Development of Needs-Based Planning Models for Substance Use Services and Supports in Canada:
Updated Project Summary

Introduction

Specialized substance use services and supports have traditionally been funded without a comprehensive systems-level planning model in place to help allocate resources by service type and target population and according to population needs. Annual funding for treatment programs for one year has largely been driven by the budget(s) from previous years with the result that gaps in services based on actual population needs are perpetuated into the future. The exact size and nature of these gaps are unknown across Canada as a whole, and within specific Canadian jurisdictions. Adding to this challenge is the fact that planning efforts to date for substance use services and supports in Canada have been largely focused on the specialized sector of services that are specifically commissioned to provide treatment and support.

The need for a broader systems framework and corresponding treatment indicators and needs-based planning models has been articulated recently by the National Treatment Strategy Working Group, which, in 2008, presented recommendations for a national treatment strategy (NTS). Among the recommendations was a call to “…establish a process for reporting and sharing data on the capacity and use of services and supports, based on the [NTS] tiered model…” (pg. 32).

A process to develop the national picture regarding treatment service utilization and current capacity has begun through the work of the Canadian Centre on Substance Abuse (CCSA). A second component focused on population needs and required capacity is now needed. Together, these data will optimize the contribution of statistical data on treatment indicators to the Canadian and jurisdictional substance use services delivery system, following a broader, systems perspective.

Project Activities and Components

In October 2009, a formal proposal for a needs-based planning model was submitted to Health Canada under the national stream of the Drug Treatment Funding Program (DTFP). The 3-year proposal was approved and work began on April 1, 2010. Progress in the project workplan has proceeded in four overlapping phases (see Figure 1).
**Component 1: Model Development** – A needs-based planning model, originally developed by Brian Rush in 1990 within the context of specialized alcohol use services and supports, will serve as the foundation for initial model development. This will involve a situational analysis, including a major literature review of the evidence supporting different levels of care within the treatment continuum based on population need, severity, and complexity of problems. Updating the model will also include expanding it to the mental health and primary care sectors, including emergency and hospital services, in order to adopt a broader systems perspective as recommended by the National Treatment Strategy Working Group (2008). Using secondary data sources such as the Canadian Community Health Survey (CCHS 1.2), original data already available in Quebec, and synthesis of key literature, parameters and pathways will be incorporated into model conceptualization. The project team will then be positioned to implement the following steps for model development, based on the 1990 Rush work, but now using updated information:

1. Determine the geographic area and size of the population served
2. Estimate the number of people with substance use problems/disorders within each population unit
3. Estimate the number of individuals from step two that should be treated in a given year
4. Estimate the number of individuals from step three that will require service from each component of the treatment system.

**Component 2: Model Expansion** – This component will expand the Phase 1 needs-based planning model to estimate the needs of populations not included in the national survey data. Examples of missed populations include:

1. Homeless populations
2. People in institutions (hospitals, corrections, long-term care)
3. Aboriginal populations
4. Armed Forces

Recommendations for prioritization for further expansion to other health sectors and social services will also be developed.

**Component 3: Pilot Testing and Model Enhancement** – The model will be piloted in up to four settings/communities to collect data to further refine it for application.

Component activities include:

- Develop criteria for selection of pilot sites
- Develop protocols and guidelines for pilot testing, including data collection, analysis and
reporting procedures

- Engage up to four settings/communities to pilot the model
- Implement model at pilot sites
- Collect data on implementation of the model and lessons learned
- Refine the model based on pilot results.

Component 4: Evaluation, Project Management, and Dissemination – Evaluation activities will assess both the development of the model, as well as the process of application. This will be accomplished with a qualitative component assessing the experience of stakeholders and feasibility of use in different jurisdictions. Evidence-based project management principles and tools will be applied throughout the project to manage scope and risk, and monitor progress. Project management will also require a communication strategy that will involve close collaboration with a number of relevant national DTFP projects and will include details regarding the product, lessons learned and recommendations for further model expansion.

The anticipated outcomes for the four components include:

- Increased access to models and toolkits for needs-based planning and allocating resources for substance use services and supports (immediate)
- Increased awareness of decision-makers across Canada of needs-based planning models and their relative advantage over existing approaches (intermediate)
- Enhanced provincial/territorial (PT) commitments to affect system change in DTFP treatment systems’ investment areas using needs-based planning models (intermediate)
- Across Canadian jurisdictions, increased awareness and use of needs-based planning models for substance use services and systems (longer-term)
- Increased ability to systematically allocate resources to better meet needs of individuals accessing services in all relevant health sectors (longer-term)
- Improved decisions for resource allocation for substance use services and systems (longer-term)
- Increased PT capacity to plan and evaluate substance abuse treatment systems’ capacity and performance (longer-term)
- Strengthened evidence-informed substance abuse treatment systems (longer-term) including:
  - System-level outcomes such as a more balanced continuum of services (e.g., residential/non-residential), improved continuity of care, increased penetration to in-need populations, and improved population health outcomes;
• **Client-level outcomes** such as reduced harms associated with substance use and improved outcomes related to health and quality of life.

Plans to coordinate project activities with other national DTFP projects are embedded in the work-plan and in fact made up a core component of the proposal. The overall budget is $1,259,400 which includes labour and non-labour costs, such as purchased services (e.g., sub-contracted work for the Quebec component), literature review, baseline survey, and evaluation. The project began effective April 1, 2010 with a planned completion date of March 31, 2013.

**Research Team:**

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Figure 1: Logic Model: Development of Needs-Based Planning Models for Services and Supports in Canada

**Components**

- Model Development
  - Develop a needs-based planning model for specialized substance use services and supports.
- Model Expansion
  - Expand the needs-based planning model to estimate the needs of special populations.
- Pilot Testing and Model Enhancements
  - Pilot and evaluate the needs-based model to refine & share with engaged jurisdictions across Canada.
- Evaluation, Project Management, and Dissemination
  - Manage and evaluate the project and share lessons learned.

**Activities**

- **Model Development**
  - Undertake literature review and access reviews from other DTFP projects
  - Apply current data on use of services to begin to populate the initial model and supplement with secondary data sources
  - Define and model components, pathways & parameters of service use in the ideal treatment system
  - Analyze available hospital & emergency services data in Quebec

- **Model Expansion**
  - Expand literature review to those populations missed in the national survey data
  - Develop a plan to estimate the needs among Aboriginal, homeless, armed forces, and institutionalized populations

- **Pilot Testing and Model Enhancements**
  - Develop criteria for selection of pilot sites
  - Engage up to four settings/regions to pilot the model
  - Develop protocols and guidelines for pilot testing
  - Implement model at pilot sites and collect data
  - Refine model based on pilot results

- **Evaluation, Project Management, and Dissemination**
  - Incorporate into pilot sites the qualitative evaluation data collection component
  - Progress monitoring
  - Coordinate with DTFP projects
  - Develop recommendations for application of model beyond present project life cycle
  - Use knowledge exchange networks to disseminate information

**Outputs**

- **Immediate Outcomes**
  - Increased access to models and toolkits for needs-based planning and allocating resources for substance use services and supports.

- **Intermediate Outcomes**
  - Increased awareness and engagement of decision-makers concerning needs-based planning models and their relative advantage over existing approaches.
  - Enhanced PT commitments to affect system change in DTFP treatment systems’ investment areas [with needs-based planning models].
  - Increased PT capacity to plan and evaluate substance abuse treatment systems’ capacity and performance.

- **Longer-Term Outcomes**
  - Across Canadian jurisdictions, increased use of needs-based planning models for substance use services.
  - Increased ability to systematically allocate resources to better meet needs of individuals accessing services in all relevant health sectors.
  - Improved decisions for resource allocation for substance use services and systems.

Strengthened evidence-informed substance abuse treatment systems including:
- Client level outcomes such as reduced harms associated with substance use and improved health and quality of life outcomes;
- System level outcomes such as better balance in continuum of care, improved continuity of care, increased penetration to in-need populations, and improved population health outcomes.
Pilot Testing and Model Implementation

Three to four pilot sites will be recruited for implementation and testing of the model. Component activities will include:

- **Develop criteria for selection of pilot sites.** Criteria have been identified with input from the Advisory Committee and other stakeholders and include: geographic/demographic variability (e.g., urban versus rural jurisdiction); structure of primary care system (e.g., traditional model of independent practitioners versus community health centres or family health teams; and health system management model (e.g., centralized versus decentralized health authority)).

- **Develop pilot protocols and guidelines for using the model, including data collection and reporting procedures for assessing capacity and use of current services.** Automated tools for data collection, interpretation and reporting developed from Components 1 and 2 will be included in the pilot and protocols to minimize reporting burden.

- **Engage up to four settings/regions to pilot the model** including liaison with other DTFP projects to maximize pilot opportunities and create synergy across national DTFP projects. Ongoing and regular consultation with project leads of other DTFP projects will facilitate identification and selection of the pilot sites.

- **Implement models at pilot sites.** In-need populations will be estimated using survey data, projected to local jurisdictions. The model will then be applied to project service delivery requirements across the continuum. We would then collect data on local capacity and determine and prioritize gaps in services. These gaps will then be reviewed and contrasted with local stakeholders’ opinion and any available data on the current flow of clients through the system, in relation to local expectations and client outcomes. Engaged sites will benefit from regular supports, including site visits, provided by members of the Core Working Group, to address any issues related to data collection or reporting, as they arise.

- **Collect data on implementation of the model and lessons learned.** Both quantitative (e.g., time required to implement the model and prepare reports) and qualitative (e.g., perceived barriers to applying the model) feedback will be collected to inform future
changes to the model’s implementation processes. This feedback will be summarized into a report that will also include a statement of priorities regarding potential expansion of the model to other specific health and social service sectors. Feedback will also feed into the overall project evaluation.

- **Refine model based on pilot results.** Data from the pilot will be analyzed and incorporated into further revisions to the initial and expanded needs-based planning models. This may include changes to both the process of the application of the models as well as the structure of the models and values for specific parameters with the models (e.g., estimated retention rates or rates of readmission).