Development and pilot testing an integrated mental health and substance use Needs-based Planning model: Lessons learned for local planning and model refinements

Dr. Brian Rush

Nov 23, 2022

Lisbon Addictions 2022

The big challenge we are hoping to improve for system planners and decision-makers

- The treatment “systems” of today are not “systems” at all

- Getting the right balance is now challenging :
  - Across mental health, substance use and concurrent disorder services
  - Across the treatment and support continuum – e.g., residential, community/hospital, levels of withdrawal management, etc. and,
  - Within the specialized sectors (MH and SU) and outside in the broader system (e.g. primary care, schools, corrections)

- No real sense of the required capacity of these services in relation to community needs

- Goal should be a treatment and support system that maximizes population health as well as individual and family outcomes

Key project details

- Funded by Health Canada – three years (November 2019 – October 2022)
- CAMH project, with significant **collaboration** from MHCC, CCSA, CIHI
- Tremendous support across the country
  - National Advisory Committee
  - Expert Research Advisors
  - Links to other collaborating organizations, e.g. Youth Wellness Hubs/Graham Boeck Foundation
- Building upon:
  - Almost 10 years of work on a national substance use model, including implementation experience (NE Ontario, Quebec, Manitoba, BC)
  - Recent work in BC that included both substance use and mental health

Some comparisons

National Model

Aligned with tiered framework for planning broad spectrum of severity (including low-high risk substance use) trans- diagnostic and focused on severity and complexity

Estimates number in need for each core service in a given jurisdiction

Pilot testing, evaluation and implementation experience for gap analysis

BC – based model

Diagnosis–based with levels of severity within diagnostic band

Combines level of need across disorders, adjusting for co-morbidity

Estimates the required suite of services and then combined to yield, for SU and MH:

- Number in need
- FTE's
- Bed requirements

Gap analysis not yet pilot tested

International Work

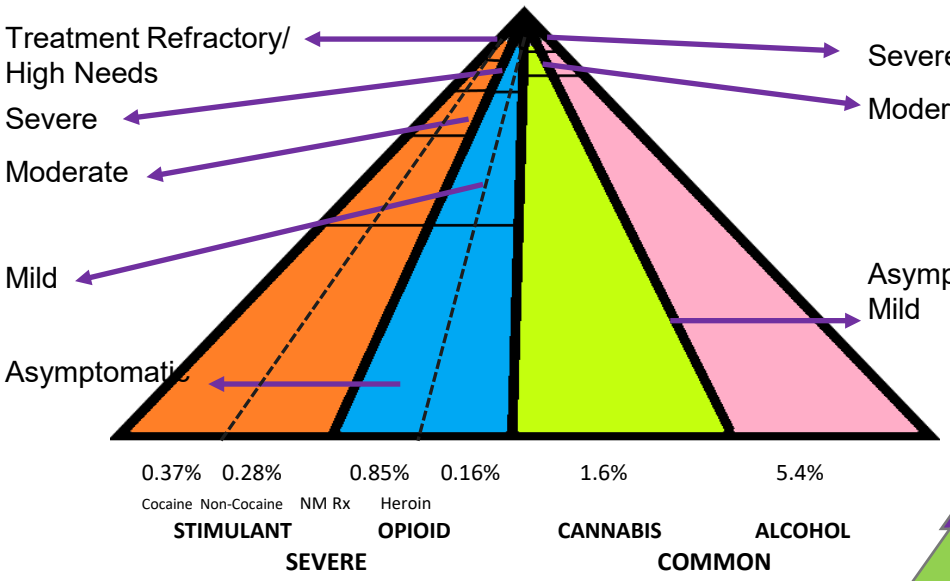
Confirms emergence of Needs-Based Planning as evidence-based practice

Mix of both approaches – tiered model and diagnostic

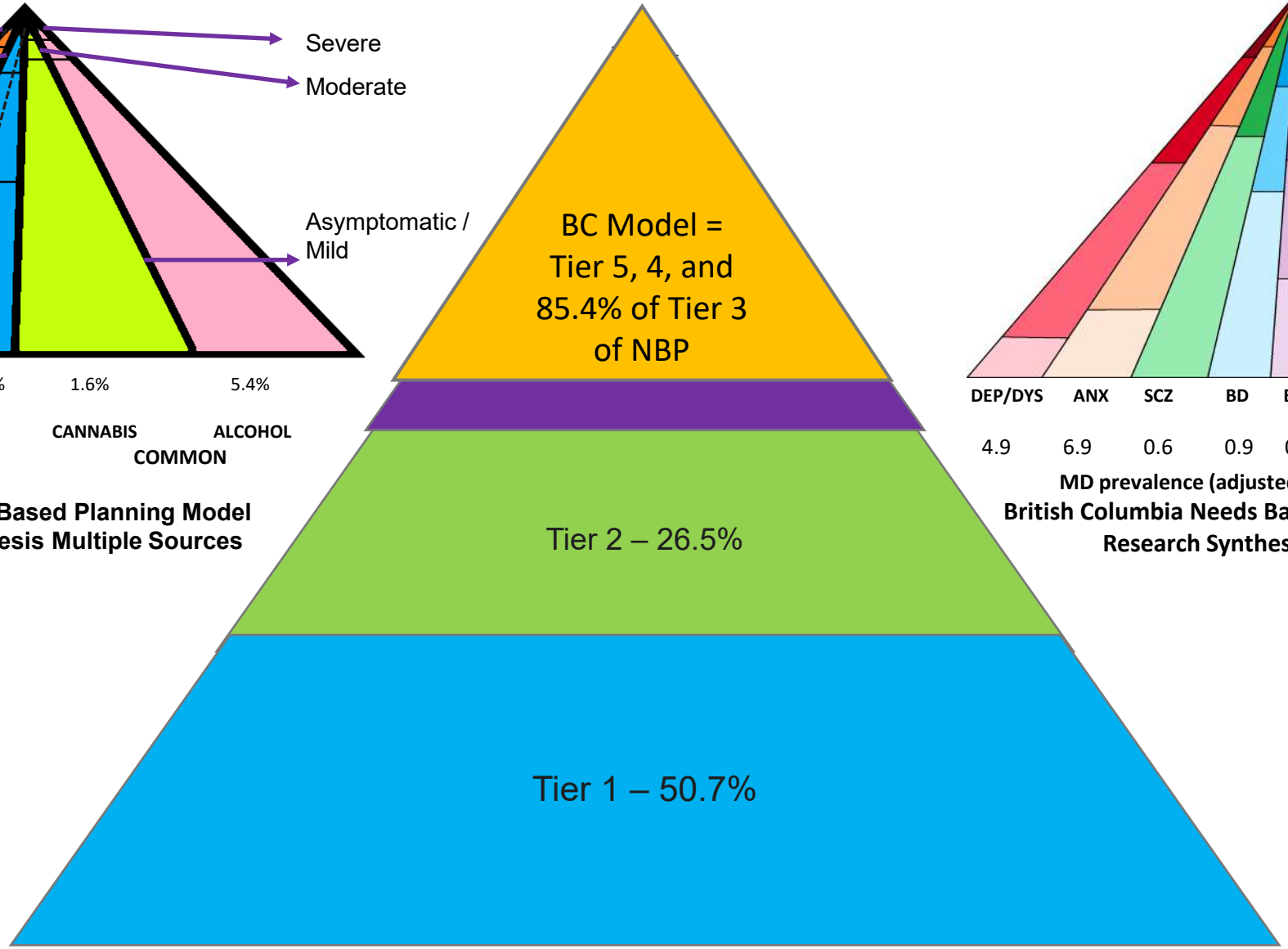
Sharing learnings across jurisdictions (e.g., Australia)

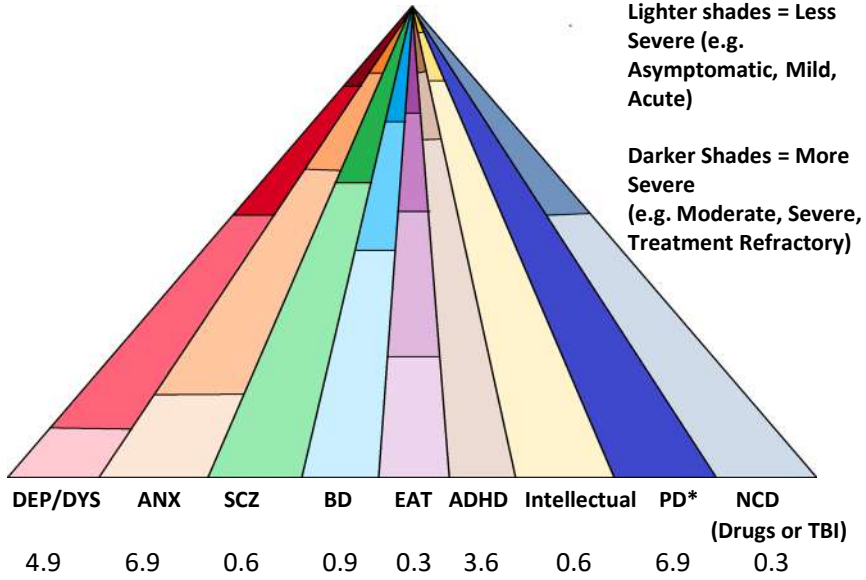
Lessons learned for implementation

Prevalence and severity of mental and substance use disorders



British Columbia Needs Based Planning Model (2019) - Research Synthesis Multiple Sources

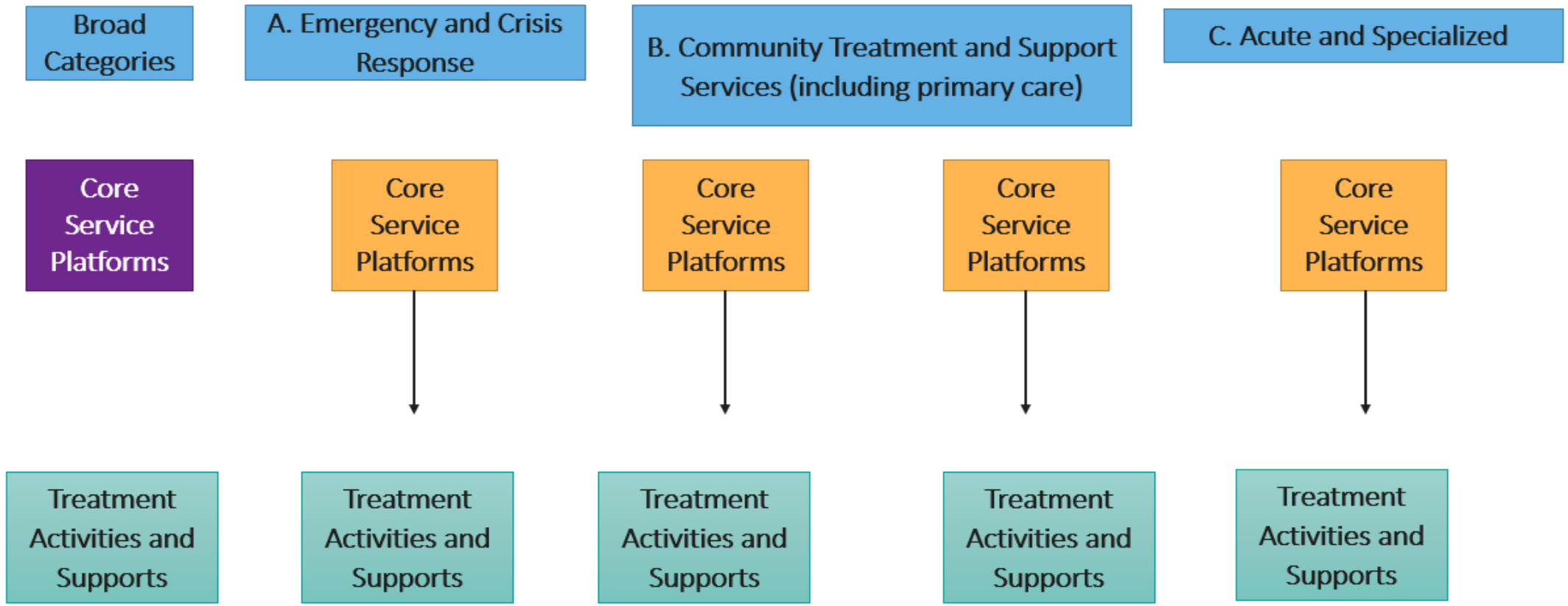




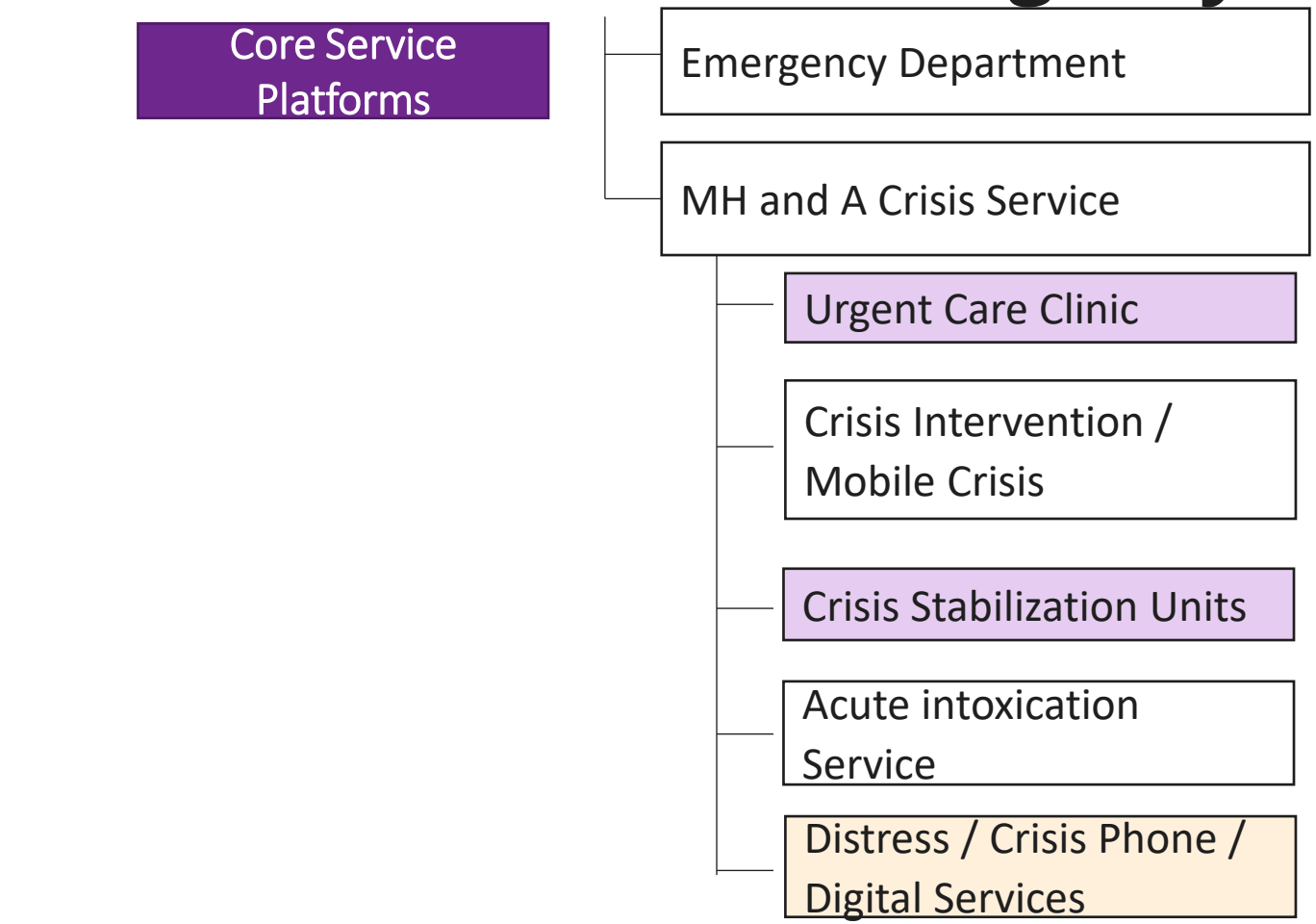
MD prevalence (adjusted for comorbidity)=17.36%

British Columbia Needs Based Planning Model (2019) - Research Synthesis Multiple Sources

Overview of National Core Services Framework



Function A. Emergency and Crisis Response



Other

- Digital Services and supports

Legend

- Calculated separately for gap analysis
- Calculated together for gap analysis
- Not included in gap analysis

Function: B. Community Treatment and Support Overview – Four components

Core Service Platforms

1. Collaborating Partners

2. Comprehensive MH/SU Services and Supports

3. Intensive MH/SU Services and Supports

4. Bed-based Recovery Supports

Function: B. Community Treatment and Support Services – Part 1

Core Service Platforms

1. Collaborating Partners

- Primary Care
- Public Health Services
- Social Services
- Family and Youth Services
- Schools/Post-Secondary
- Justice-related Services

2. Comprehensive MH/SU Services and Supports

- Coordinated/Central Access and Navigation
- MH /SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
- Peer and Family Support Services (Blended or Independent) MH /SU teams (include psychosocial)
- Consultation and Liaison (ER, Hospital, LTC, Home Care, Schools, Police-based)
- Home/Mobile WMS
- Addiction Medicine Specialty Services (physician, psychiatrist, RAAM/RAAC, OAT, managed alcohol)
- MH and SU court
- Supervised/Safe consumption sites

Other

- Digital Services and supports
- Private (e.g., EAP, therapist, psychologist)

Legend

- Calculated separately for gap analysis
- Calculated together for gap analysis
- Not included in gap analysis

Function: B. Community Treatment and Support Services – Part 2

Core Service Platforms

3. Intensive MH/SU Services and Supports

- Community Bed-based WMS
- Community SU Intensive Bed-based Treatment
- Intensive Case Management (SU, MH, CD)
  - SU – Specific ICM
  - MH – Specific ACT/FACT
- Community-based Intensive Day or Evening Treatment Services (SU, MH, CD)
  - SU – Specific
  - MH – Specific

4. Bed-based Recovery Supports

- Supported Housing - high and moderate support (e.g., Housing First)
  - SU – Specific
  - MH – Specific
- SU Supportive Recovery Services
- Multi-functional SU Transition Services
- Transitional/Long-term bed-based Mental Health Recovery

Other

- Digital Services and supports
- Private (e.g., EAP, therapist, psychologist, residential treatment facility)

Legend

- Calculated separately for gap analysis
- Calculated together for gap analysis
- Not included in gap analysis

Function C. Acute and Specialized

Core Service Platforms

- Hospital bed-based Acute Care
- Hospital bed-based Tertiary Care
- Hospital bed-based SU WMS
- Hospital bed-based Intensive SU Treatment

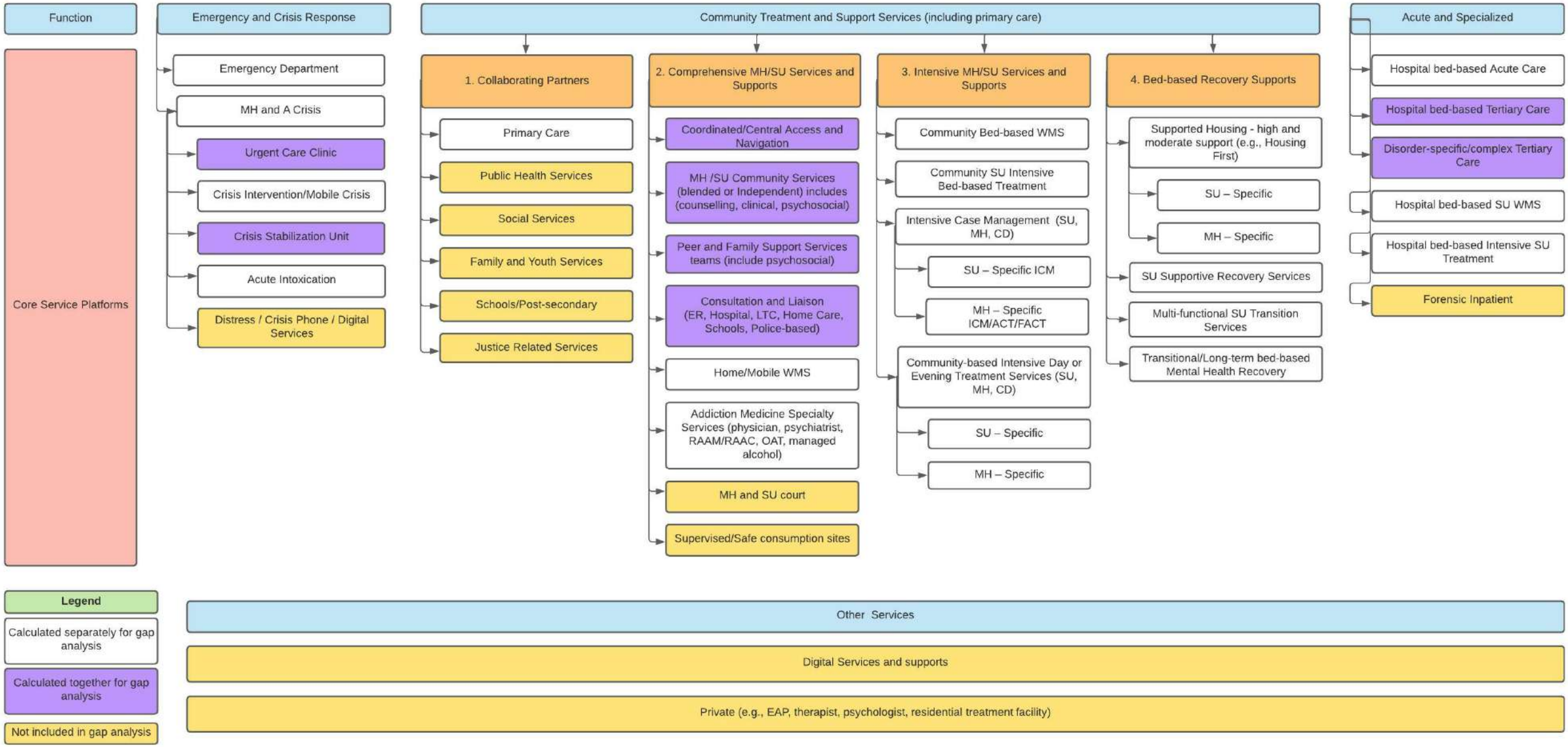
- Forensic Inpatient
- Disorder-specific/complex Tertiary Care

Other

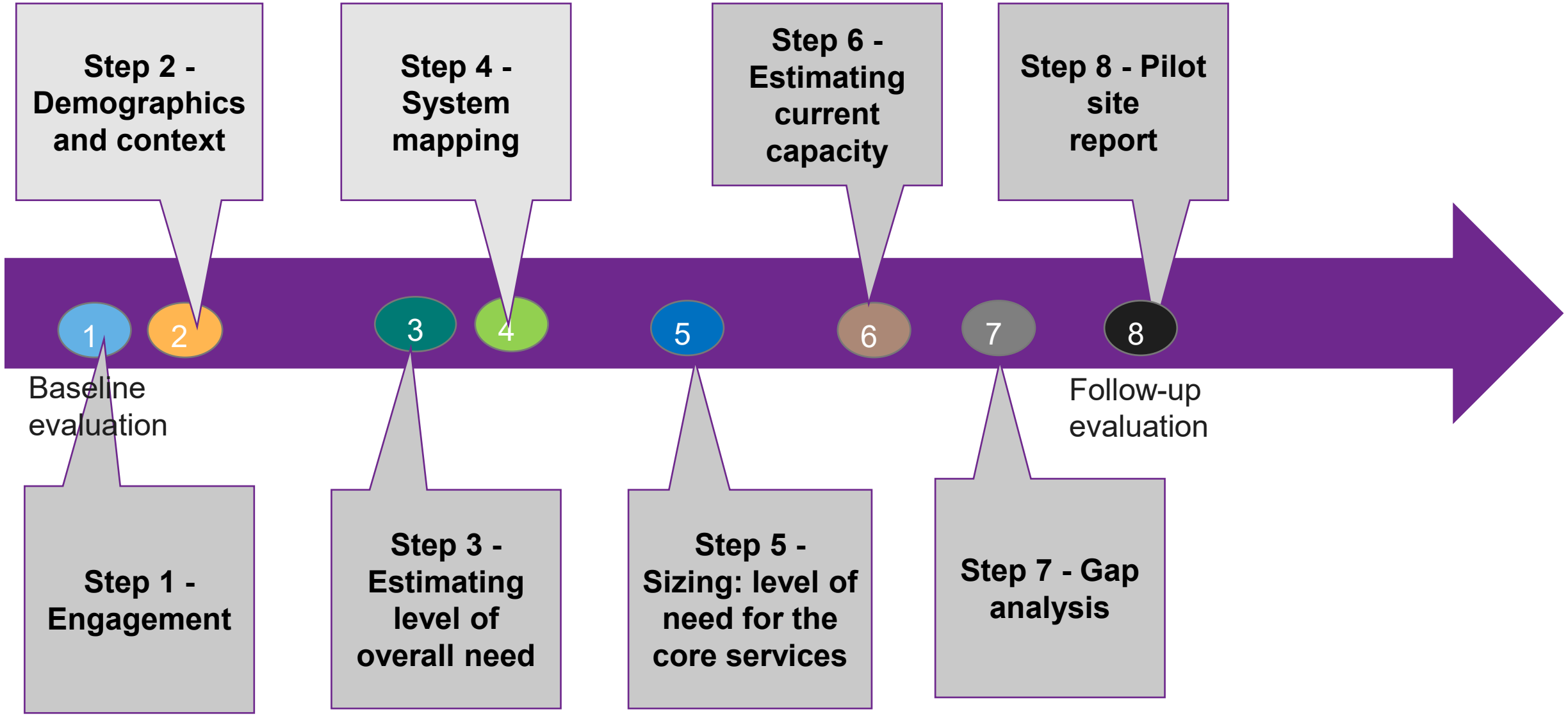
- Digital Services and supports
- Private (e.g., mental health and substance use facilities)

Legend

- Calculated separately for gap analysis
- Calculated together for gap analysis
- Not included in gap analysis


Function
Core Service Platforms
Emergency and Crisis Response
Emergency Department
MH and A Crisis
Urgent Care Clinic
Crisis Intervention/Mobile Crisis
Crisis Stabilization Unit
Acute Intoxication
Distress / Crisis Phone / Digital Services
Community Treatment and Support Services (including primary care)
1. Collaborating Partners
Primary Care
Public Health Services
Social Services
Family and Youth Services
Schools/Post-secondary
Justice Related Services
2. Comprehensive MH/SU Services and Supports
Coordinated/Central Access and Navigation
MH /SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
Peer and Family Support Services teams (include psychosocial)
Consultation and Liaison (ER, Hospital, LTC, Home Care, Schools, Police-based)
Home/Mobile WMS
Addiction Medicine Specialty Services (physician, psychiatrist, RAAM/RAAC, OAT, managed alcohol)
MH and SU court
Supervised/Safe consumption sites
3. Intensive MH/SU Services and Supports
Community Bed-based WMS
Community SU Intensive Bed-based Treatment
Intensive Case Management (SU, MH, CD)
SU – Specific ICM
MH – Specific ICM/ACT/FACT
Community-based Intensive Day or Evening Treatment Services (SU, MH, CD)
SU – Specific
MH – Specific
4. Bed-based Recovery Supports
Supported Housing - high and moderate support (e.g., Housing First)
SU – Specific
MH – Specific
SU Supportive Recovery Services
Multi-functional SU Transition Services
Transitional/Long-term bed-based Mental Health Recovery
Acute and Specialized
Hospital bed-based Acute Care
Hospital bed-based Tertiary Care
Disorder-specific/complex Tertiary Care
Hospital bed-based SU WMS
Hospital bed-based Intensive SU Treatment
Forensic Inpatient
Legend
Calculated separately for gap analysis
Calculated together for gap analysis
Not included in gap analysis
Other Services
Digital Services and supports
Private (e.g., EAP, therapist, psychologist, residential treatment facility)

8 Key Steps


Step 2 - Demographics and context
Step 4 - System mapping
Step 6 - Estimating current capacity
Step 8 - Pilot site report
1
2
3
4
5
6
7
8
Baseline evaluation
Follow-up evaluation
Step 1 - Engagement
Step 3 - Estimating level of overall need
Step 5 - Sizing: level of need for the core services
Step 7 - Gap analysis


2010-2014
2016-2018
2019-2022
RUSSIA
ARCTIC OCEAN
Norwegian Sea
Chukchi Sea
Arctic Circle
Beaufort Sea
GREENLAND
ICELAND
Reykjavik
Baffin Bay
Yukon
Anchorage
Godthab
Gulf of Alaska
Whitehorse
MacKenzie
Great Bear Lake
Iqaluit
Juneau
Yellowknife
Great Slave Lake
CANADA
Prince Rupert
Hudson Bay
PACIFIC OCEAN
Edmonton
St. John's
Victoria
Vancouver
Calgary
Lake Winnipeg
Regina
Seattle
Spokane
Winnipeg
Quebec
Vancouver
Portland
Helena
Lake Superior
Ottawa
Montreal
Augusta
Bismarck
Boise
Concord
Boston
St. Paul
Minneapolis
Missouri
Lake Michigan
Lake Huron
Lake Ontario
ATLANTIC OCEAN
Milwaukee
Hartford
Providence
Buffalo
Salt Lake City
Cheyenne
Chicago
Detroit
Cleveland
New York
Omaha
Philadelphia
San Francisco
Denver
Pittsburgh
Indianapolis
Baltimore
U. S. A.
Washington D. C.

Mapping the system example

ORGANIZATION	SERVICE/PROGRAM NAME	FUNCTION	CORE SERVICE PLATFORM
PMH	*Crisis Response Service	Emergency and Crisis Response	Crisis Intervention/ Mobile Crisis
PMH	7th Street Health Access Centre - Primary Care	Community Treatment and Support Services	Primary Care
Brandon Friendship Centre	Aboriginal Healing and Wellness Centre	Community Treatment and Support Services	MH/SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
PMH	Activity Instructors	Community Treatment and Support Services	MH/SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
PMH	Adult Community Mental Health	Community Treatment and Support Services	MH/SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
PMH	Amberwood Village	Community Treatment and Support Services	Long-term bed-based Mental Health Recovery/Transitional
CMHA Swan Valley	Canadian Mental Health Association - Swan Valley	Community Treatment and Support Services	MH/SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
AFM	CART - (Community Addictions Response Team)	Community Treatment and Support Services	MH/SU Community Services (blended or Independent) includes (counselling, clinical, psychosocial)
PMH	Centre for Adult Psychiatry (CAP)	Acute and Specialized	Hospital bed-based Acute Care
PMH	Centre for Geriatric Psychiatry (CGP)	Acute and Specialized	Hospital bed-based Tertiary Care OR Disorder-specific/complex hospital bed-based

Emergency & Crisis Services

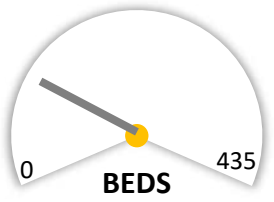
Service	Exists	Gap
Emergency Department	Y	- 3 Beds*
Urgent Care/Crisis Stabilization Unit	Y	+ 17 Beds**
Mobile Crisis	Y	Invalid
Acute Intoxication Service	N	- 4 Beds

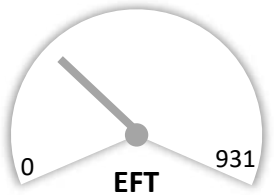
* MHLN are not represented as the estimate is in beds.
** The model does assumes a full suite of services decreasing the estimate for crisis services

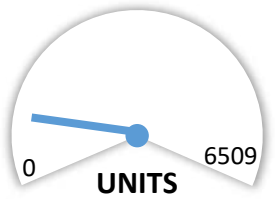
Acute & Specialized

Service	Exists	Gap
Hospital Bed Based Acute Care	Y	-1 Beds
Hospital Bed Based Tertiary Care	Y	- 25 Beds*
Hospital Bed Based SU WMS	N	- 2 Beds
Hospital Bed Based Intensive SU Treatment	N	- 14 Beds

* Beds available provincially







Comprehensive Community

Service	Exists	Gap
Home or Mobile WMS	N	- 7 EFT
Addictions Medicine Specialty Services	Y	- 7 EFT
Level 1 - Physicians (General Practitioner, Internal Medicine, Addiction Medicine or Psychiatry)	Y	- 45 EFT
Level 2 - Clinicians with competencies and credentialing for highly specialized assessment and therapy	Y	- 141 EFT
Level 3 - Professionals with providing counselling, case coordination/management, transitional supports, medication supports, and psychosocial rehabilitation	Y	- 7 EFT
Level 4 - Professionals providing psychoeducation and psychosocial supports	Y	+46 EFT
Level 5 - Workers with lived experience providing peer/family support or healthy living activities	Y	- 46 EFT

Intensive Services & Supports & Bed Based Recovery Supports

Service	Exists	Gap
Community Bed Based WMS	Y	- 1 Beds
Community SU Bed Based Treatment	Y	+ 7 Beds*
ICM/ACT/FACT	Y	- 50 EFT
Supported Housing – High and Moderate	Y	- 2,352 Units
Subsidized Housing	Y	- 4,156 Units
SU Supportive Recovery Services	Y	- 46 Units
Multi Functional SU Transition Service	N	- 27 Beds
Long Term Bed Based Mental Health Recovery	Y	- 82 Beds

* Provides services to more than population of PMH

Estimating current core services supply and utilization

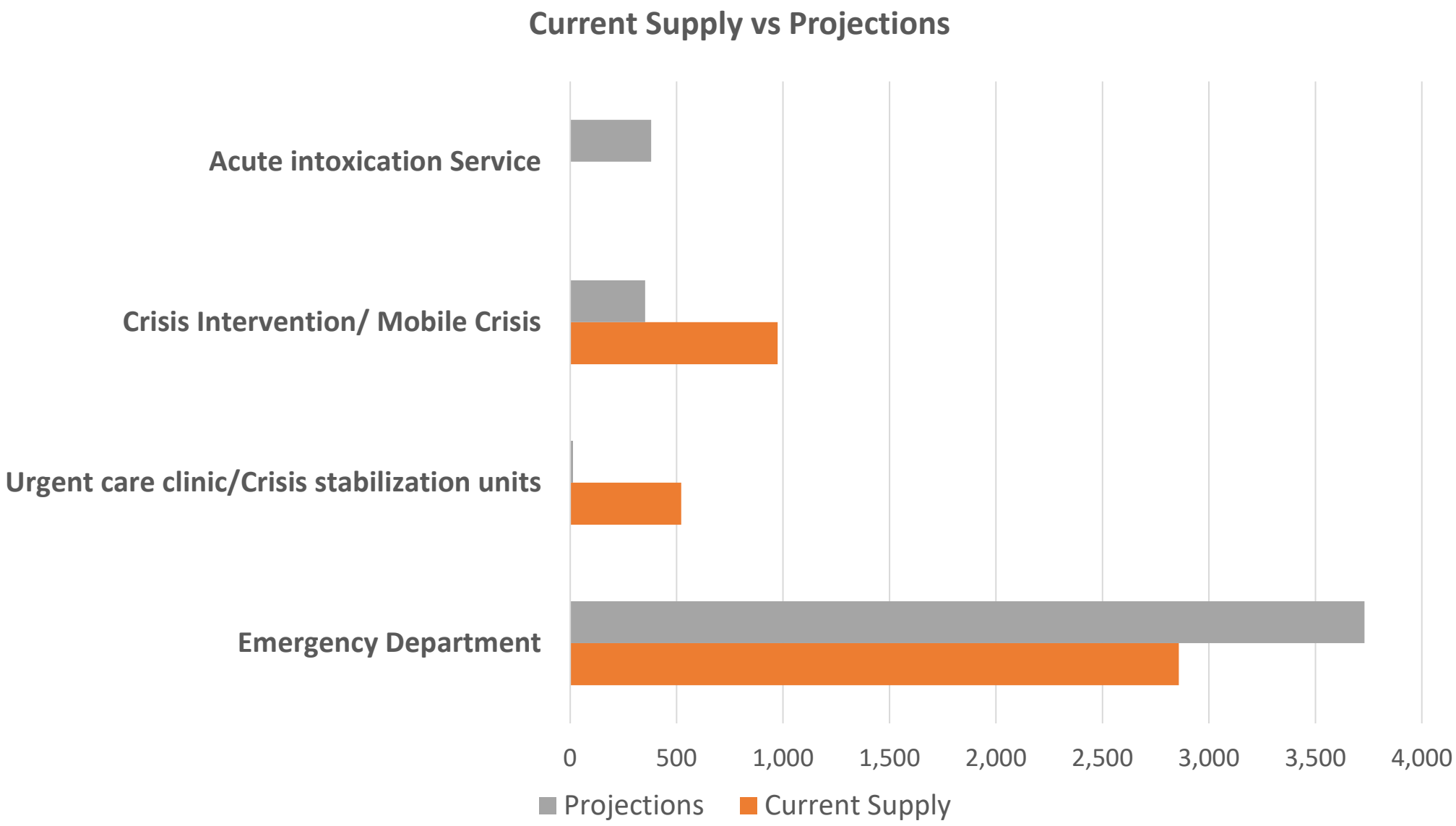
- ✓ Estimate the current core services supply and utilization by identifying where there are gaps (and potential surpluses) in each of the Core Services

	Current Capacity		
Core Service Platform	People (Unique)	Beds	FTEs
Emergency Department	2,859		N/A
Urgent care clinic/Crisis stabilization units	522	18	31
Crisis Intervention/ Mobile Crisis	974	N/A	1
Acute intoxication Service			N/A

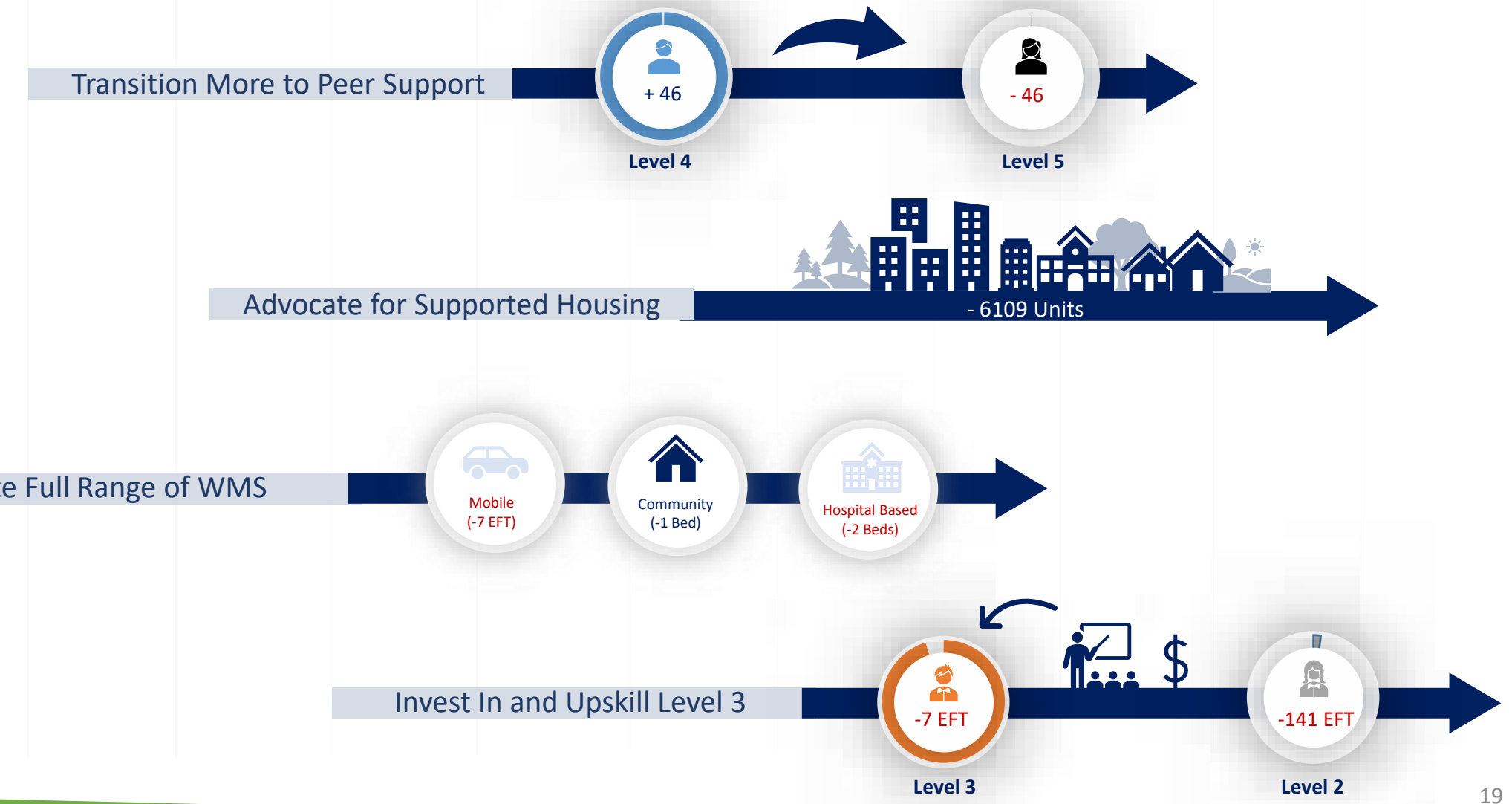
Projection		
Persons	FTEs/Beds	Unit
3,730	3	Beds
14	1	Beds
352	1	FTE
380	4	Beds

GAP		
Persons	FTEs/Beds	Unit
-871	-3	Beds
508	17	Beds
622	0	FTE
-380	-4	Beds

Gap Analysis – by core service category (number of individuals, FTE's or Beds)



Initial Analysis Priorities



Key Lessons Learned

- Interpretation of gap is based on **100% help seeking**, meaning that we are estimating that 100% of people that need help will actually seek the help they require
- Importance of the tiered framework – going beyond diagnosis, testing for co-morbidity
- Value of National model
- Iterative improvements based on pilot testing
- Going from Needs-based Planning to standards and performance measurement
- Need for a model specific to children and youth

Selected comments from Evaluation

The project will facilitate ability to utilize not only evidence based cutting edge research modeling but also draw on experiences from other jurisdictions.

Having a national model that will inform our individual region MH/SUD needs is essential to future practice.

This snapshot in time is priceless. It organizes the disarray of statistics we have as a collective.

Recognizing that many partners beyond the "formal" MHA system are engaged in service response, and taking the time to engage these partners in the conversation is beneficial to shift/strengthen a whole system response (e.g., inclusion of Primary Health Care in the Advisory Committee).

The outcome of this project has the potential to be a game changer in service delivery.

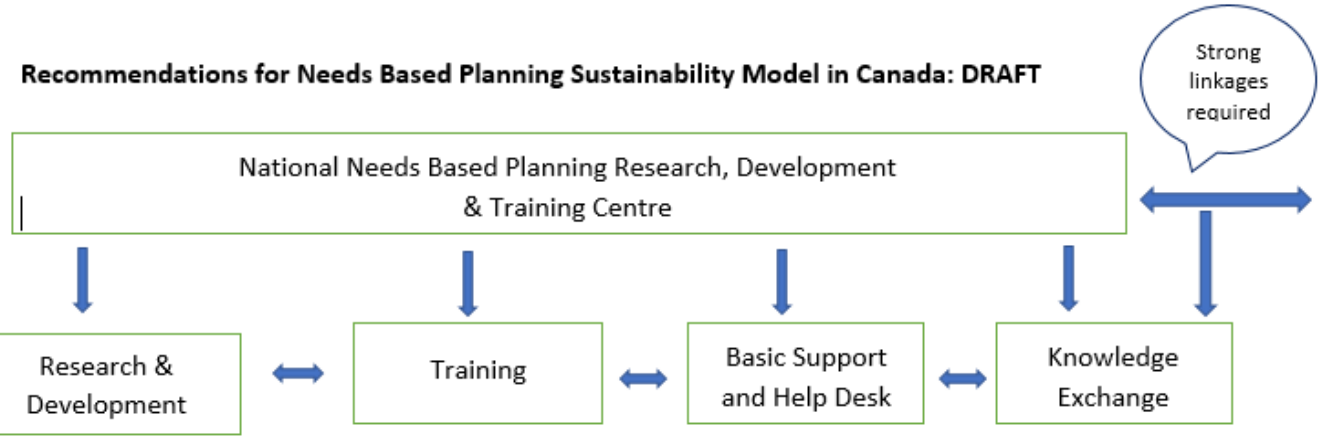
Sustainability Vision

- Focus on **building capacity** for implementation of the Needs-based Planning Model and its various tools and processes to support planning, funding and delivery of mental health and substance use services

- Broad national and regional stakeholder **buy-in** for its application, while ensuring that the planning tool and related supports are **user-friendly, flexible, and available at no cost**

- Support **reasonable adaptations** needed by decision-makers in diverse contexts while maintaining fidelity to the core elements

Recommendations for Needs Based Planning Sustainability Model in Canada: DRAFT



Core Functions

- Conduct ongoing research into the model, allowing opportunities for improvements that will aim to ultimately make the model more effective.
- Incorporate new population health or administrative health data as it becomes available, including new clinical and/or program advancements as practice changes.
- Update resource manuals or appendices as there are model enhancements.
- Decide on software solutions (to excel) and determine level of access to the back-end data processes.

Core Functions

- Ensure that the model is well understood and applied correctly.
- Provide up front training on the use of the model, ensuring that as the model is redeveloped, so too is the training platform.
- Offer training on an alternative software solution, should one be chosen.

Core Functions:

- Provide a single point of contact for those using the model or wishing to use the model, which also supports consistency of messaging about model use.
- Offers technical support, provides assistance/information about model usage.
- Provide basic support for understanding or implementing the model (e.g.: provide information about assumptions underlying the model or provide an explanation of limitations).

Core Functions:

- Facilitate sharing of information across jurisdictions
- Identify additional research, development and implementation opportunities
- Supporting interpretation and validation of methodological enhancements

Implementation & System Planning

- Health Authorities, Health Regions, Provinces, Territories, are free to implement the model without hindrance of copyright (e.g., permission NOT needed).
- End users should inform the Centre of their plans and may or may not request support from the Centre itself. e.g., using their own trained resources and/or external resources
- Collaboration and communication with the Centre will be important so as to maximize ongoing fidelity to the NBP model, along with the sharing of challenges and/or opportunities as the model is implemented in new jurisdictions.

***Note:** Some thought will need to be given as to how this "bridge" might be formalized.