementation of community mental health and addictions centres has been shown to improve coordination of services and the delivery of interdisciplinary models of care which, in turn, lead to significant improvement in functioning and quality of life as well as reductions in Emergency Department visits and inpatient hospitalizations.

Community-Based Tele-Mental Health

Tele-mental health services in community settings are used to connect clients in an outpatient facility or home to a mental health providers at a different location via an encrypted, secure video connection. Using this innovation, the mental health provider will be able to provide services such as acute assessment, clinic appointment, therapy and other relevant services. Implementation of tele-mental health services in the community setting and providing app-based telepsychiatry services allows mental health professionals to their expert services to patients in far reach areas, and also provide specialist consultation to the primary care providers in the rural areas. This innovation is expected to improve overall self-reported symptoms, decrease ED utilization and improve psychiatrist access

Day Treatment Program

Day treatment Programming or partial hospitalization programming is a level of care that provides clients with access to a safe, structured treatment environment without total disruption of their daily routines while reducing the reliance on inpatient hospitalization for lower acuity clients. Day programs allow clients to live in the community and received structured intensive outpatient treatment daily. Implementation of day programming services will provider alternative options to a clients who may would otherwise be admitted to an inpatient unit. In addition to impacting inpatient utilization, day programming provides a comfortable medium for those who need more counseling support than offered traditional outpatient treatment. It is a well-performing transitional step between inpatient and part-time outpatient treatment programs.

Dialectical Behavioral Therapy

Dialectical behavior therapy provides clients with new skills to manage painful emotions and decrease conflict in relationships. Dialectical behavior therapy specifically focuses on providing therapeutic skills in four key areas: mindfulness, distress tolerance, emotion regulation and interpersonal effectiveness. DBT was originally developed to treat borderline personality disorder. Research shows that dialectical behavior therapy has also been used successfully to treat people experiencing depression, bulimia, binge-eating, bipolar disorder, post-traumatic-stress disorder, and substance abuse. Numerous research studies suggest that dialectical behavioral therapy leads to significant improvement in functioning and quality of life as well as reductions in Emergency Department visits and inpatient hospitalizations.

ED-Based Tele-Mental Health

Tele-mental health services in the medical emergency department (ED) are used to connect clients presenting to an ED without an in-house mental health evaluator to a mental health evaluator at a remote location via an encrypted, secure video connection. Using this innovation, the remote mental health evaluator will be able to assess the client and determine the appropriate disposition from the ED. Implementation of tele-mental health services in the medical emergency department (ED) for outlying sites on PEI will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an ED staffed with an in-person mental health evaluator. This innovation is expected to reduce unnecessary interfacility transfers and inpatient hospitalizations for clients who can be safely managed in the community.

Extended Care Homes

Recovery homes offer safe, supportive living environments for clients in recovery, free of the items that have led to an addictions condition. They are typically designed to house a number of clients who are able to provide peer support to one another. Recovery homes are increasingly viewed as a viable and cost-effective alternative to established recovery-oriented systems of care. Recovery homes are an effective alternative to extended inpatient stays by providing support as clients transition towards living independent and productive lives in their communities.

Integrated Electronic Health Record

An integrated electronic health record is a clinical documentation technology system with interoperability enabling providers to communicate, exchange data, and use information that has been exchanged, even if systems were developed by widely different manufacturers in different industries. Being able to exchange information between applications, databases, and other technology systems is considered essential for the delivery of modern, high-quality healthcare services. According to the Healthcare Information and Management Systems Society, “Interoperability describes the extent to which systems and devices can exchange data and interpret that shared data. For two systems to be interoperable, they must be able to exchange data and subsequently present that data such that it can be understood by a user.” A lack of interoperability is problematic as it related to client activation and compliance, communication, care coordination, clinical quality and cost of care.

Mental Health & Addictions Specialists in Primary Care

Primary care settings have become a gateway for many individuals with behavioral health and primary care needs. To address these needs, many primary care providers are integrating behavioral health care services into their setting to create a team-based approach offered in the same setting. Integrating mental health specialist in primary care walk in clinics and/or community teams provides a pathway way for effective, quicker diagnosis of mental health illnesses and ability to provide team –based collaborative approach to client., inclusive of physical and mental health. Expected outcomes include reduced ED utilization and increase in overall outpatient visits.

Mental Health Emergency Department

Mental Health Emergency Departments are environments designed to provide acute assessment services for patients presenting with an acute mental health or addiction crisis. The staff, educated and trained to provide mental health and addictions services, provide prompt mental health assessments, stabilization and treatment with rapid disposition to the appropriate care setting. These services are typically provided in a safe and secure setting. Developing a dedicated Mental Health Emergency Department will allow clients to experience receive safe, efficient, high-quality mental health and addictions acute assessments and disposition. When pair with other innovations focused on accelerating and coordinating care, a dedicated Mental Health Emergency Department holds the promise of reduced length of stay, lower cost of care and improved care coordination.

Mental Health Hospitalist

Mental health hospitalists in the inpatient mental health and addictions setting are used to provide consistent care to the inpatients, ensuring that patients receive timely evidence-based care. The hospitalists will establish, implement and monitor a plan of care throughout the duration of the inpatient hospitalization,

orchestrating the coordination of all resources necessary for provide necessary care. Implementation of a mental health hospitalist program will facilitate the standardization of many plans of care for routine inpatient presentations. This will increase quality, reduce avoidable days and create a more operationally efficient clinical environment. In addition, the program frees community-based psychiatrists from the disruption of daily rounding and inpatient on-call schedules. Implementation of a mental health hospitalist program will require that Health PEI implement changes to the Physician Master Agreement with the psychiatrists to allow for this proven model of care.

Mobile Crisis Response Teams

Crisis response teams provide intensive alternative care for patients who are experience an acute crisis. These teams are designed to stabilize individuals in psychological distress and engage them in the most appropriate course of treatment. These services are designed to reach people in the community setting along a continuum including telephone hotlines, peer crisis services, crisis intervention teams, mobile crisis services, crisis stabilization beds, and more. Implementation of crisis response teams in the community will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an ED staffed with an in-person mental health evaluator. This innovation is expected to reduce utilization of emergency department and inpatient encounters by providing assessment, disposition and transfer to a higher level of care, when appropriate.

On-Line Self-Assessment

On-line self-assessment tools provide community members with access to resources to help identify potential mental health or addictions issues using a series of standardized questions that are scored to identify patterns suggestive of a situation that requires further evaluation and possible intervention. On-line self-assessment tools that have been shown to be valid assessment tools have been developed to assess conditions such as depression, bipolar disorder, eating disorders, generalized anxiety, post-traumatic stress, and addictions to items such as alcohol, recreational pharmaceuticals, sexual activity, the internet and a host of other addictions. Use of on-line self-assessments have been shown to increase awareness of mental health and addictions issues, creating a propensity to seek needed mental health and addictions services before situations require more aggressive interventions.

Outpatient Follow-Up Interventions

Outpatient follow-up planning is a process used to decide what a client needs to ensure effective outpatient follow-up that promotes client compliance with follow-up recommendations. Outpatient follow-up planning can include psychosocial education, treatment plan development, structured needs assessments, medication reconciliation/education, intensive case management and the like. It has been shown to be effective in reducing escalation of mental health or addictions conditions with subsequent need to access acute assessment and stabilization services or inpatient hospitalization.

Pre-Discharge Planning

Discharge planning is a process used to decide what a client needs for a smooth transition from one level of care to another. Pre-discharge planning can include psychosocial education, outpatient treatment plans, structured needs assessments, medication reconciliation/education, transition managers and the like. It has been shown to be effective in reducing repeat hospitalizations. The new mental health and addictions model of care will benefit from a redesigned discharge

process. The goal of the process will be to begin discharge planning on inpatient day zero (0), working to anticipate the post-inpatient needs of the clients long before discharge in order to avoid unnecessary inpatient days related to care transition and discharge planning.

Psychosocial Education

Psychosocial education helps people develop the social, emotional and intellectual skills they need in order to live happily with the smallest amount of professional assistance they can manage. Psychosocial education uses two strategies for intervention: learning coping skills to help handle stressful situations and environments and developing resources that reduce future stressors. Implementation of psychosocial education has been shown to improve social functioning in clients engaged in treatment.

Same-Day Appointments

Same-day appointments provide clients with the ability to access necessary services with a level of expediency not found in systems that schedule services well in advance. Making same-day appointment slots available provide members of the care team the flexibility to respond to clients in need of services who might otherwise be referred to the Emergency Department or other level of service that exceeds what is necessary for the client. Use of same-day appointments has been shown to decrease Emergency Department utilization while also increasing client satisfaction with their treatment plan.

Self-Scheduling

Technologic advancements are allowing clients and their families to schedule community mental health appointment via on-line self-scheduling appointment solutions. Self-scheduling provides a convenient 24 / 7 scheduling option for clients, reduces the need for scheduling staff and facilitates appointment scheduling at times more convenient for the client, reducing the potential for appointment cancellations and no-shows. Client self-scheduling has the potential to be implemented across community-based services where. This can increase compliance with community-based programming. In addition, on-line self scheduling holds the potential to reduce staffing costs associated with this function while providing a real-time scheduling solution.

SMS / Text Communications

Missed appointments are a major cause of inefficiency in healthcare delivery with substantial monetary costs for the health system, leading to delays in diagnosis and appropriate treatment. Patients' forgetfulness is one of the main reasons for missed appointments. Mobile phone messaging such as Short Message Service (SMS) could provide an important, inexpensive delivery medium for reminders for healthcare appointments. Implementation of SMS technology to improve outpatient follow up will facilitate improved client outcomes by improving overall attendance rate to therapy sessions and/or program meetings. This innovation is expected to reduce the number of no-show and missed appointments and reduce wait times to see therapists by opening up available appointment slots when clients are unable to attend their scheduled appointment.

Student Well-Being Teams

According to information available on Prince Edward Island’s website, “student well-being teams work in schools advising, consulting and providing direct service to children and youth who are struggling with mental, social and physical health issues. When professionals are co-located in schools, more children can be

reached and supports can be provided earlier. Barriers such as transportation to services can be eliminated and there is more opportunity to support wellness in schools. Locating child and youth services in schools allows issues to be addressed earlier and prevents them from escalating and impacting a student's ability to succeed in school and throughout life."

Transitional Housing

Transitional housing is a temporary housing situation meant to bridge the gap from homelessness to permanent housing. Transitional housing offers benefit by providing structure, supervision and support for mental health and addictions conditions. Many transitional housing environments offer life skills development, education and training. Implementation of transitional housing has been shown to reduce homelessness and the exacerbation of psychosocial stressors that can lead to escalation of mental health and addictions issues.

Virtual Peer Coach / Support

Peer coaches / support have been found to be very effective as part of the treatment plan for clients with mental health and addiction disorders. Peer coaches / support undertake a variety of functions, such as serving as role models showing that recovery is possible, teaching goal setting and problem solving, helping with symptom management skills and providing a variety of coping strategies. Studies have shown that peer coaches / support have helped decrease client depression when they are part of this support. Offering peer coaches / support continues to round out a comprehensive community-based model of care, providing clients with an additional resource to successfully manage their condition in the community setting.

Vocational Training

Vocational training is an educational programming model that emphasizes developing the skills or training necessary to engage in the day-to-day activities associated with a particular job function or trade. Vocational training programs have been shown to provide participants with a set of life skills necessary to obtain and maintain employment and subsequent financial independence which, in turn, can reduce homelessness and the exacerbation of psychosocial stressors that can lead to escalation of mental health and addictions issues.

Whole Team / On-Line Scheduling

Technologic advancements are allowing clients and their families to schedule community mental health appointment via on-line self-scheduling appointment solutions. On-line scheduling provides a convenient 24 / 7 scheduling option for clients, reduces the need for scheduling staff and facilitates appointment scheduling at times more convenient for the client, reducing the potential for appointment cancellations and no-shows. Client self-scheduling has the potential to be implemented across community-based services where. This can increase compliance with community-based programming. In addition, on-line self-scheduling holds the potential to reduce staffing costs associated with this function while providing a real-time scheduling solution.

9.2 Innovations Requiring Enabling Moves

The Path to Implementing Self-Scheduling and SMS / Text Communications

The implementation of both self-scheduling and SMS / text communications have been shown to increase client activation and empowerment through their mental health and addictions care journey. The implementation of self-scheduling has been shown to reduce the time between scheduling an encounter to engaging in that encounter by as much as 45% while also reducing appointment no-shows by up to 40%. Similarly, the implementation of SMS / text communications for appointment confirmations and reminders have been shown to reduce no-show rates by up to 50% and, through increased compliance with treatment recommendations, reductions in unanticipated inpatient readmissions by as much as 40%.

Diagram 100: Implementation Roadmap, Community MH&A Centres

To successfully implement self-scheduling and SMS / text communications as proposed in fiscal year 2020/2021, it is recommended that Health PEI first implement whole team and on-line scheduling in fiscal year 2019/2020. This innovation is necessary to provide clients with a 24/7 portal through which to view and select their desired appointment times. In addition, this will enable clients to coordinate multiple appointments within a single visit if services are provided at the same site.

The Path to Opening a Mental Health Emergency Department

The opening of a Mental Health Emergency Department is a central component of advancing a community-based model of car that is focused on early intervention and de-escalation of acute mental health and addictions crises. The Mental Health Emergency Department serves as a critical intermediate site of service between lower-acuity community settings and higher-acuity inpatient settings, offering the ability to quickly coordinate a host of community resources that might not be easily coordinated elsewhere. Implementation has been shown to reduce the Emergency Department length of stay for mental health and addictions clients in excess of 12 hours while also reducing inpatient utilization by as much as 20% by diverting clients who do not require intensive inpatient services to a more appropriate site of care.

Diagram 99: Implementation Roadmap, Self-Scheduling and SMS Text

To avoid overwhelming the Mental Health Emergency Department, targeted for opening in fiscal year 2021/2022, with low-acuity clients who do not need to travel to Charlottetown for assessment and stabilization services, it is recommended that Health PEI implement an Emergency Department tele-mental health program and mobile crisis response teams in fiscal year 2019/2020. Having an Emergency Department tele-mental health program in operation will promote in-community care before creating a higher-acuity provincial resource. Mobile crisis response teams will provide similar benefit.

The Path to Opening Community Mental Health and Addictions Centres

A series of four proposed community mental health and addictions centres distributed across PEI will form the cornerstone of Health PEI's invigorated focus on community-based mental health and addictions programming. The community mental health and addictions centres are intended to host comprehensive, interdisciplinary services in convenient locations. It is anticipated that these community mental health and addictions centres might include services such as initial intake and assessment, cognitive behavioral therapy, dialectical behavioral therapy, family and group therapy, intensive day programming, community outreach, meeting / educational space and wrap-around psychosocial support services. To realize their maximum benefit to clients, a number of enabling moves will be necessary to support community mental health and addictions centres.

Diagram 102: Implementation Roadmap, MH Specialists in Primary Care

For community mental health and addictions centres to deliver maximum value upon their launch in fiscal year 2021/2022, it is recommended that mobile crisis response teams and pre-discharge planning for mental health and addictions clients being transitioned from inpatient to community-based setting be implemented in fiscal year 2019/2020. These two steps are necessary prior to implementing assertive community treatment teams and intensive case management programs, which has been slated for implementation in fiscal year 2020/2021. In addition, prior to operationalizing community mental health and addictions centres, it is recommended that day treatment programming be launched in fiscal year 2020/2021.

The Path to Mental Health Specialists in Primary Care

Embedding mental health specialists has been shown to be a critical aspect of enhancing the coordination of mental health and addictions care between primary care and the mental health and addictions community. Making this real-time resource available has been shown to reduce Emergency Department encounters for mental health and addictions complaints by as much as 50% while also reducing inpatient admissions by up to 50% in certain communities and client cohorts.

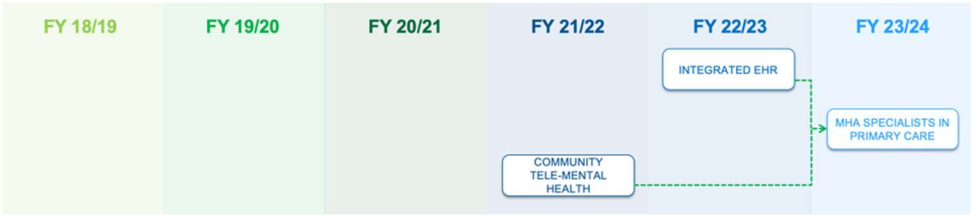


Diagram 101: Implementation Roadmap, Mental Health Emergency Department

Health PEI has indicated its intention to deploy mental health specialists into primary care setting in fiscal year 2023/2024. To achieve this goal, two enabling innovations are recommended to achieve maximum value from basing mental health providers in primary care settings. The first innovation, embedding tele-mental health services in primary care settings will provide enhanced connectivity between primary care and mental health and addictions providers with the ability to provide real-time video consultations and client assessments. This innovation is recommended for implementation in fiscal year 2021/2022. The second recommended enabling move is the creation of an integrated electronic health record with interoperability enabling providers to communicate, exchange data, and use information that has been exchanged, even if systems were developed by widely different manufacturers in different industries. This electronic health record should be in use at all sites of medical, mental health and addictions service. Understanding the modernization of an electronic health record is a time and capital-intensive investment, this innovation has been slated for implementation on FY 2022/2023.

The Path to a Fully-Operational Health PEI Mental Health and Addictions Access Centre

The Health PEI Mental Health and Addictions Access Centre is a dedicated service equipped to handle the needs clients making contact via phone or electronic means. Access centres operated 24 hours a day, 365 days a year providing services to ranging from providing basic information to assisting with access services to organizing interventions for those in crisis who present with the most complex mental health problems. The Access Centre is a critical front door to access mental health and addictions programming across PEI. It will support accelerated access to services, improved service coordination and ease confusing associated with which agency to contact for whatever the need may be. While it will be possible to implement portions of the Access Centre in phases on the coming years, it is expected that the Access Centre will not be fully operational until fiscal year 2022/2023.

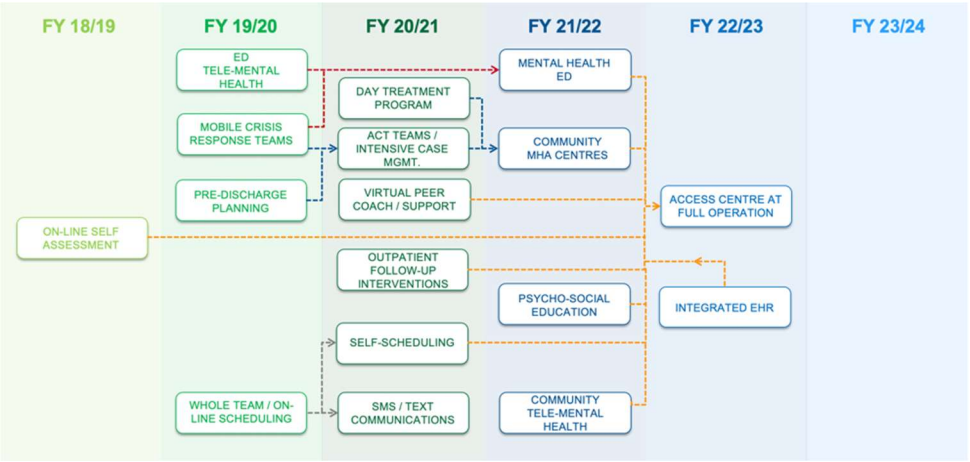


Diagram 103: Implementation Roadmap, MH Specialists in Primary Care

To leverage the full potential of the Health PEI Mental Health and Addictions Access Centre there are 16 enabling innovations that should be implemented. While some of these are innovations are related to the infrastructure necessary to support the Access Centre, many others are programmatic innovations that are necessary in order for the Access Centre to be able to provide clients, their support networks and referring providers and agencies with access to the right resources at the right time with the intent of delivering the right care and avoiding unnecessary escalation of a mental health or addictions condition. A number of these 16 innovations are enabling innovations for innovations that will further enable success of the Access Centre as outlined in the figure above. Fiscal year 2018/2019 will see the implementation of online self-assessment tools for clients. The implementation of Emergency Department tele-mental health services and mobile crisis response teams in fiscal year 2019/2020 will facilitate the implementation of the Mental Health Emergency Department in fiscal year 2021/2022. Then implementation of mobile crisis response teams and pre-discharge planning for clients in inpatient environments in fiscal year 2019/2020 will support the implementation of assertive community treatment teams and intensive case management in fiscal year 2020/2021 which, in combination with day treatment programming implementation in fiscal year 2020/2021, will support the launch of the community mental health and addictions centres in fiscal year 2021/2022. The implementation of whole team and on-line scheduling in fiscal year 2019/2020 will facilitate the implementation of both client self-scheduling and communication via SMS and text, beginning in fiscal year 2020/2021.

One enabling moves have been implemented, the implementation of outpatient follow-up interventions, virtual peer coaches and self-scheduling in fiscal year 2020/2021, the Mental Health Emergency Department, community mental health and addictions centres, psychosocial education and community-based tele-mental health services in fiscal year 2021/2022 and an integrated electronic health record in fiscal year 2022/2023 will, in combination, support the full and complete implementation of the Health PEI Mental Health and Addictions Access Centre.

10. Establishing a Workforce Strategy to Support the Future

At the core of any successful strategy are the people who come to work every day prepared to carry an organization's mission forward, to do the yeoman's work. It's been said that if you do not get the people part of the equation right the strategy will never succeed. In the case of such a transformative evolution in Health PEI's mental health and addiction model of care, this is absolutely the case.

As Health PEI begins the journey toward their new model of care there will likely be considerable impacts on the type and numbers of resources that will be necessary to successfully execute the on the new model of care. New roles will be launched, some existing roles will evolve, some will remain the same and others might not be necessary in the future. In each scenario the ladies and gentlemen that comprise the heart and soul of the Health PEI mental health and addictions program are about to be afforded with an incredible opportunity to redefine their roles, to gain new skills and to be a part of enhancing the quality and experience for mental health and addictions clients across Health PEI. The people of Health PEI have the opportunity to become the gold standard in rural mental health and addictions workforce planning by looking beyond other workforce models and curating a model that will work for the unique attributed of Prince Edward Island and its mental health and addictions clients.

During the course of redefining the mental health and addictions model of care stakeholders across Health PEI have asked what the future work force model should look like to support the new model of care. This is a question that is not easily answered because there is no one right staffing model that will represent a silver bullet solution. Instead, Health PEI will need to be prepared to look closely at task that need to be accomplished differently in the future and consider how to evolve the available workforce to achieve the desire outcomes for clients and colleagues. There will need to be a comfort level with ambiguity and uncertainty, a desire to seek creative solutions and to lean into experimentation as a way to find the solutions that will work for Health PEI.

In the staffing discussions that ensure, CannonDesign is focusing on the skill types and functions that will be necessary in certain roles. We fully understand that the role titles and responsibilities are not etched in stone. Rather, responsibilities and necessary competencies should be viewed in a holistic manner to identify how best to meet programmatic needs. Where possible, we do weigh in on the quantities of staff necessary to fulfill roles as outlined and in response to the new model of care. This information should be used as guidance for care model and facility planning purposes only, understanding that as roles are defined there will need to be more detailed analysis completed. CannonDesign also understand that aspects of what is proposed may require some existing staff to be retrained or armed with new competencies to completed newly envisioned roles. This is a routine part of care model evolution and experience has demonstrated this is easily achieved and only limited by the willingness of individuals to embrace new roles and competencies.

For the purposes of determining staffing counts, CannonDesign has assumed that one full-time employee (FTE) will provide 1,950 hours of work annually. In addition, we make no assumptions about whether or not the work will be completed in face-to-face settings or via use of digital technologies that could enable members of the mental health and addictions team to be based anywhere in PEI or even elsewhere in Canada or around the globe. To respond to the very real challenges of recruiting talent to rural PEI, Health PEI should consider maximizing the use to tele-mental health and other internet-based solutions to employ individuals off-island who can successfully perform their duties without having to be physically present in Prince Edward Island.

10.1 Health PEI Mental Health and Addictions Access Centre

The Prince Edward Island Mental Health and Addictions Access Centre is one of the cornerstones of the access strategy for any potential or existing client or other interested stakeholder interested in seeking information or access to resources. Operating 24 hours a day, 7 days a week, 365 days a year, the Mental Health and Addictions Access Centre will be a vital link in the coordination of services for would-be clients and those experiencing an acute crisis. As the primary forms of contact with the Mental Health and Addictions Access Centre will be via phone or other virtual means such as internet or mobile-based video.

The access centre will be staffed with mental health and addictions experts who are able to provide high-level initial screening, coordination of resources and access to intake specialists and triaging acute situations to determine if immediate escalation in engagement with the individual contacting the access centre is warranted. While Health PEI will have a number of options with respect to the skills and educational requirements for the individuals manning the call centre, CannonDesign recommends that these individuals have formal education, training and experience in mental health and addictions evaluation and crisis management. It is suggested that health PEI consider staffing the access centre with mental health counselors, mental health nurses and / or mental health social workers who meet the educations and training objectives outlined.

At present the Island Helpline provides free, confidential emotional support and crisis intervention to individuals of all ages. As currently structured, coordinating access to mental health and addictions services is not a part of the Island Helpline's scope of practice. In fiscal year 2016/2017, the Island Helpline supported over 1,300 encounters with approximately ½ of those calls occurring between the hours of 8am and 4pm. 35% of the call to the Island Helpline were made between the hours of 4pm and 12am and 15% of the calls to the Helpline occurred during the overnight hours of 12am to 8am. While it is difficult to project future call volumes based on the expanded scope of services of the access centre in combination with the overall evolution of the model of care, CannonDesign recommends that Health PEI consider the possibility that call volumes could double or even triple over time.

To ensure ample resources are available to handle both an increase in call volumes and simultaneous calls to the access centre, CannonDesign recommends that the new Health PEI Mental Health and Addictions Access Centre be staffed with two specialists at all times. Assuming around-the-clock staffing 365 days of the year, this would result in a requirement for 8.4 FTE's.

10.2 Mobile Crisis Response Teams

Mobile crisis response teams provide intensive intervention for patients who are experience an acute crisis. These teams are designed to stabilize individuals in psychological distress and engage them in the most appropriate course of treatment. The mobile crisis response team are expected to work in collaboration with many aspects of the continuum of mental health and addictions care including the Prince Edward Island Mental Health and Addictions Access Centre, Community mental health and addictions centres, Emergency Departments, primary care providers, Student Well-Being Team, law enforcement and emergency medical services, among other stakeholders. Implementation of crisis response teams in the community will facilitate rapid evaluation by a qualified mental health provider without requiring the client be transferred to an ED staffed with an in-person mental health evaluator. This innovation is expected to reduce utilization of emergency department and inpatient encounters by providing assessment, disposition and transfer to a higher level of care, when appropriate.

CannonDesign has recommended that two mobile crisis response units be deployed in PEI. These teams will work closely with the Mental Health and Addictions Access Centre and could likely share administrative leadership and overhead to reduce programmatic costs. As with nearly every aspect of the mental health and

addictions program there are multiple staffing models that have been successfully employed to resource mobile crisis response teams. A staffing model that was commonly seen was one where each mobile crisis response team is staffed with two team members, both of whom are expert in mental health and addictions evaluation and in case management / care coordination activities. It is strongly recommended that each mobile crisis response team have two team members to ensure staff safety while responding to situations across PEI. With two teams deployed this would require four team members on duty at all times for a total of 16.8 FTEs of clinical staffing.

10.3 Community Mental Health and Addictions Centres

The goal of the community mental health and addictions centres is to provide clients with access to comprehensive community-based mental health and addictions services reflective of community demand. These centres are intended to bring together existing services that are often disparate and uncoordinated into a singular environment that will promote accelerated and convenient access, interdisciplinary models of care, seamless coordination and transition of care and the ability to provide clients with a one-stop shop for their community-based needs. Modeled after other centres of excellence, the Community mental health and addictions centres will function as a hub for community-based mental health and addictions care, bringing more services into communities across Prince Edward Island, particularly benefitting rural communities where accessing some services typically meant long drives to Charlottetown.

Staff requirements for each community mental health centre will be driven by the programmatic mix at each centre. In general, it is expected that each centre could include:

- Initial intake and assessment
- Cognitive behavioral therapy
- Dialectical behavioral therapy
- Family and group therapy
- Addictions counseling
- Day programming
- Community outreach
- Wrap-around psychosocial support services

Intake Coordinators

Community Mental Health and Addiction Centre intake coordinators will serve as the very first point for contact for new clients entering into the mental health and addiction continuum of care. The intake coordinator will be tasked with performing an initial high-level assessment of the mental health, addiction and psychosocial needs of a new client to determine the immediate next steps, resource requirements and timeline necessary within which to initiate treatment. The intake coordinator will immediately identify clients at immediate risk for harm to themselves or others as well as those with the potential to experience life-threatening substance

withdrawal and refer them to a definitive location for rapid assessment and stabilization. The intake coordinators will also assign each to a case manager who will support the client's on-going interactions and needs with the mental health and addictions programs.

Intake coordinators will have extensive experience in mental health and addictions programming and will typically have experience and proper licensure / certifications in either social work, mental health nursing, mental health counseling, psychology or other related field. Assuming that intake coordinators will be available five (5) days a week and will be able to support four (4) intake assessment per day, it is expected that Health PEI will require a total of four intake coordinator FTEs to support the four proposed community mental health and addictions centres. Given the disparity in anticipated volumes at the different community mental health and addictions centres, it will be necessary to closely monitor intake volumes at each site to most appropriate deploy this resource understanding that tele-mental health solutions and / or intake coordinators that move between different centres may be necessary.

Mental Health Counselors

By 2026, Health PEI's community mental health and addictions services will require 49.25 FTEs focused on providing initial intake and assessment, individual counseling cognitive behavioral therapy, dialectical behavioral therapy and family and group therapy for mental health and addictions clients to serve a rapidly growing number of client encounters in community-based environments. These providers can be a combination of psychologists, mental health social workers, mental health nurses and other licensed mental health counselors. For each provider, it is assumed, based on input from Health PEI, that each provide will provide services to five (5) clinical hours per day, 240 days per year. This translates into 1,200 clinical hours per provider per year. CannonDesign assumes that for every two (2) providers there would be one (1) individual in a support role. This individual could be a case manager, a transportation coordinator, a housing placement specialist, an administrative assistant or any host of other roles that are necessary to successfully deliver on a truly integrated, interdisciplinary community-based model.

Community-Based Psychiatrists

In the new model of mental health and addictions care, it is expected that the role community-based psychiatrists will evolve to one such that the psychiatrists are providing direct supervision of a team of providers engaged in mental health and addictions care. The psychiatrist will provide regular (weekly) and as needed consultation on a caseload of patients followed by members of the mental health team. The role of the psychiatrists will also include:

- Support of mental health intake screenings
- Psychiatric risk assessments as warranted
- Medication management
- Supervision of care for high risk clients
- Tele-mental health encounters through community tele-mental health program
- Serve as a clinical educator on mental health and addictions topics for other healthcare providers

In addition, community-based psychiatrists will be expected to partner with their mental health and addictions colleagues to develop clinical protocols to support a wide range of diagnoses that can be safely managed in the community. Psychiatrists will be available to provide in-person or tele-mental health consultation or referral for complex patients. In addition, community-based psychiatrists will provide education and training for primary care-based providers to further promote collaboration and management of lower-acuity clients in primary care settings.

Unfortunately, the existing data available through Health PEI and the subsequent future-based demand projections do not enable CannonDesign to project psychiatrist visits specific to community-based encounters. Using anticipated volumes at each community mental health centre, CannonDesign recommends that each psychiatrist be expected to support approximately four (4) hours per week of mental health consultant time for each 1 FTE care manager. Assuming that psychiatrists will spend approximately 50% of their time in their consultative role, there will be a need for ten (10) community-based psychiatrists to support the services provided in the community mental health and addictions centre.

Case Managers

Another critical staffing component of the Health PEI Community Mental Health and Addictions Centres will be case managers who will be engaged in direct care coordination for clients who require additional support to optimize their care journey. The case managers will be responsible for managing a case load of clients and will engage in activities including, but not necessarily limited to:

- Management of client case load with volume based on acuity
- Coordinate client interactions with referral to all mental health and addictions resources and community services as needed
- Identify and develop response plan for psychosocial barriers that may interfere with treatment compliance
- Serve as a primary liaison between primary care providers and mental health and addictions team for clients under their management
- Systematically track client response to treatment, medication compliance, etc.
- Review moderate and high-complexity clients with supervising psychiatrist weekly and low-complexity clients monthly
- Prepares client for relapse prevention

Case managers will have extensive experience in mental health and addictions programming and will typically have experience and proper licensure / certifications in either social work, mental health nursing, mental health counseling, psychology or other related field. While there are a number of different staffing models based on the constructs of individual care models, CannonDesign recommends that Health PEI evaluate the following structural model for its application to Health PEI:

CLIENT POPULATION	DESCRIPTION	TYPICAL CASE LOAD FOR ONE (1) CASE MANAGER FTE
Low-Acuity	• High-functioning clients • Employed • Strong support network • No or limited psychosocial barriers to compliance	100
Moderate-Acuity	• 1 – 2 inpatient admissions in past 12 months • Co-morbid medical needs • Mental health and substance abuse needs • Dual-diagnosis • Unemployed • Poor or no support network • Multiple psychosocial barriers to compliance	75
High-Acuity	• Safety net population • High suicide risk • ≥ 3 inpatient admissions in past 12 months • Forensic client • No support network • Severe psychosocial barriers to compliance	50

Table 16: Community MH&A Centres - Case Manager Case Load by Client Population

Final determination of the number of case manager FTEs will vary based on the overall client acuity mix. It is highly likely that as the care coordinators achieve greater success in their tasks the overall number of case managers required to support mental health and addictions programming will decline until reaching a steady-state. CannonDesign recommends that staffing needs be assessed annually based on a retrospective analysis of the prior year in conjunction with anticipated demographic shifts for the coming year.

Additional Clinical and Support Staff

To support the successful implementation of the Health PEI Community Mental Health and Addiction Centres it will be necessary to engage a number of additional clinical and support roles. CannonDesign anticipates that these will include occupational therapy, vocational therapy, peer support programming, and administrative / scheduling support. Many of these resources will be shared across multiple community sites based on community demand. Based on available information, CannonDesign recommends that Health PEI consider the following staffing model for additional clinical and support services.

ROLE	DESCRIPTION	RECOMMENDED FTEs
Occupational Therapist	• Evaluating and adapting the environment at home, work, school, and other environments to promote a client's optimal functioning • Providing educational programs, experiential learning, and treatment groups or classes to address assertiveness, self- awareness, interpersonal and social skills, stress management, and role development • Working with clients to develop leisure or avocational interests and pursuits • Facilitating the development of skills needed for independent living such as using community resources, managing one's home, managing time, managing medication, and being safe at home and in the community • Providing training in activities of daily living • Conducting functional evaluations and ongoing monitoring for successful job placement • Providing guidance and consultation to persons in all employment settings, including supportive employment • Providing evaluation and treatment for sensory processing deficits	2
Peer Support Program	• Developing a one-on-one relationship in which a peer leader with mental health or addictions recovery experience encourages, motivates, and supports a peer client in treatment and / or recovery • Connecting the peer client with information on professional and nonprofessional services and resources available in the community • Facilitating or leading recovery-oriented group activities, including support groups and educational activities • Helping peers make new friends and build healthy social networks through emotional, instrumental, informational, and affiliation types of peer support	3

Table 17: Community MH&A Centres - Clinical and Support Services Staffing Model

10.4 Day Programming

Day programming, or partial hospitalization programming, is a level of care that provides clients with access to a safe, structured treatment environment without total disruption of their daily routines. This model enables client to remain in their home environments during treatment while reducing the reliance on inpatient hospitalization for lower acuity needs. This is achieved by providing structured intensive outpatient treatment daily at a location that is accessible and convenient to the client. Treatment typically involves a combination of individual, family and group activities. CannonDesign anticipates that day programming will be co-located with the Health PEI Community Mental Health and Addiction Centres and, as a result, will be able to share a number of resources including occupational and vocational therapists. Discussions of staffing needs in this section will focus on staffing requirements specific to day programming.

Case Manager

Case managers will form the backbone of facilitating clients' journeys through day programming services. The case managers will be responsible for managing a case load of clients in day programming and will engage in activities including, but not necessarily limited to:

- Management of client case load with volume based on acuity
- Initial intake screening for new clients entering day programming
- Coordinate client interactions with referral to all mental health and addictions resources and community services as needed
- Identify and develop response plan for psychosocial barriers that may interfere with treatment compliance
- Serve as a primary liaison between primary care providers and mental health and addictions team for clients under their management
- Systematically track client response to treatment, medication compliance, etc.
- Review all clients with care team weekly
- Prepares client for relapse prevention

Case managers will have extensive experience in mental health and addictions programming and will typically have experience and proper licensure / certifications in either social work, mental health nursing, mental health counseling, psychology or other related field. While there are a number of different staffing models based on the constructs of individual care models, CannonDesign recommends that Health PEI assign one case manager to each day programming site, assuming each site is providing day programming services to no more than 20 clients at any given moment.

10.5 Mental Health Emergency Department

Mental Health Emergency Departments are environments designed to provide acute assessment and stabilization services for patients presenting with an acute mental health or addictions crisis. The staff, educated and trained to provide mental health and addictions services, provide prompt mental health and addictions assessments, stabilization and treatment with rapid disposition to the appropriate setting for on-going care. These services are typically provided in a safe and secure setting within the confines of a dedicated, locked unit.

Staffing models for Mental Health Emergency Departments are well-established in many westernized mental health and addictions care models. CannonDesign recommends that Health PEI adopt a proven staffing model in this area that includes a team of mental health nurses, mental health aides, a mental health and addictions assessor and a case manager. Connectivity to a psychiatrist via tele-mental health technologies forms an essential part of the Mental Health Emergency Department staffing as this technology, in combination with standardized admission and discharge criteria, has eliminated the need for the in-person presence of a psychiatrist.

Mental Health Nurse

Mental health nurses are experts in crisis intervention, mental health, medications and therapies to assist clients in the management and treatment of their mental health and addictions conditions. They are experts in assessing, de-escalating and treating clients with mental health and addictions conditions.
Mental health nurses work as part of an interdisciplinary team to provide total care for their clients. In some clinical settings, mental health nurses provide a combination of mental health, addictions and medical interventions. These include, but are not necessarily limited to:

- Evaluation of mental health and addictions needs
- Support development of treatment plans for clients
- Establish nursing plan of care for clients for the duration of their encounter
- Engage in activities that provide emotional support and de-escalation
- Provide mental health, addictions, medical and / or personal care
- Administer medications as needed

The Mental Health Emergency Department is sized to support 12 treatment stations. Assuming a 4:1 client-to-nurse ratio, it is recommended that the Mental Health Emergency Department be staffed with three nurses at all times. This will require 12.6 FTEs for full staffing.

Mental Health Aide

Mental health aides support nurses, mental heal counselors and psychiatrists provide care to clients with mental health and addictions needs. They work as a part of an interdisciplinary care team and are trained to provide de-escalation interventions and support as needed. One of the primary roles of the mental health aides is to ensure the safety of clients, visitors and staff. Additional responsibilities might include, but are not necessarily limited to:

- Provide direct client care, guidance and positive role modeling as needed
- Engage in activities that provide emotional support and de-escalation
- Provide direct observation of all clients in the Mental Health Emergency Department per unit protocol

The Mental Health Emergency Department is sized to support 12 treatment stations. Assuming a 6:1 client-to-aide ratio, it is recommended that the Mental Health Emergency Department be staffed with two mental health aides at all times. This will require 8.4 FTEs for full staffing.

Mental Health and Addictions Assessor

Mental health and addictions assessors will be tasked with performing an initial assessment of the mental health, addictions, and psychosocial needs of clients presenting to the Mental Health Emergency Department to determine the severity of the presenting compliant, immediate next steps, appropriate site of care, resource requirements, and timeline necessary within which to initiate treatment. Using a series of standardized clinical pathways to develop developed by Health PEI clinical leadership, the mental health and addictions assessors will identify clients at immediate risk for harm to themselves or others as well as those requiring immediate intervention to deescalate conditions that carry a high risk of morbidity or mortality. The mental health and addictions assessors will also provide tele-mental health services to outlying emergency departments and urgent care centres, providing acute assessments to determine if a client warrants transfer to the Mental Health Emergency Department or other disposition that cannot be adequate addressed at the outlying facility.

The mental health and addictions assessors will complete their assessment with a plan for disposition to the appropriate site of on-going care for the client under evaluation. This may include:

- Discharge to home, no intervention indicated
- Discharge to home, refer to community-based services
- Discharge to home, refer for day programming
- Transfer to acute stabilization unit for short-term interventions / initiation of therapy
- Transfer for acute inpatient admission for interventions / initiation of therapy

  Placement in long-term care, transitional housing, supportive housing or other appropriate location

Mental health and addictions assessors will have extensive experience in mental health and addictions programming and will have experience and proper licensure / certifications in either social work, mental health nursing, mental health counseling, psychology, or other related field. It is expected that one mental health intake coordinator will be present in the Mental Health Emergency Department 24/7/365. This translates into the need for 4.2 FTEs.

Case Manager

Another critical staffing component of the Mental Health Emergency Department will be case managers who will engage in direct care coordination for clients who require additional support to optimize their care journey. The case managers will be responsible for managing the disposition needs determined by the mental health and addictions assessor including, but not necessarily limited to:

- Coordinate client referral to all mental health and addictions resources and community services as needed
- Develop response plan for psychosocial barriers that may interfere with treatment compliance
- Coordinate and facilitate transfer to appropriate site of service if admission or placement in long-term housing solution is indicated
- Provide electronic encounter summary to client’s mental health and addictions team, including their primary care provider

- Assign any unaffiliated clients with a care manager for on-going management and support
- Provide end-of-visit education to client and their support network

Case managers will have extensive experience in mental health and addictions programming and will typically have experience and proper licensure / certifications in either social work, mental health nursing, mental health counseling, psychology, or another related field. It is expected that one mental health intake coordinator or case manager will be present in the Mental Health Emergency Department 24/7/365. This translates into the need for 4.2 FTEs.

10.6 Inpatient Mental Health and Addictions Services

Mental Health Nurse

Mental health nurses are experts in crisis intervention, mental health, medications and therapies to assist clients in the management and treatment of their mental health and addictions conditions. They are experts in assessing, de-escalating and treating clients with mental health and addictions conditions. Mental health nurses work as part of an interdisciplinary team to provide total care for their clients. In some clinical settings, mental health nurses provide a combination of mental health, addictions and medical interventions. These include, but are not necessarily limited to:

- Evaluation of mental health and addictions needs
- Support development of treatment plans for clients
- Establish nursing plan of care for clients for the duration of their encounter
- Engage in activities that provide emotional support and de-escalation
- Provide mental health, addictions, medical and / or personal care
- Administer medications as needed

Staffing recommendations for mental health nurses on inpatient unit will vary based on the client cohort and acuity and are outlined in Table 18.

PATIENT TYPE	BEDS	STAFF FTEs	DIRECT CARE (NURSING) STAFF DAY/EVE RATIO	DIRECT CARE (NURSING) STAFF EVE/NIGHT RATIO
Acute	33	57.41	3.5:1	5:1
Geriatric	29	49.25	4:1	5.5:1
Child and Adolescent	5	15.20	3:1	5:1
Forensic	5	15.50	3:1	5:1
Addictions/Acute Detox	16	39.85	3:1	3:1
Transitional Addictions	27	40.13	4:1	6:1
Long-Term Care	135	192.94	4:1	6:1

Table 18: Inpatient MH&A Services – Nursing Ratios by Patient Type

Notes:

- Team coverage above includes direct care (nursing staffing)using a combination of registered nurse, registered practical nurse, and personal assistant / personal service worker, addiction worker, or child/youth developmental specialist coverage, depending on the unit; *staffing based on a staff-to-patient ratio model is most often used to establish staffing plans at the organizational level, rather than using an Hours Per Patient Day model* (Journal of American Psychiatric Nurses Association 18(1) 12-22, 2012)
- Based on a review of recent staffing model planning at other Canadian mental health hospitals, each type of program / unit noted above has been developed to consider the level of contribution from each member of the interdisciplinary team; the contribution varies by member and nature of the patient / client population and may include the following: advanced practice nurse / clinician, occupational therapist / therapy aide, teacher (children's unit only), recreation therapist, behaviour therapist, intake / discharge coordinator, psychologist / psychometrist, social worker, pharmacist, addiction / concurrent disorder specialist, peer facilitator, medical physician, psychiatrist / hospitalist, nurse practitioner
- Recommendation for transitional addictions nurse ratio based on review of various Canadian and US guidelines
- Staffing team for the Acute Detox program was further informed by a review of various US guidelines

Mental Health Aide

Mental health aides support nurses, mental heal counselors and psychiatrists provide care to clients with mental health and addictions needs. They work as a part of an interdisciplinary care team and are trained to provide de-escalation interventions and support as needed. One of the primary roles of the mental health aides is to ensure the safety of clients, visitors and staff. Additional responsibilities might include, but are not necessarily limited to:

- Provide direct client care, guidance and positive role modeling as needed
- Engage in activities that provide emotional support and de-escalation
- Provide direct observation of all clients in the Mental Health Emergency Department per unit protocol

Mental Health Hospitalists

Mental health hospitalists are psychiatrists whose primary professional focus at a given moment is the general care of mental health clients in an inpatient environment. Their activities focus on coordinating and executing on an interdisciplinary model of inpatient care and includes client care, teaching, research, and leadership related to mental health and addictions programming. By focusing their practice on the care of clients in an inpatient setting, a mental health hospitalist typically spends most or all of their work day in the hospital setting. As a result, they are more readily available to clients on the inpatient units than a psychiatrist who spends much the day outside the hospital in a community-based setting.

Staffing guidelines for mental health hospitalists vary by role expectations and robustness of on-unit support roles, such as mental health counselors and case managers. Based on expected acuity levels and the on-unit support roles described in this section, CannonDesign anticipates the following mental health hospitalist staffing needs:

PATIENT TYPE	BEDS	HOSPITALIST FTEs
Acute	33	2
Geriatric	29	2
Child and Adolescent	5	N/A
Forensic	5	N/A
Addictions/Acute Detox	16	1
PATIENT TYPE	**BEDS**	**HOSPITALIST FTEs**
Acute	33	2
Geriatric	29	2
Child and Adolescent	5	N/A
Forensic	5	N/A
Addictions/Acute Detox	16	1

Table 19: Inpatient MH&A Services – Mental Health Hospitalists FTEs

In the hospitalist model there is variability regarding dedicating specific psychiatrists to serve in the role of an inpatient hospitalist versus having all psychiatrists rotate into the role regularly in an "on-service" model. In the on-service model, psychiatrists rotating onto the inpatient units to staff as a hospitalist would do so for a defined period of time, usually ranging between one week and four weeks. During their time "on-service," the psychiatrists would not be expected to provide any community-based services, instead focusing their attention on management of the clients on the inpatient unit. CannonDesign does not have a position on the frequency of rotations on- and off-service and would defer to Health PEI to make this determination in consultation with their psychiatrists.

As demonstrated, the anticipated number of child and adolescent inpatient beds is not in a quantity sufficient to justify dedicated hospitalists. The same is true for the forensic population. In other instances, it is expected that psychiatrists with the appropriate training and expertise will support these patient population while also supporting community-based services simultaneously. Another viable alternative would be to rely on off-island resources through the use of tele-mental health technologies. This approach is currently being employed on occasion for child and adolescent inpatient services at Queen Elizabeth Hospital with great success.

Mental Health Counselors

Inpatient-based mental health counselors are responsible for providing a combination of individual, group and family-based counseling services to clients on the inpatient units, including but not necessarily limited to:

- Psychoeducation
- Individual therapy
- Group therapy
- Family or couple's therapy
- Cognitive behavioral therapy
- Dialectical behavioral therapy
- Trauma-focused therapy
- Bidirectional family support

Typically, a combination of psychologists, mental health social workers and other licensed mental health counselors, these individuals are dedicated to their respective inpatient environments developing deep competencies over time.

Staffing requirements with respect to the number of counselors necessary on each unit will vary based on the acuity of the inpatient environment and the targeted number of hours each client will receive counseling services daily and the proportion of individual to group therapy environments. CannonDesign recommends that counseling services be provided seven days a week, excluding major holidays and each counselor be expected to provide an average of five (5) hours of direct counseling services each day.

Case Manager

Another critical staffing component of the inpatient environment will be case managers who will engage in direct care coordination for clients who require additional support to optimize their care journey. The case managers will be responsible for managing the disposition needs determined by the mental health and addictions assessor including, but not necessarily limited to:

- Begin discharge planning within 24 hours of admission to the inpatient environment
- Serve as the primary liaison between the inpatient unit and the client's family / support network
- Coordinate client referral to all mental health and addictions resources and community services post-discharge as needed
- Develop response plan for psychosocial barriers that may interfere with treatment compliance

- Coordinate and facilitate transfer to appropriate site of service if indicated
- Provide electronic encounter summary to client's mental health and addictions team, including their primary care provider
- Assign any unaffiliated clients with a care manager for on-going management and support
- Provide discharge education to client and their support network

Case managers will have extensive experience in mental health and addictions programming and will typically have experience and proper licensure / certifications in either social work, mental health nursing, mental health counseling, psychology, or other related field. Best practice models in collaborative interdisciplinary inpatient care pairs a case manager with a mental health hospitalist into a care team dyad. This model supports improved communication and coordination of care, particularly if the case manager is present every day for patient rounds with the mental health hospitalist. Assuming this model is employed and assuming that case managers will be on-unit 12 hours per day, approximately 13 case manger FTEs would be required to provide daily coverage for all inpatient units, including the child and adolescent and forensics units which will not have dedicated mental health hospitalists but will require dedicated case management support.

11. References

Alberta Health Services Annual Report. Alberta Health Services, 2016, pp. 1–141, *Alberta Health Services Annual Report*.

Atzema, C. L., et al. "Wait Times in the Emergency Department for Patients with Mental Illness." *Canadian Medical Association Journal*, vol. 184, no. 18, 11 Dec. 2012, doi:10.1503/cmaj.111043

Barekatain, Majid, et al. "Aftercare Services for Patients with Severe Mental Disorder: A Randomized Controlled Trial." *Advances in Pediatrics*., U.S. National Library of Medicine, 19 Mar. 2014, www.ncbi.nlm.nih.gov/pmc/articles/PMC4061646/.

Barker, Victoria, et al. "Impact of Crisis Resolution and Home Treatment Services on User Experience and Admission to Psychiatric Hospital." *The Psychiatrist*, vol. 35, no. 03, 2011, pp. 106–110., doi:10.1192/pb.bp.110.031344.

Bassett, Karen, et al. "Integration Models Lessons from the Behavioral Health Field." SAMHSA.

Batterham, Philip J., et al. "Trajectories of Change and Long-Term Outcomes in a Randomised Controlled Trial of Internet-Based Insomnia Treatment to Prevent Depression." *BJPsych Open*, vol. 3, no. 5, Sept. 2017, pp. 228–235., doi:10.1192/bjpo.bp.117.005231.

Brickell, Tracey, et al. *Patient Safety in Mental Health*. BC Mental Health & Addictions Services, 2009, pp. 1–55, *Patient Safety in Mental Health*.

Buckley, David, and Susan Weisser. "Videoconferencing Could Reduce the Number of Mental Health Patients Transferred from Outlying Facilities to a Regional Mental Health Unit." *Shibboleth Authentication Request*, 2 Oct. 2012, onlinelibrary-wiley-com.proxygw.wrlc.org/doi/full/10.1111/j.1753-6405.2012.00915. x.

Burke, Bridget Teevan, et al. "A Needs-Based Method for Estimating the Behavioral Health Staff Needs of Community Health Centers." *BMC Health Services Research*, vol. 13, no. 1, 2 July 2013, doi:10.1186/1472-6963-13-245.

Cameron, Stewart, et al. "Adoption of Open-Access Scheduling in an Academic Family Practice." *Can Fam Physician,* U.S. National Library of Medicine, Sept. 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC2939120/.

Canadian Psychiatric Association, Wait Time Benchmarks for Patients With Serious Psychiatric Illnesses, A series of recommendations made by Canada's psychiatrists, March 2006

Car, Josip, et al. "Mobile Phone Messaging Reminders for Attendance at Healthcare Appointments." *Cochrane Database of Systematic Reviews*, 11 July 2012, doi:10.1002/14651858.cd007458.pub2.

Clausen, Hanne, et al. "Hospitalization of High and Low Inpatient Service Users before and after Enrollment into Assertive Community Treatment Teams: a Naturalistic Observational Study." *International Journal of Mental Health Systems*, vol. 10, no. 1, 29 Feb. 2016, doi:10.1186/s13033-016-0052-z.

Day, Stephen, et al., editors. *A Community-Based Comprehensive Psychiatric Crisis Response Service*. Technical Assistance Collaborative, Inc., 2005, pp. 1–134, *A Community-Based Comprehensive Psychiatric Crisis Response Service.*

Department of Health & Human Services. "Discharge Planning." *State Government of Victoria*, Department of Health & Human Services, 22 Sept. 2015, www2.health.vic.gov.au/about/key-staff/chief-psychiatrist/chief-psychiatrist-guidelines/discharge-planning-guidelines.

Dieterich, Marina, et al. “Intensive Case Management for Severe Illness.” *U.S. National Library of Medicine*, Cochrane Database, 6 Oct. 2010, www.ncbi.nlm.nih.gov/pmc/articles/PMC4233116/.

Drake, Robert E., and Eric Latimer. *Current Neurology and Neuroscience Reports.*, U.S. National Library of Medicine, Feb. 2012, www.ncbi.nlm.nih.gov/pmc/articles/PMC3266763/.

Esseling, Petra. *Addressing Avoidable ED Utilization: Primer Series*. Advisory Board, 2018, pp. 1–3, *Addressing Avoidable ED Utilization: Primer Series*.

Fee, Christopher, et al. “Association of Emergency Department Length of Stay with Safety-Net Status.” *Jama*, vol. 307, no. 5, 2012, p. 476., doi:10.1001/jama.2012.41.

Fenton WS, Hoch JS, Herrell JM, Mosher L, Dixon L. Cost and Cost-Effectiveness of Hospital vs Residential Crisis Care for Patients Who Have Serious Mental Illness. Arch Gen Psychiatry. 2002;59(4):357–364. doi:10.1001/archpsyc.59.4.357

Fitzpatrick, Kathleen Kara, et al. “Delivering Cognitive Behavior Therapy to Young Adults With Symptoms of Depression and Anxiety Using a Fully Automated Conversational Agent (Woebot): A Randomized Controlled Trial.” *JMIR Mental Health*, vol. 4, no. 2, 6 June 2017, doi:10.2196/mental.7785.

Fortney, John C., et al. *Advances in Pediatrics.*, U.S. National Library of Medicine, 1 Apr. 2013, www.ncbi.nlm.nih.gov/pmc/articles/PMC3816374/.

Fortney, John C., et al. “Practice-Based Versus Telemedicine-Based Collaborative Care for Depression in Rural Federally Qualified Health Centers: A Pragmatic Randomized Comparative Effectiveness Trial.” *American Journal of Psychiatry*, vol. 170, no. 4, Apr. 2013, pp. 414–425., doi:10.1176/appi.ajp.2012.12050696.

Funk, Michelle. “Planning and Budgeting to Deliver Services for Mental Health.” *Mental Health Policy and Service Guidance Package* , 2003, www.who.int/mental_health/policy/services/5_planning%20budgeting_WEB_07.pdf.

Gill PJ, Saunders N, Gandhi S, Gonzalez A, Kurdyak P, Vigod S, Guttmann A, Emergency Department as a First Contact for Mental Health Problems in Children and Youth, Journal of American Academy Child Adolescent Psychiatry. 2017 Jun;56(6):475-482.e4. doi: 10.1016/j.jaac.2017.03.012. Epub 2017 Apr 3

Glover, Gyles, et al. “Crisis Resolution/Home Treatment Teams and Psychiatric Admission Rates in England.” *British Journal of Psychiatry*, vol. 189, no. 05, Nov. 2006, pp. 441–445., doi:10.1192/bjp.bp.105.020362.

Godleski, Linda, et al. “Outcomes of 98,609 U.S. Department of Veterans Affairs Patients Enrolled in Telemental Health Services, 2006–2010.” *Psychiatric Services*, 1 Apr. 2012, ps.psychiatryonline.org/doi/full/10.1176/appi.ps.201100206.

Gonzales, Rachel, et al. “Substance Use Recovery Outcomes among a Cohort of Youth Participating in a Mobile-Based Texting Aftercare Pilot Program.” *Journal of Substance Abuse Treatment*, vol. 47, no. 1, July 2014, pp. 20–26., doi:10.1016/j.jsat.2014.01.010.

Griffiths, Kathleen M., et al. “The Effectiveness of an Online Support Group for Members of the Community with Depression: A Randomised Controlled Trial.” *PLoS ONE*, vol. 7, no. 12, 28 Dec. 2012, doi:10.1371/journal.pone.0053244.

Hasselberg, Nina, et al. “Psychiatric Admissions from Crisis Resolution Teams in Norway: a Prospective Multicentre Study.” *BMC Psychiatry*, vol. 13, no. 1, 18 Apr. 2013, doi:10.1186/1471-244x-13-117.

Haug, Severin, et al. “A Pilot Study on the Feasibility and Acceptability of a Text Message-Based Aftercare Treatment Programme Among Alcohol Outpatients.” *Alcohol and Alcoholism*, vol. 50, no. 2, 19 Mar. 2015, pp. 188–194., doi:10.1093/alcalc/agu107.

Haug, Severin, et al. “A Pre-Post Study on the Appropriateness and Effectiveness of a Web- and Text Messaging-Based Intervention to Reduce Problem Drinking in Emerging Adults.” *Journal of Medical Internet Research*, vol. 15, no. 9, 2 Sept. 2013, doi:10.2196/jmir.2755.

Health Care in Canada, 2012: A Focus on Wait Times. 2012, *Canadian Institute for Health Information*, www.cihi.ca/sites/default/files/document/hcic2012_intro_en.pdf.

HIMISS. “What Is Interoperability?” *HIMSS*, 13 Oct. 2013, www.himss.org/library/interoperability-standards/what-is.

Houston, Thomas K., et al. “Internet Support Groups for Depression: A 1-Year Prospective Cohort Study.” *American Journal of Psychiatry*, vol. 159, no. 12, Dec. 2002, pp. 2062–2068., doi:10.1176/appi.ajp.159.12.2062.

Hugo, Malcolm, et al. “A Comparison in Hospitalization Rates Between a Community-Based Mobile Emergency Service and a Hospital-Based Emergency Service.” *Australian & New Zealand Journal of Psychiatry*, vol. 36, no. 4, Aug. 2002, pp. 504–508., doi:10.1046/j.1440-1614.2002.01042.x.

Jackson, Evette. “A Community-Based Comprehensive Psychiatric Crisis Response Service.” Technical Assistance Collaborative, Apr. 2005.

Johnson, Sonia, et al. “Randomised Controlled Trial of Acute Mental Health Care by a Crisis Resolution Team: the North Islington Crisis Study.” *Bmj*, vol. 331, no. 7517, 15 Sept. 2005, p. 599., doi:10.1136/bmj.38519.678148.8f.

Johnson, Sonia, et al. “Outcomes of Crises before and after Introduction of a Crisis Resolution Team.” *British Journal of Psychiatry*, vol. 187, no. 01, July 2005, pp. 68–75., doi:10.1192/bjp.187.1.68.

Joint Commission. “Alleviating ED Boarding of Psychiatric Patients.” *Joint Commission,* Dec. 2015, www.jointcommission.org/assets/1/23/Quick_Safety_Issue_19_Dec_20151.PDF.

Kates, N, et al. “The Evolution of Collaborative Mental Health Care in Canada: A Shared Vision for the Future.” *Canadian Journal of Psychiatry*, vol. 56, no. 5, May 2011, pp. 1–10.

Kasprow , Wesley, and Robert Rosenheck. “Outcomes of Critical Time Intervention Case Management of Homeless Veterans After Psychiatric Hospitalization.” *Psychiatric Services*, 1 July 2007, ps.psychiatryonline.org/doi/full/10.1176/ps.2007.58.7.929.

Kelly, Charlotte, et al. “Are Differences in Travel Time or Distance to Healthcare for Adults in Global North Countries Associated with an Impact on Health Outcomes? A Systematic Review.” *BMJ Open*, vol. 6, no. 11, 24 Nov. 2016, doi:10.1136/bmjopen-2016-013059.

Keown, Patrick, et al. “Changes to Mental Healthcare for Working Age Adults: Impact of a Crisis Team and an Assertive Outreach Team.” *Psychiatric Bulletin*, vol. 31, no. 08, 2007, pp. 288–292., doi:10.1192/pb.bp.106.012054.

Kinderman, Peter, et al. “The Feasibility and Effectiveness of Catch It, an Innovative CBT Smartphone App.” *BJPsych Open*, vol. 2, no. 03, 13 May 2016, pp. 204–209., doi:10.1192/bjpo.bp.115.002436.

Kisely, Stephen, et al. “A Controlled Before-and-after Evaluation of a Mobile Crisis Partnership between Mental Health and Police Services in Nova Scotia.” *The Canadian Journal of Psychiatry*, vol. 55, no. 10, 1 Oct. 2010, pp. 662–668., doi:10.1177/070674371005501005.

Kravariti, Eugenia, et al. “Effectiveness of Automated Appointment Reminders in Psychosis Community Services: a Randomised Controlled Trial.” *BJPsych Open*, vol. 4, no. 01, Jan. 2018, pp. 15–17., doi:10.1192/bjo.2017.7.

Lawn, Sharon, et al. “Mental Health Peer Support for Hospital Avoidance and Early Discharge: an Australian Example of Consumer Driven Operated Service.” *American Psychological Association*, American Psychological Association, 2008, psycnet.apa.org/record/2008-15562-007.

Leung, Lucinda B., et al. “Primary Care–Mental Health Integration in the VA: Shifting Mental Health Services for Common Mental Illnesses to Primary Care.” *Psychiatric Services*, vol. 69, no. 4, 15 Dec. 2017, pp. 403–409., doi:10.1176/appi.ps.201700190.

Lindsay, Jan A., et al. “Implementation of Video Telehealth to Improve Access to Evidence-Based Psychotherapy for Posttraumatic Stress Disorder.” *Telemedicine and e-Health*, vol. 21, no. 6, June 2015, pp. 467–472., doi:10.1089/tmj.2014.0114.

Loebach, Rachel, and Sasha Ayoubzadeh. “Wait Times for Psychiatric Care in Ontario.” *University of Western Ontario Medical Journal*, vol. 86, no. 2, 2017, pp. 48–50., doi:10.5206/uwomj.v86i2.2027.

Lund, Crick, et al. “Bed/Population Ratios in South African Public Sector Mental Health Services.” *Social Psychiatry and Psychiatric Epidemiology*, vol. 37, no. 7, Feb. 2002, pp. 346–349., doi:10.1007/s00127-002-0552-9.

Lund, Crick. “Human Resources and Training in Mental Health.” World Health Organization, 2012.

Malone, Kevin. “Crisis Services: Effectiveness, Cost-Effectiveness, and Funding Strategies.” HHS Publication CO, 2014.

Manicavasagar, Vijaya, et al. “Feasibility and Effectiveness of a Web-Based Positive Psychology Program for Youth Mental Health: Randomized Controlled Trial.” *Journal of Medical Internet Research*, vol. 16, no. 6, 4 June 2014, doi:10.2196/jmir.3176.

Martini da Costa, Thiago, et al. “The Impact of Short Message Service Text Messages Sent as Appointment Reminders to Patients' Cell Phones at Outpatient Clinics in São Paulo, Brazil.” *Egyptian Journal of Medical Human Genetics*, Elsevier, 26 Sept. 2009, www.sciencedirect.com/science/article/pii/S1386505609001336?via=ihub.

Mateus, Mario D, et al. “The Mental Health System in Brazil: Policies and Future Challenges.” *Advances in Pediatrics.*, U.S. National Library of Medicine, 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2553047/.

Mauer, Barbara. “Behavioral Health Primary Care Integration: The Four Quadrant Model of Evidence-Based Practices.” National Council for Community Behavioral Healthcare, 2002.

McCallister, Cassandra. “A Quick Start Guide to Behavioral Health Integration for Safety-Net Primary Care Providers.” National Council for Behavioral Health.

Mccarty, Dennis, et al. “Substance Abuse Intensive Outpatient Programs: Assessing the Evidence.” *Psychiatric Services*, vol. 65, no. 6, 1 June 2014, pp. 718–726., doi:10.1176/appi.ps.201300249.

McClaren, Ainsile, et al. “Evaluation and Implementation of a Telepsychiatry Trial in the Emergency Department of a Metropolitan Public Hospital.” *Shibboleth Authentication Request*, 25 Sept. 2017, www-tandfonline-com.proxygw.wrlc.org/doi/full/10.1080/15228835.2017.1367351?scroll=top.

Mcdermott, Shannon, et al. “Reducing Hospitalisation among People Living with Severe Mental Illness.” *Australian Health Review*, vol. 40, no. 2, Apr. 2016, pp. 124–128., doi:10.1071/ah15073.

Moltke, Katinka, et al. “Psychiatric Emergency Services in Copenhagen 2012: A 27-Year Psychiatric and Demographic Follow-up Study.” *Nordic Journal of Psychiatry*, vol. 69, no. 6, 3 Aug. 2015, pp. 1741–1747., doi:10.3109/08039488.2014.1003402.

Moran, Lucy, et al. “The Effect of SMS (Text Message) Reminders on Attendance at a Community Adult Mental Health Service Clinic: Do SMS Reminders Really Increase Attendance?” *Irish Journal of Medical Science (1971 -)*, vol. 187, no. 3, 16 Aug. 2017, pp. 561–564., doi:10.1007/s11845-017-1710-0.

Morrow, R, et al. “A Novel Mental Health Crisis Service - Outcomes of Inpatient Data.” *Advances in Pediatrics.*, U.S. National Library of Medicine, Jan. 2016, www.ncbi.nlm.nih.gov/pmc/articles/PMC4847833/.

Mueser, KT. “Models of Community Care for Severe Mental Illness: a Review of Research on Case Management.” *Advances in Pediatrics.*, U.S. National Library of Medicine, 1 Jan. 1998, www.ncbi.nlm.nih.gov/books/NBK67493/.

Neale, Michael. “Building Your Program- Assertive Community Treatment.” U.S. Department of Health and Human Services, 2008.

Nesbitt, Thomas S., et al. “Perceptions of Local Health Care Quality in 7 Rural Communities with Telemedicine.” *Freshwater Biology*, Wiley/Blackwell (10.1111), 6 June 2006, onlinelibrary.wiley.com/doi/pdf/10.1111/j.1748-0361.2005.tb00066.x.

Netten, Ann. “Residential Care Staffing Review.” Ministry of Health, Mar. 2017.

Neufeld, Jonathan, and Ruth Case. “Walk-In Telemental Health Clinics Improve Access and Efficiency: A 2-Year Follow-Up Analysis.” *Telemedicine and e-Health*, vol. 19, no. 12, Dec. 2013, pp. 938–941., doi:10.1089/tmj.2013.0076.

Nicks, B. A., and D. M. Manthey. “The Impact of Psychiatric Patient Boarding in Emergency Departments.” *Emergency Medicine International*, vol. 2012, 2012, pp. 1–5., doi:10.1155/2012/360308.

Patient Experiences with Short-Stay Mental Health and Substance Use Services in British Columbia. R.A. Malatest & Associates Ltd., 2010, pp. 1–88, *Patient Experiences with Short-Stay Mental Health and Substance Use Services in British Columbia*.

Pickin, Mark, et al. “Evaluation of Advanced Access in the National Primary Care Collaborative.” *Advances in Pediatrics.*, U.S. National Library of Medicine, 1 May 2004, www.ncbi.nlm.nih.gov/pmc/articles/PMC1266165/.

“Position Statement 59: Responding to Behavioral Health Crises.” Mental Health America, 16 Aug. 2017, www.mentalhealthamerica.net/issues/position-statement-59-responding-behavioral-health-crises.

Powell, John, et al. “Effectiveness of a Web-Based Cognitive-Behavioral Tool to Improve Mental Well-Being in the General Population: Randomized Controlled Trial.” *Journal of Medical Internet Research*, vol. 15, no. 1, 31 Dec. 2012, doi:10.2196/jmir.2240.

Pratt, Sarah I., et al. “Automated Telehealth for Managing Psychiatric Instability in People with Serious Mental Illness.” *Journal of Mental Health*, vol. 24, no. 5, 2 July 2014, pp. 261–265., doi:10.3109/09638237.2014.928403.

Salisbury, Chris, et al. “Does Advanced Access Improve Access to Primary Care Health? Questionnaire Survey of Patients.” *Advances in Pediatrics.*, U.S. National Library of Medicine, 1 Aug. 2007, www.ncbi.nlm.nih.gov/pmc/articles/PMC2099666/.

Salisbury, Chris, et al. “Impact of Advanced Access of Access, Workload, and Continuity: Controlled before and after and Simulated Patient Study.” *Advances in Pediatrics.*, U.S. National Library of Medicine, 1 Aug. 2007, www.ncbi.nlm.nih.gov/pmc/articles/PMC2099665/.

Saurman, Emily, et al. “Responding to Mental Health Emergencies: Implementation of an Innovative Telehealth Service in Rural and Remote New South Wales, Australia.” *Journal of Emergency Nursing*, vol. 37, no. 5, Sept. 2011, pp. 453–459., doi:10.1016/j.jen.2010.11.005.

Scotia, Nova. “Mental Health Adult Community Based Services.” *Government of Nova Scotia, Canada*, 20 Oct. 2014, waittimes.novascotia.ca/procedure/mental-health-adult-community-based-services#trends.

Scotia, Nova. “Mental Health Child and Adolescent Community Based Services.” *Government of Nova Scotia, Canada*, 20 Oct. 2014, waittimes.novascotia.ca/procedure/mental-health-adult-community-based-services#trends.

Scott, Roger. “Evaluation of a Mobile Crisis Program: Effectiveness, Efficiency, and Consumer Satisfaction.” Psychiatric Services, Sept. 2000.

Sunderji, Nadiya, et al. “Urgent Psychiatric Services: A Scoping Review.” *The Canadian Journal of Psychiatry*, vol. 60, no. 9, 2015, pp. 393–402., doi:10.1177/070674371506000904.

Segal, Leonie, et al. “A Needs-Based Workforce Model to Deliver Tertiary-Level Community Mental Health Care for Distressed Infants, Children, and Adolescents in South Australia: a Mixed-Methods Study.” *The Lancet Public Health*, vol. 3, no. 6, June 2018, doi:10.1016/s2468-2667(18)30075-6.

Seymour, Joanne, et al. “Changing Characteristics of a Psychiatric Emergency Care Centre. An Eight Year Follow-up Study.” *Australasian Psychiatry*, 8 May 2018, p. 103985621877225., doi:10.1177/1039856218772252.

“Sg2 Intelligence.” *Intelligence | Sg2*, intel.sg2.com/members/login/?returnUrl=%2Fresource-types%2Finfographics%2F2018%2F3%2Fintegrated_behavioral_health%2F.

Simms, Hannah, et al. “Text Message Reminders of Appointments: A Pilot Intervention at Four Community Mental Health Clinics in London.” *Psychiatric Services*, 2 Feb. 2012, ps.psychiatryonline.org/doi/abs/10.1176/appi.ps.201100211.

Sledge, W H, et al. “Day Hospital/Crisis Respite Care versus Inpatient Care, Part II: Service Utilization and Costs.” *Advances in Pediatrics.*, U.S. National Library of Medicine, Aug. 1996, www.ncbi.nlm.nih.gov/pubmed/8678177.

Sledge, William H., et al. “Effectiveness of Peer Support in Reducing Readmissions of Persons With Multiple Psychiatric Hospitalizations.” *Psychiatric Services*, vol. 62, no. 5, May 2011, pp. 541–544., doi:10.1176/ps.62.5.pss6205_0541.

Sloan, Paul A., et al. “Psychiatric Hospitalists and Continuity of Care: A Comparison of Two Models.” *Journal of Psychiatric Practice*, vol. 16, no. 3, May 2010, pp. 170–176., doi:10.1097/01.pra.0000375713.85454.8f.

Spaulding, Ryan, et al. “Cost Savings of Telemedicine Utilization for Child Psychiatry in a Rural Kansas Community.” *Telemedicine and e-Health*, vol. 16, no. 8, 6 Oct. 2010, pp. 867–871., doi:10.1089/tmj.2010.0054.

Suffoletto, Brian, et al. “A Text Message Alcohol Intervention for Young Adult Emergency Department Patients: A Randomized Clinical Trial.” *Annals of Emergency Medicine*, vol. 64, no. 6, July 2014, doi:10.1016/j.annemergmed.2014.06.010.

Svensson, Bengt, et al. “Outcomes of Clients in Need of Intensive Team Care in Flexible Assertive Community Treatment in Sweden.” *Nordic Journal of Psychiatry*, vol. 72, no. 3, 2018, pp. 226–231., doi:10.1080/08039488.2018.1430168.

"Team Structure." Evidence-Based Behavioral Interventions in Primary Care | University of Washington AIMS Center, University of Washington, 2017, aims.uw.edu/collaborative-care/team-structure.

"Text Message Reminders of Appointments: A Pilot Intervention at Four Community Mental Health Clinics in London." *Psychiatric Services*, ps.psychiatryonline.org/doi/abs/10.1176/appi.ps.201100211.

Thomas, John F., et al. "The Use of Telepsychiatry to Provide Cost-Efficient Care During Pediatric Mental Health Emergencies." *Psychiatric Services*, vol. 69, no. 2, Feb. 2018, pp. 161–168., doi:10.1176/appi.ps.201700140.

Tice, Jeffrey A., et al. *Integrating Behavioral Health into Primary Care*. Institute for Clinical and Economic Review, 2015, pp. 1–136, *Integrating Behavioral Health into Primary Care*.

Torrey, E. Fuller, et al. "The Shortage of Public Hospital Beds for Mentally Ill Persons." *The Advocacy Treatment Center*, 2008.

Understanding Emergency Department Wait Times. 2007, *Canadian Institute for Health Information*, https://secure.cihi.ca/free_products/Emergency_Department_Wait_Times_III_2007_e.pdf.

Van der Leer, Gerrit, and Ian Musgrove. "British Columbia Program Standards for Assertive Community Treatment (ACT) Teams." Ministry of Health Services, 31 Mar. 2008.

Vanderploeg, Jeffrey J., et al. "Extended Day Treatment: A Comprehensive Model of After School Behavioral Health Services for Youth." *Child & Youth Care Forum*, vol. 38, no. 1, 2008, pp. 5–18., doi:10.1007/s10566-008-9062-6.

Veldhuizen, J. Remmers Van. "FACT: A Dutch Version of ACT." *Community Mental Health Journal*, vol. 43, no. 4, 2007, pp. 421–433., doi:10.1007/s10597-007-9089-4.

Vervloet, Marcia, et al. "The Effectiveness of Interventions Using Electronic Reminders to Improve Adherence to Chronic Medication: a Systematic Review of the Literature." *Journal of the American Medical Informatics Association*, vol. 19, no. 5, 2012, pp. 696–704., doi:10.1136/amiajnl-2011-000748.

Vigod, Simone N., et al. "Transitional Interventions to Reduce Early Psychiatric Readmissions in Adults: Systematic Review." *British Journal of Psychiatry*, vol. 202, no. 03, Mar. 2013, pp. 187–194., doi:10.1192/bjp.bp.112.115030.

Walsh, Tracy. "Integrated Behavioral Health Implementation Toolkit." *Advisory Board Daily Briefing*, 26 Mar. 2015, www.advisory.com/research/population-health-advisor/resources/2015/integrated-behavioral-health-implementation-toolkit.

Wand, Timothy, et al. "Realistic Evaluation of an Emergency Department-Based Mental Health Nurse Practitioner Outpatient Service in Australia." *Freshwater Biology*, Wiley/Blackwell (10.1111), 20 May 2011, onlinelibrary.wiley.com/doi/pdf/10.1111/j.1442-2018.2011.00601.x.

Xiang, Yu-Tao, et al. "Efficacy of the Community Re-Entry Module for Patients with Schizophrenia in Beijing, China: Outcome at 2-Year Follow-Up." *British Journal of Psychiatry*, vol. 190, no. 01, 2 Jan. 2018, pp. 49–56., doi:10.1192/bjp.bp.106.023697.

Zeller, Scott, et al. "Effect of a Regional Dedicated Psychiatric Emergency Service on Boarding and Hospitalization of Psychiatric Patients in Area Emergency Departments." *Western Journal of Emergency Medicine*, vol. 15, no. 1, Feb. 2014, pp. 1–6., doi:10.5811/westjem.2013.6.17848.

Health PEI
One Island Health System

APPENDICES

12. Appendices

Appendix I – Supporting Data

Chart 1: Population Forecast Baseline Volumes, 2016/17 – 2026/27

Site of Service	Age Cohort	Baseline Visits 2016 / 17	Baseline Visits 2026 / 27
Community Mental Health and Addictions			
Community Mental Health and Addictions	0-14	2,933	3,224
	15-24	2,241	2,399
	25-64	7,856	8,303
	65+	1,232	1,642
Community Mental Health and Addictions: Community MMTP	All	1,952	2,184
Community Mental Health and Addictions: Walk-In Clinics	All	466	521
Community Mental Health and Addictions Total		**16,680**	**18,273**
Community Housing			
Community Housing	0-14	-	-
	0-17	15	16
	15-24	-	-
	18-29	40	43
	25-64	-	-
	65+	-	-
Community Housing – Deacon House	All	1,237	1,384
Community Housing Female	0-14	11	13
	15-24	8	9
	25-64	34	36
	65+	-	-
Community Housing Male	0-14	15	17
	15-24	12	13
	25-64	105	111
	65+	3	4
Community Housing Total		**1,480**	**1,646**
Emergency Department			
Emergency Department	0-17	1,452	1,578
	18-64	8,382	8,892
	65+	1,836	2,446
Emergency Department – Crisis Consults	All	1,817	2,033
Emergency Department Total		**13,487**	**14,949**
Inpatient			
Inpatient Mental Health	0-17	175	190
	18-64	562	596
	65+	285	380
Inpatient Mental Health – Concurrent	All	231	258
Inpatient Addictions – Detox	All	1,332	1,490
Inpatient Addictions – Transition Unit	All	397	444
Inpatient – All Other Patients	All	195	255
Inpatient Total		**3,177**	**3,613**
Grand Total		**34,824**	**38,481**

Chart 2: Mental Health Planning Staffing Model

See detailed direct care staffing assumptions on next page

	Child / Adolescent MH	Adult MH	Geriatric MH	Forensic MH	Acute Detox	Transitional Addictions	LTC
beds/Unit	**5**	**33**	**29**	**5**	**16**	**27**	**30**
Manager	0.50	0.50	1.00	0.50	0.50	0.50	0.50
RN	5.78	20.21	14.44	5.78	10.50	5.25	7.88
RPN	2.89	23.10	17.33	5.78	5.25	5.25	15.75
PA/PSW/Addcitions Wrkrs/CY Dev Spec	2.89	0.00	2.89	0.00	15.75	13.13	8.40
Ward Clerk	0.50	1.90	1.90	0.50	1.90	1.90	1.90
Advanced Practice Nurse/Clinician	0.25	0.50	0.50	0.25	0.50	0.50	0.50
Nurse Practioner / Hospitalist	0.25	0.50	0.50	0.25	0.50	0.25	0.25
OT	0.50	0.50	0.50	0.50	0.20	0.70	0.35
OTA		1.40	1.40			1.40	1.40
Teacher	0.50						
Recreation Therapist		1.40	1.40	0.70		1.40	1.40
Behaviour Therapist	0.20	1.00	1.00	0.30	0.40	0.50	0.50
Intake/Discharge Coordination	0.10	0.25	0.25	0.10	0.25	0.25	0.25
Psychologist / Psychometrist	0.20	0.40	0.40	0.20	0.50	0.20	
Social Worker	0.20	2.00	2.00	0.20	0.50	2.00	1.40
Pharmacist	0.10	0.50	0.50	0.10	0.50	0.20	0.20
Addiction / Concurrent Disorder Specialist	consult'g	0.25	0.25	consult'g	2.10	4.20	0.20
Peer Facilitators		0.50	0.50			1.00	0.50
Psychiatrist	0.25	2.00	2.00	0.25		1.00	1.00
Medical Physician (incl GP, Specialists)	0.10	0.50	0.50	0.10	0.50	0.50	0.50
TOTAL/Unit	**15.20**	**57.41**	**49.25**	**15.50**	**39.85**	**40.13**	**42.88**
FTEs/bed	**3.04**	**1.74**	**1.70**	**3.10**	**2.49**	**1.49**	**1.43**
TARGET FTEs (total team FTEs/bed; based on review of other Canadian examples)	2.30	1.70	1.70	2.40	review of US guidelines	1.45	1.20
Beds by Program	**5**	**33**	**29**	**5**	**16**	**27**	**135**
Total by Program (FTEs)	**15.20**	**57.41**	**49.25**	**15.50**	**39.85**	**40.13**	**192.94**

Chart 3: Mental Health Planning Staffing Model

Mental Health Planning
Staffing Modelling

ASSUMPTIONS:

1. Assumes minimal change in census on weekends
2. coverage by 4 hr block to allow for 8 or 12 hr shifts
3. Conversion version of shift hrs to paid hrs discounted by an unpaid 30 minute break over 8 hrs (factor of 93.75%)
4. addition of 25% to backfill for sickness, vacation, education, etc.
5. Some programs have contstant care allocation of 10% added to generate additional FTES needed for this function where this cannot be covered from shift coverage

6. Target Direct Care Patient:Staff Ratios	Day/Evg	Evg/Night	Comments
Acute (blend of assessment / standard)	3.5:1	5:1	
Geriatric (assumes assessmsent on Acute)	4:1	5.5:1	
C/A	3:1	5:1	must meet min of 2 staff all shifts; back-up from adult or adjacent
Forensic	3:1	5:1	must meet min of 2 staff all shifts; back-up from adult or adjacent
High Care (e.g. Acute Detox)	3:1	3:1	
Transitional / LTC	4:1	6:1	

Proposed Direct Clinical Staffing by shift		Mon to Fri						Weekends										
		0000-0400	0400-0800	0800-1200	1200-1600	1600-2000	2000-2400	0000-0400	0400-0800	0800-1200	1200-1600	1600-2000	2000-2400	*total hours*	*FTE (hr/1950)* 0.9375*	*FTE incl relief @ 25%*	*FTEs 10% for constant obs*	*TOTAL FTEs*
Child / Adolescent MH	**5**																	
RN (back-up from adult)	high care	1	1	1	1	1	1	1	1	1	1	1	1	8,736	4.20	5.25	0.53	5.78
RPN				1	1	1				1	1	1		4,368	2.10	2.63	0.26	2.89
C/Y Development Specialist		1	1				1	1	1				1	4,368	2.10	2.63	0.26	2.89
		2.50	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*			**10.50**	**1.05**	**11.55**
Adult MH	**33**																	
RN	some high care	3	3	4	4	4	3	3	3	4	4	4	3	30,576	14.70	18.38	1.84	20.21
RPN		3	3	5	5	5	3	3	3	5	5	5	3	34,944	16.80	21.00	2.10	23.10
PA/PSW														0	0.00	0.00	0.00	0.00
		5.50	*5.50*	*3.67*	*3.67*	*3.67*	*5.50*	*5.50*	*5.50*	*3.67*	*3.67*	*3.67*	*5.50*			**39.38**	**3.94**	**43.31**
Geriatric MH	**29**																	
RN	some high care	2	2	3	3	3	2	2	2	3	3	3	2	21,840	10.50	13.13	1.31	14.44
RPN		3	3	3	3	3	3	3	3	3	3	3	3	26,208	12.60	15.75	1.58	17.33
PA/PSW				1	1	1				1	1	1		4,368	2.10	2.63	0.26	2.89
		5.80	*5.80*	*4.14*	*4.14*	*4.14*	*5.80*	*5.80*	*5.80*	*4.14*	*4.14*	*4.14*	*5.80*			**31.50**	**3.15**	**34.65**
Forensic MH	**5**																	
RN (back-up from adult)	high care	1	1	1	1	1	1	1	1	1	1	1	1	8,736	4.20	5.25	0.53	5.78
RPN		1	1	1	1	1	1	1	1	1	1	1	1	8,736	4.20	5.25	0.53	5.78
PA/PSW														0	0.00	0.00	0.00	0.00
		2.50	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*	*2.50*			**10.50**	**1.05**	**11.55**
Acute Detox	**16**																	
RN	high care	2	2	2	2	2	2	2	2	2	2	2	2	17,472	8.40	10.50		10.50
RPN		1	1	1	1	1	1	1	1	1	1	1	1	8,736	4.20	5.25		5.25
Addictions Workers		3	3	3	3	3	3	3	3	3	3	3	3	26,208	12.60	15.75		15.75
		2.67	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*	*2.67*			**31.50**	**0.00**	**31.50**
Transitional Addictions	**27**																	
RN	no high care	1	1	1	1	1	1	1	1	1	1	1	1	8,736	4.20	5.25		5.25
RPN		1	1	1	1	1	1	1	1	1	1	1	1	8,736	4.20	5.25		5.25
Addictions Workers		2	2	3	3	3	2	2	2	3	3	3	2	21,840	10.50	13.13		13.13
		6.75	*6.75*	*5.40*	*5.40*	*5.40*	*6.75*	*6.75*	*6.75*	*5.40*	*5.40*	*5.40*	*6.75*			**23.63**	**0.00**	**23.63**
LTC	**30**																	
RN	(no high care)	1	1	2	2	2	1	1	1	2	2	2	1	13,104	6.30	7.88		7.88
RPN		3	3	3	3	3	3	3	3	3	3	3	3	26,208	12.60	15.75		15.75
PA/PSW		1	1	2	2	2	1	1	1	2	2	2	1	13,104	6.72	8.40		8.40
		6.00	*6.00*	*4.29*	*4.29*	*4.29*	*6.00*	*6.00*	*6.00*	*4.29*	*4.29*	*4.29*	*6.00*			**32.03**	**0.00**	**32.03**