CANADIAN MENTAL HEALTH ASSOCIATION
ASSOCIATION CANADIENNE POUR LA SANTÉ MENTALE

# *Project IN4M*

# Integrating Needs for Mental Well-Being into Human Resource Planning

## Final Report

**March 31, 2011**

## Preface:

Project IN4M was commissioned by Health Canada to undertake an analysis of the common elements of needs-based human resource planning for mental wellbeing. This represents Phase I of a potentially three phased project. It has been done under the auspices of the Canadian Mental Health Association.

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# Project IN4M Final Report

## Executive Summary

"After all is said and done, more is said than done" *Aesop*

One in five Canadians will experience a mental health issue in their lifetime. One third of hospital stays in Canada are due, in whole or in part, to mental health disorders. And, by 2003, the estimated burden of mental illness on the Canadian economy was $51 billion. These statistics reflect both a serious economic problem and an immense amount of human suffering, and helped spur the Senate committee report "Out of the Shadows at Last," the creation of the Mental Health Commission of Canada (MHCC) in 2008 and – ultimately – this work, *Project IN4M* - Integrating Needs for Mental Wellbeing, on human resources in mental health care.

It's estimated more than 80 percent of investments in health and health care go to human resources and proper planning for them is critically important to achieve better physical and mental health outcomes, and also to ensure more efficient use of the $192 billion Canada spends annually on healthcare. But human resource planning in Canadian health care has been flawed by our preoccupation with the supply side of the system and our tendency to think in terms of formal caregivers, particularly physicians and nurses. That's led to poor decisions about the size and focus of education programs.

*Project IN4M* is a three-phase research project, jointly funded by Health Canada and the Mental Health Commission. It's overall goal is to improve the accessibility of high-quality mental-health services "through needs-based predictive modelling of health, social, education, criminal justice and private sector human resources — including informal caregivers."

Phase One, the subject of this report, examines possibilities for predictive modelling based on needs-based planning experiences in Canada and around the world. Phases Two and Three of this project will look at creating and introducing a needs-based planning tool for mental health in Canada. For this phase, we did a comprehensive literature search, extensive key informant interviews and an in-depth analysis of four case studies, which were followed by a roundtable with stakeholders in November, 2010. We started with the premise that unless we find better ways of getting the right people in the right places doing the right things, we will not be able to address the large and growing need for mental health services in Canada. But we also understand better planning for human resources for mental health cannot be done in isolation from the overall health system.

Our **literature review** showed a shortage of the occupational and epidemiological data required for needs-based planning. Statistics Canada, the Canadian Institute for Health Information and the Public Health Agency of Canada have some data but no one collects statistics on need for mental health services that is unmet because of stigma or lack of availability. Furthermore, very little comprehensive, high-quality data is available in sectors outside of health.

The literature review found the most reliable population-based measures of need for health services are the *MOS 36-item Short Form Health Survey*, *Health Utility Index, Health-Adjusted Life Expectancy*, self-assessed health status, and *Health Related Quality of Life.*

Our **online survey** of mental health experts was primarily filled out by people working in health care although we put extra effort into getting respondents from non-health sectors. Most surveyed were unaware of forecasting models in Canada applicable to mental health, except for RiskAnalytica, Tomblin-Murphy Consulting Inc. and the Conference Board of Canada. The most cited example was *Tolkien* created by Gavin Andrews in Australia. Experts felt that the best way to forecast mental health service requirements was to use an epidemiological approach. They ranked the most important areas for study as anxiety, depression and ADHD followed by schizophrenia and substance abuse.

Our four **case studies** — Vancouver Coastal Health Authority, Algoma/Sault Ste Marie, Tolkien II Australia and Alberta Health Services— made it clear no single existing model can accurately predict mental health human resource needs in Canada. Each of the case studies addressed different aspects of need-based planning. Some looked at specific disease categories, others integrated services across sectors, others address the various planning levels of the health system.

In late September 2010, we posted a **request for proposals** inviting consultants to indicate their interest in delivering a comprehensive needs-based human resource planning tool for mental well-being. Three strong proposals were received but the best approach seemed to be to combine aspects of each.

Historically, human resources planning for Canada's health system has been less than successful for at least three inter-related reasons: first, a preoccupation with the supply side of the system; second, a preoccupation with physicians and nurses; and third, a preoccupation with formal caregivers. As a consequence, we tend to overshoot the mark both in terms of building and retiring our overall training capacity for health and health-related professionals in Canada.

The overall goal of *Project IN4M* is to help "improve the availability and accessibility to high quality, necessary mental health services through needs-based predictive modelling of health, social, education, criminal justice and private sector human resources — including informal caregivers. In short, *Project IN4M* is designed to address the "Kirby Gap" — to level the playing field in terms of access to mental health relative to physical health.

With this as the overall context, *Project IN4M* starts from the premise that unless we find better ways of getting the right people, in the right places and doing the right things, we will not be able to address the large and growing need for mental health services in Canada. The project also reflects a realization that better planning for human resources for mental health cannot be undertaken in isolation of the much larger mainstream health system. Lessons learned from one system can and should be transferred to the other.

A **multi-stakeholder roundtable** was held in November 2010 to validate the findings of the research and to build momentum for subsequent phases of project IN4M. Roundtable participants were supportive of Project IN4M moving from Phase One (feasibility) to Phase Two (proof of concept) and felt that there was a window of opportunity with the right messages available to stakeholders.

The IN4M **project evaluation** found that its objectives, outputs and outcomes met the requirements of the Health Care Policy Contribution Program. The original multi-level risk management strategy outlined in the projects' contribution agreement related to the both the financial and operational aspects were addressed and managed successfully throughout the project. Various **communication** strategies and tactics were used to promote the project throughout.

Overall, Phase One of *Project IN4M* confirms that the potential exists to put in place a reliable, needs-based predictive model built around incidence and prevalence of mental health disorders and leading practices here in Canada and imported from other countries such as Australia. While the project confirms that mental health is, for the most part, a "data-free zone", models exist for estimating the prevalence and incidence of some of the key mental health diagnoses and for better estimating the effective supply of the broader range of health and social service providers. We can also draw upon the lessons learned from the case studies conducted to refine our models around optimal mix of inputs to maximize health outcomes.

Specifically, the results of phase one of Project IN4M point to:

1. The need to create a health human resources planning focus as part of any national mental health strategy aimed at improving access to mental health services;

2. Canada has the applied research capacity to build and apply a reliable, needs-based predictive model based on a research consortium of the "best-of–the-best"; and

3. The focus of next steps towards realizing this potential is to spotlight anxiety, depression and ADHD as the largest and most worrisome mental health challenges. Developing a 'proof of concept' planning tool at the Canadian and provincial level with a short list of occupations (or competencies) will be the most efficient use of resources. Furthermore, our research has demonstrated that the next two categories that should be added to the tool should be schizophrenia and substance abuse.

The Canadian Mental Health Association is pleased to have been involved in Project IN4M to date and supports moving forward with Phase two or the "proof of concept" phase of this important work. It also stands ready to work with the MHCC and the rest of the mental health community to ensure that the potential identified by Project IN4M is fully realized.

## Résumé

« En définitive, on a beaucoup parlé, mais peu agi » *Aesop*

Un Canadien sur cinq aura un problème de santé mentale au cours de sa vie, le tiers des séjours dans les hôpitaux canadiens sont attribuables, en tout ou en partie, aux troubles de santé mentale et on estime que le fardeau économique de la santé mentale s'est établi à environ 51 milliards de dollars en 2003. Voilà quelques-unes des raisons qui ont motivé la production, par un comité sénatorial, de l'important rapport intitulé « De l'ombre à la lumière », la création ultérieure de la Commission de la santé mentale du Canada (CSMC) en 2008 et l'approbation du Projet IN4M.

Le *Projet IN4M* – Intégrer les besoins liés au bien-être mental à la planification des ressources humaines, accorde une attention particulière à un élément très important du défi que présente la santé mentale : les travailleurs du domaine de la santé mentale. On estime que plus de 80 % des ressources investies dans la santé et les soins de santé chaque année sont consacrées aux personnes qui travaillent dans le système. Par conséquent, une meilleure planification des ressources humaines est cruciale si nous voulons mieux utiliser les 192 milliards de dollars que nous dépensons chaque année pour la santé et ainsi améliorer les résultats globaux pour la santé, tant physique que mentale.

Dans le passé, la planification des ressources humaines pour le système canadien de la santé est loin d'avoir été un succès pour au moins trois raisons reliées entre elles : premièrement, une préoccupation concernant le côté de l'offre du système; deuxièmement, une préoccupation à l'égard des médecins et infirmières; et troisièmement, une préoccupation relative aux fournisseurs de soins professionnels. Par conséquent, nous avons tendance à dépasser les attentes en ce qui concerne l'accroissement et la réduction de notre capacité globale de formation pour les professionnels de la santé et des domaines connexes.

Le *Projet IN4M* est un projet de recherche comprenant trois phases qui est financé conjointement par Santé Canada et la Commission de la santé mentale. La première phase, sur laquelle porte ce rapport, examine ou définit l'« art du possible » en ce qui concerne la modélisation prédictive, d'après ce que nous a appris l'expérience canadienne et internationale en matière de planification axée sur les besoins pour la santé et les soins de santé. Ce rapport a été établi à partir des résultats clés : 1) de l'analyse documentaire la plus exhaustive jamais entreprise sur le sujet; 2) d'un important processus d'entrevue auprès d'informateurs clés; 3) d'une analyse approfondie de quatre études de cas de la planification des ressources humaines fondées sur les besoins (au Canada et à l'étranger); et 4) des résultats d'une table ronde de recherche active à laquelle participaient des parties intéressées clés en novembre 2010. Les phases 2 et 3 de ce projet prévoient la création et l'utilisation d'un outil de planification fondé sur les besoins pour la santé mentale au Canada.

Le Projet IN4M a vu le jour à la suite d'une prise de conscience, à savoir que nous, en tant que pays, pouvons et devons faire mieux en matière de planification globale des ressources humaines en santé. Dans le sillage du rapport « De l'ombre à la lumière » du comité sénatorial présidé par l'honorable Michael Kirby et en prévision de la publication du rapport final de la Table ronde sur la santé mentale, ce

projet reflète également un consensus naissant selon lequel nous avons déjà trop attendu pour égaliser l'accès, au Canada, aussi bien aux soins de santé physique qu'aux soins de santé mentale.

Le but global du Projet IN4M est d'aider à « améliorer la disponibilité et l'accessibilité de services de santé mentale essentiels de grande qualité au moyen d'un modèle prédictif et fondé sur les besoins de ressources humaines en santé, en services sociaux, en éducation, en justice pénale et du secteur privé, ce qui comprend les aidants naturels ». Bref, le Projet IN4M vise à combler la « lacune Kirby », c'est-à-dire à pourvoir les services de santé mentale du même niveau de ressources que celui dont jouissent les services de santé physique.

Dans ce contexte global, le Projet IN4M part du constat suivant : à moins que nous trouvions de meilleurs moyens de placer les bonnes personnes aux bons endroits pour qu'elles remplissent les fonctions nécessaires, nous ne pourrons pas répondre aux besoins importants et croissants de services de santé mentale au Canada. Le projet reflète aussi une autre prise de conscience, à savoir qu'on ne peut pas parvenir à une meilleure planification des ressources humaines pour la santé mentale sans tenir compte du système de santé beaucoup plus vaste visant l'ensemble de la population. Il est possible et souhaitable de transposer les leçons apprises dans un système à l'autre.

L'**analyse documentaire** a conclu que les ensembles de données épidémiologiques et sur les professions qui sont nécessaires à la création d'un outil de planification fondé sur les besoins pour la santé mentale sont quasi inexistants. Il est possible d'obtenir certaines données par l'entremise de Statistique Canada, de l'Institut canadien d'information sur la santé et de l'Agence de la santé publique du Canada, mais elles présentent d'importantes lacunes. Très peu de données sont recueillies en ce qui concerne les besoins insatisfaits ou non exprimés de services de santé mentale pour des raisons rattachées à la stigmatisation et au manque de disponibilité de services. En outre, il y a très peu de données complètes de grande qualité dans les secteurs à l'extérieur de celui de la santé.

L'analyse documentaire a aussi conclu que les mesures les plus fiables du besoin de services de santé basés sur la population étaient le *MOS 36-item Short Form Health Survey*, la *Health Utility Index,* la *Health-Adjusted Life Expectancy*, l'auto-évaluation de l'état de santé et la *Health Related Quality of Life*.

Le questionnaire de l'**enquête en ligne** auprès de spécialistes en santé mentale a surtout été rempli par des membres du secteur de la santé, malgré les efforts particuliers déployés dans les autres secteurs. La très grande majorité des répondants ne connaissaient aucun modèle de prévision canadien qui pourrait s'appliquer au bien-être mental autre que ceux de RiskAnalytica, de Tomblin-Murphy Consulting Inc. et du Conference Board du Canada. L'exemple le plus souvent cité a été le *Tolkien*, mis au point par Gavin Andrews en Australie. Les spécialistes étaient d'avis que la meilleure façon de prévoir les besoins de services de santé mentale consistait à utiliser une approche épidémiologique. Selon eux, après l'anxiété, la dépression et le THADA, les domaines les plus importants sur lesquels il faudrait se pencher sont les troubles de la pensée et la toxicomanie.

Les quatre **études de cas** (portant sur Vancouver Coastal Health Authority, Algoma/Sault-Ste-Marie, le Tolkien II d'Australie et les Alberta Health Services) ont clairement démontré qu'aucun modèle existant ne peut à lui seul prédire avec exactitude les besoins de ressources humaines en santé mentale au Canada. Chacune de ces études de cas a porté sur divers éléments d'une approche exhaustive de la planification fondée sur les besoins. Certains portaient sur des catégories de maladies précises, d'autres visaient à intégrer les services des divers secteurs, alors que d'autres se concentraient sur les divers niveaux de planification du système de santé. Aucun exemple n'englobait tous les aspects d'une approche complète de la planification fondée sur les besoins.

À la fin de septembre 2010, une **demande de propositions (DDP)** a été affichée sur le site de MERX pour inviter les consultants à indiquer leur capacité et leur intérêt à l'égard de la production d'un outil complet de planification des ressources humaines fondée sur les besoins pour le domaine du bien-être mental. Trois propositions solides ont été reçues. Chacune comprenait ses propres forces uniques et quelques faiblesses relatives. À la fin, on a conclu que la meilleure approche serait de créer une relation réunissant les meilleurs éléments des propositions uniques de chacun des consultants.

En novembre 2010, on a tenu une **table ronde** pour valider les constatations de la recherche et préparer les phases ultérieures du Projet IN4M. Les participants à la table ronde étaient favorables au passage du Projet IN4M de la phase 1 (faisabilité) à la phase 2 (validation du principe) et croyaient que ce serait possible en livrant les bons messages aux parties intéressées.

L'**évaluation du Projet** IN4M a révélé que ses objectifs, produits et résultats répondaient aux exigences du Programme de contributions pour les politiques en matière de soins de santé. Tout au long du projet, l'équipe a appliqué et géré avec succès la stratégie originale de gestion des risques à plusieurs niveaux, brièvement décrite dans l'accord de contribution visant le projet, qui portait à la fois sur les aspects financiers et opérationnels. Diverses stratégies et tactiques de **communication** ont été utilisées tout au long du projet pour le promouvoir.

Dans l'ensemble, la phase un du *Projet IN4M* confirme qu'il serait possible de mettre en place un modèle prédictif fiable basé sur les besoins en se fondant sur la fréquence et l'incidence des troubles de santé mentale et sur les meilleures pratiques existant au Canada et dans d'autres pays, comme l'Australie. Bien que le projet ait confirmé que la santé mentale est un domaine sur lequel il n'y a pratiquement pas de données, il existe des modèles pour estimer la fréquence et l'incidence de quelques-uns des principaux diagnostics de santé mentale et pour mieux estimer l'offre réelle de la plupart des fournisseurs de soins de santé et de services sociaux. Nous pouvons aussi tirer parti des leçons apprises grâce aux études de cas effectuées afin de perfectionner nos modèles en utilisant une combinaison optimale de données d'entrée de manière à maximiser les résultats pour la santé.

De façon précise, les résultats de la phase un du Projet IN4M indiquent :

1. qu'il faut axer toute stratégie nationale en matière de santé mentale destinée à améliorer l'accès aux services de santé mentale sur la planification des ressources humaines en santé;

2. que le Canada a la capacité de recherche appliquée qui est nécessaire pour créer et appliquer un modèle prédictif fiable fondé sur les besoins s'il a recours à un consortium de recherche regroupant les meilleurs chercheurs, et
3. qu'au cours des prochaines étapes visant à tirer parti de ces possibilités, il faudra se concentrer sur l'anxiété, la dépression et le THADA qui sont les plus importants et les plus inquiétants problèmes de santé mentale. L'utilisation la plus efficiente que l'on pourra faire des ressources consistera à élaborer un outil de planification de la « validation du principe » aux niveaux canadien et provincial comprenant une courte liste de professions (ou de compétences). En outre, notre recherche a démontré que les deux catégories suivantes à ajouter à l'outil devraient être la schizophrénie et la toxicomanie.

L'Association canadienne pour la santé mentale est heureuse d'avoir participé au Projet IN4M jusqu'à présent et appuie le passage à la phase deux, ou à la phase de la « validation du principe » de cet important travail. Elle est prête à travailler avec la CSMC et les autres organisations du milieu de la santé mentale pour veiller à réaliser tout le potentiel relevé par le Projet IN4M.

# Project IN4M Final Report

## Project Description

One in five Canadians will experience a mental health issue in their lifetime. In 2003, an estimated 1.9 million adults in Canada had a mental disorders diagnosis and 1.6 million reported symptoms but were not treated.[1] Mental health is one of the six major chronic diseases in Canada with an estimated economic burden of $51 billion in 2003.[2] One-third of hospital stays in Canada are due to mental health disorders in whole or in part.[3] To address this, and to plan a course for the future, the Mental Health's Commission of Canada released its' *Toward Recovery and Well-Being: A Framework for a Mental Health Strategy for Canada* (2009) outlining seven goals, one of which was that "people have equitable and timely access to appropriate and effective programs, treatments, services, and supports that are seamlessly integrated around their needs."[4]

> *"People must have equitable and timely access to appropriate and effective programs, treatments, services, and supports that are seamlessly integrated around their needs."*
>
> **Mental Health Commission of Canada, 2009.**

Mental health services are offered in a number of sectors and by governmental, non-governmental and private sources, as well as by consumer groups and family caregivers. Services and the service providers in one sector are not linked to those in another. This CMHA project, known as *IN4M* (pronounced "inform"), is a national effort to develop a needs-based human resource framework and predictive model based on current data sources and those that need to be developed in the mental wellness area.

## Goals and Objectives

*Project IN4M* is envisaged as a three-phase project constituting:

1. conducting a "scoping study" of the feasibility of identifying common elements to integrate needs-based planning for mental well-being (hence *Project "IN4M"*);
2. putting a practical, predictive needs-based human resource planning model into practice ("i.e. proof of concept"); and

[1] Lim KL and Jacobs P. *How Much Should We Spend on Mental Health?* Reported prepared for the Alberta Institute of Health Economics. 2008.
[2] Public Health Agency of Canada. *Centre for Chronic Disease and Prevention*. 2010.
[3] Government of Canada. *The Human Face of Mental Health and Mental Illness in Canada*, 2006.
[4] Mental Health Commission of Canada. *Toward Recovery and Well-Being: A Framework for a Mental Health Strategy for Canada.* November 2009.

3. disseminating and promoting the adoption of the model across Canada as part of an overarching, integrated mental health strategy.

As outlined in the original funding application to Health Canada, the goal of *Project IN4M* is "to improve availability and accessibility to high quality, necessary mental health services at the time and to the extent of need." At the outset, two objectives were identified for Phase One:

- To evaluate common elements of needs-based models for human resources planning; and
- To disseminate to planners and policy-makers, knowledge on needs-based planning and data related to the needs and services available.

To accomplish these objectives, the Canadian Mental Health Association led Phase One of this multi-phased project as one critical way to enhance the capacity to respond to the needs for mental health services. *Project IN4M* (Phase One) was funded by Health Canada and supported by the Mental Health Commission of Canada. *Project IN4M* involves identifying and analyzing data sources in the health, education, social services, and criminal justice sectors within the public domain as well as those in the private, workplace and not-for-profit domains. This phase of *Project IN4M* included a review of national and international experience with projecting future needs for mental health services.

*Project IN4M* is focusing on three conditions: Depression, Anxiety and Attention-Deficit Hyperactivity Disorder (ADHD). These three conditions were chosen for a number of reasons: their potential economic impact; the number and ages of people affected; the potential for applying the learning to other conditions; and the advice of experts in the field.

This, the initial or scoping phase of the project, involved four parts:

**Part One: Undertake a diagnostic/situational analysis**. The situation analysis involved a review of the literature and an environmental scan based on a "snowball survey."[5]

**Part Two: Create an inventory of existing needs-based and other HHR planning practices**. The inventory drew on the results of an on-line survey of stakeholders who have expertise in needs-based planning and/or human resource modelling. This also involved a series of cross-case analysis of four organizations to identify leading practices in planning for mental health services.

**Part Three: Complete a feasibility study of predictive modelling building in and upon a series of case studies**. A request for proposals was provided to a select group of leading modellers who have expertise in human resource modelling on both the demand and supply side of the equation. The result is a proposed collaborative arrangement comprised of two leading Canadian predictive modelling organizations as part of moving forward into Phase II.

[5] The snowball survey is used when a formal review of the peer reviewed literature is unlikely to provide insights into the availability of key learning's. In this case it involved a series of telephone interviews. Interviewees were found from referrals of initial interviews to gather initial information on the subject.

**Part Four: Create champions of change and develop a future approach through an action research roundtable**. The results of the other three parts were summarized into a *Leadership Challenge* that provided a springboard for discussion at a consensus conference or *Action Research Roundtable*. A report on the conclusions and recommendations of the *Roundtable* were developed and a future approach for developing a business case and champions of change created.

The first phase of *Project IN4M* took place over a twelve month period beginning in the Spring of 2010. Evaluation and communication/dissemination functions are also associated with each of the above-listed objectives of Phase One.

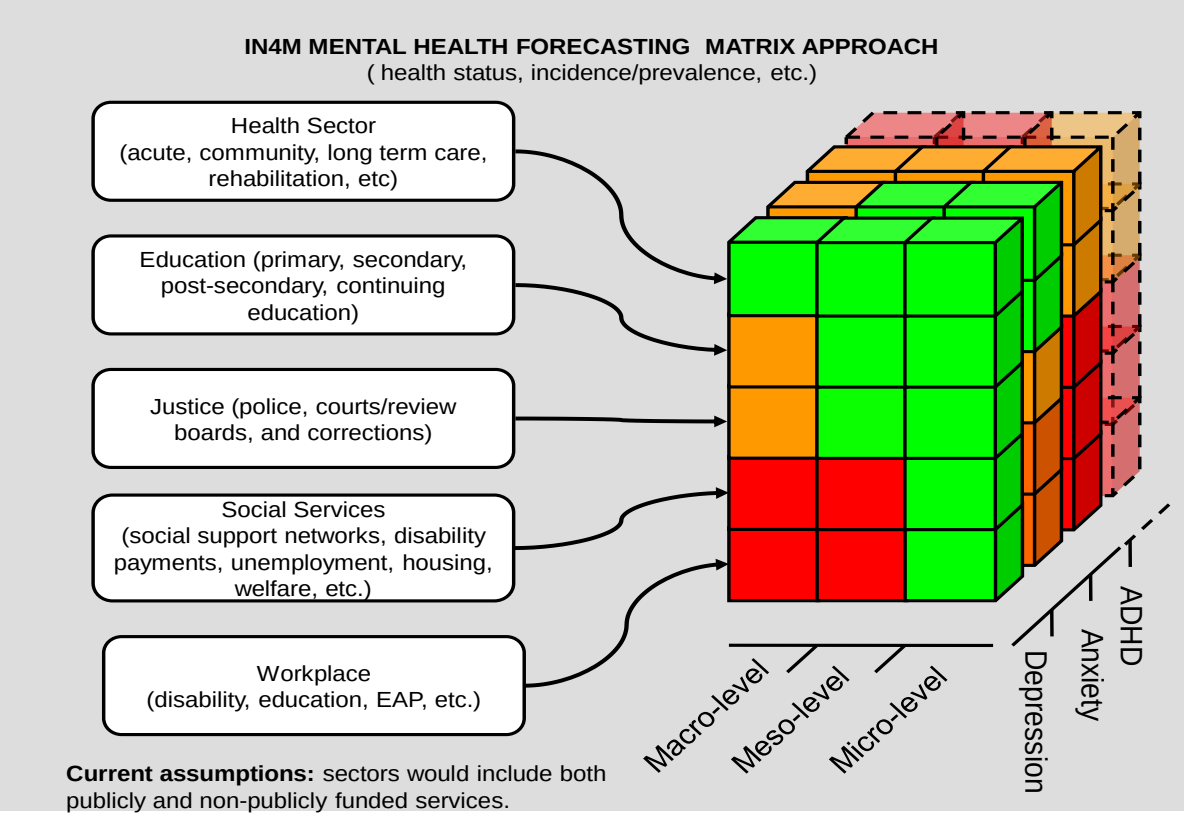
The seven person project team, which is comprised of individuals with expertise in mental health, needs-based modelling and health system policy planning, ensured deliverables were of high quality, produced on time and accomplished within budget. An advisory committee provided additional guidance from the various perspectives of mental health including representatives of consumers, the private and public sectors, data collectors, and government.

## Activities and Results

A human resource planning tool for mental well-being must be able to cross sectors (e.g. health, education, criminal justice, social welfare and the workplace), include formal and informal caregivers, include government and non government funded services and move between the national, provincial/territorial and sub-provincial/territorial levels of forecasting. To conceptualize the project, a Rubik's Cube approach (Figure 1) was devised to reflect the complexity of needs-based human resources planning. On the one axis is the continuum of services, ranging from traditional "downstream" acute treatment to "upstream" workplace prevention. A second axis takes into account the planning perspective (system, institution, clinical). And the third dimension reflects this project's focus on three, representative diagnostic categories.

Needs-based planning looks at need for services based on the estimated health status of the population (using incidence, prevalence, self-reported health, mortality, etc.) and then factors in utilization of services data. Unmet need is considered in this planning approach as total need for services as compared with total supply of services.

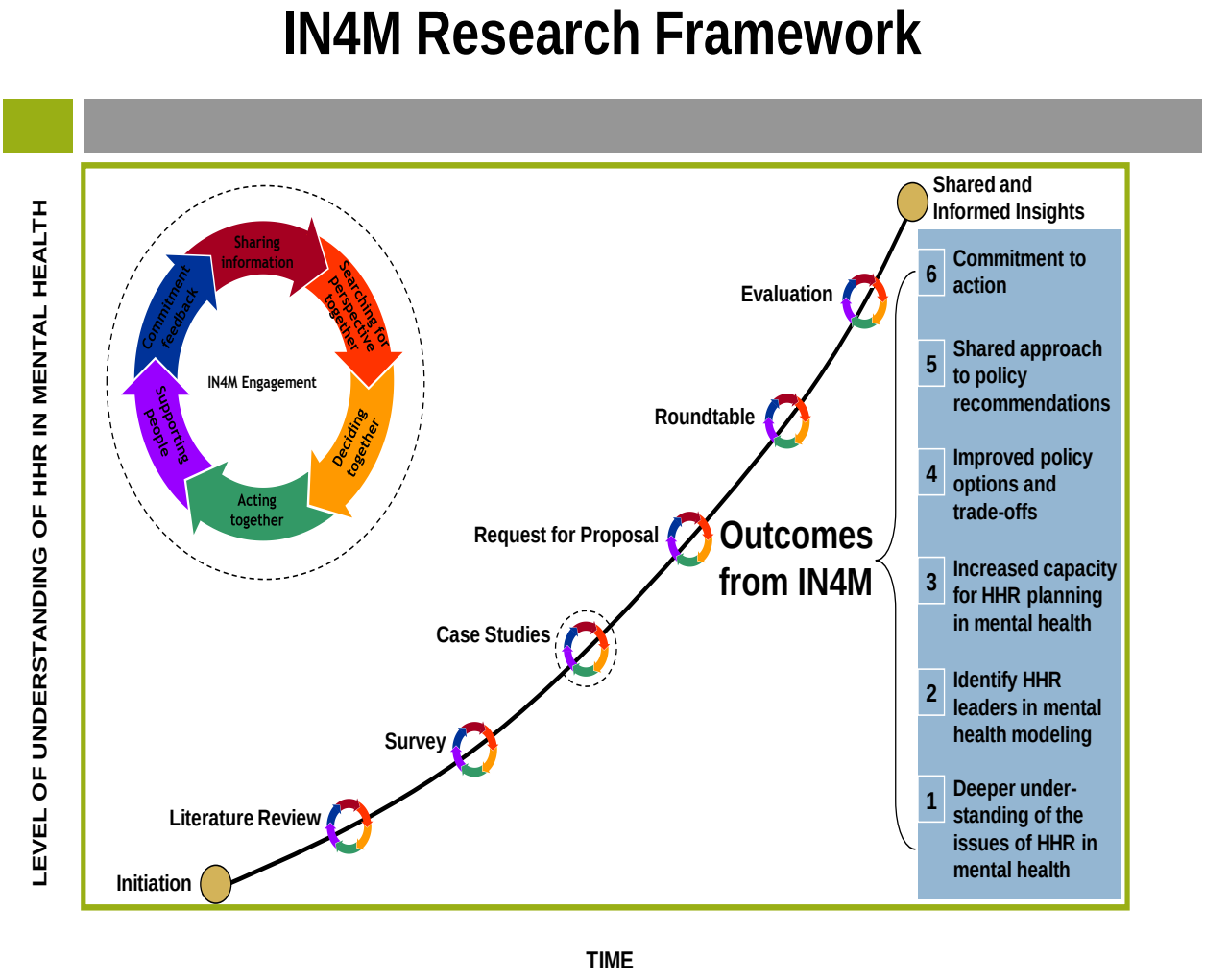
**Figure 1: Matrix Approach to Mental Wellness Forecasting**




The research framework (seen below in Figure 2) for this project included a literature review/environmental scan (final version December 2010), and an online survey of experts to further explore the issues around data and human resource planning models (completed September 2010). The literature review and survey confirmed that the best work in Canada on needs-based human resource planning that had potential applicability to this project was being done by three organizations. To this end, a request for proposals was issued in September, 2010, and three proposals were received to further develop a model and data sources for mental wellness human resource planning. The final research piece to inform and provide insight into this project was an exploration of four exemplar case studies that show differing approaches to human resource planning at the international, provincial and local levels (completed early November 2010). The IN4M Advisory Committee[6] was instrumental in guiding the project team in terms of the research agenda throughout the project.

[6] Members of the Advisory Committee can be found on the second page of this report.

**Figure 2: IN4M Research Framework**



## Literature Review and Environmental Scan

Peer reviewed and grey literature was compiled and analyzed from March to December 2011 into a comprehensive literature review and environmental scan by IN4M staff (see Appendix A). The literature review and environmental scan were updated until December 2010 as new sources were indentified through the various research deliverables and from the advisory committee. Key leaders were identified both through an initial and follow-up *snowball survey* and the literature review itself. Their opinions and insights were solicited through the online survey.

**What is need and what is needs-based planning?**

*Historically need was determined by people consulting directly with communities through for example meetings and face to face surveys. Once the needs of the community were determined, planning was completed and solutions found. Today with the advent of large scale demographic, epidemiological and occupational data sets, we can use computer-generated models to estimate need, human resource supply and related gaps. This then becomes one tool to guide an evidence-based planning process and generate potential solutions.*

The review built on a broad discussion on health needs narrowing to forecasting models in health human resources for mental health disorders. In 2009, Roberfroid, *et al*. in their review of physician forecasting highlighted four main approaches:[7]

1. *Supply projection* – or *trend model* uses provider-per-population ratios and uses health care services being currently delivered. It assumes that: the current level, mix, and distribution of providers in the population are adequate; age and sex-specific productivity of providers is constant over time ; and that size and demographic profile of providers change over time based on current trends.
2. *Demand-based – or requirements or a utilization-based approach* uses the quantity of health care services demanded by the population. Demand is the amount of health services that a population currently uses. Forecasts are estimated using provider-per-population ratios (population usually divided by age and sex) and the number and type of projected services (often billing data is used for physicians). It assumes that current demand for health care is appropriate and that this demand is suitably met by the current level, mix and distribution of providers; age and sex resource requirements remain constant in the future; and the size and demographic profile of the population changes over time based on current trends. Three methods are used for estimations: service utilization, workforce-to-population ratio, and economic demand (current and future social, political and economic factors are considered)

[7] Roberfroid D, Leonard C, and Stordeur S. Physician Supply Forecast: Better Than Peering in a Crystal Ball? *Health Resources for Health*. 2009, 7:10. Available at www.human-resources-health.com

3. *Needs-based – or epidemiological approach* uses data on health status of a population with disease prevalence, demographics and appropriates standards of care. It assumes that real health needs can be measured and should be met; cost-effective methods of addressing needs are identified and used; and health care resources are allocated based on relative levels of needs. This approach considers unmet needs as opposed to assuming past utilization trends and patterns s the basis for projections. It expressly allows for co-morbidities to be taken into account in the planning process (e.g. obesity and depression).
4. *Benchmarking* – identifies leading practices across regions or countries that are similar in demographics and health profiles but different in costs and use of health care resources.

*In Canada, there is no comprehensive national database on the prevalence of mental health problems and disorders.*

Overall success in human resource planning in mental health can be assessed in terms of ensuring there are sufficient workers (both formal and informal caregivers) to meet the mental health care needs of the Canadian population. The work on this deliverable uncovered very limited information that is currently available on needs-based human resource planning and forecasting in mental health especially across other sectors outside of health care (in areas such as criminal justice, family/youth services and education). Historically, most endeavours have focussed more on the supply side of the equation, based on utilization patterns, rather than demand based on need.

In 2009, *Cameron Health Strategies Group Ltd*, on behalf of the *Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources* conducted an inventory of forecasting models and tools in Canada and remarked that "forecasting is an inexact science and needs are difficult to define. No single model meets everyone's needs, and individual users must balance overall costs and complexity against their respective needs and capacities when making a model selection."[8]

Gibson (*Western and Northern HHR Planning Forum, 2009)* noted that "HHR planning is not just about data and modelling, it is about establishing the right model of health care delivery and optimizing the performance and effective productivity of the workforce."[9] Both of these statements offer words of wisdom that should be considered in the movement forward of needs-based planning models for mental health well-being.

[8] Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

[9] Gibson P. *Collaborative HHR Planning: Advancing the Evidence-Base*. A Workshop on Data and Modelling for Effective HHR Planning. Vancouver, British Columbia. March 2009. Report prepared by Intersol Group.

***Key Findings***:

1. In Canada, there is no comprehensive national or provincial/territorial database on the prevalence of mental health problems and disorders.

2. The most comprehensive data source on the prevalence for depression and anxiety is the *Canadian Community Health Survey* although there are limitations such as that mental health survey was repeated only once nationally, data is for those over the age of 15 years, and it does not include institutionalized populations. There will be a need to seek and create better data sources for incidence, prevalence, and mortality.

Depression is the fastest growing disability cost to Canadian employers .

3. The *Hospital Mental Health Database* of the Canadian Institute of Health Information includes data for mental disorders and stratifies mood disorders and anxiety disorders.

4. Disability claims are high for mental disorders with most recent figures at 79 per cent of long term disability claims and 75 per cent of short term disability claims.[10] Depression is the fastest growing disability cost to Canadian employers.[11]

5. In terms of quantifying needs for mental health services among children and youth, several data sources may be useful: the *Canadian Community Health Survey;* the *National Longitudinal Survey of Children and Youth* (Statistics Canada); *Health Behaviour in School-Aged Children* (Public Health Agency of Canada), and the *Canadian Health Measures Survey* (Statistics Canada).[12] Within the education system, limited data are available on incidence and prevalence in children and youth for mental health disorders.

6. In the criminal justice system (police, courts/review boards, and corrections), there is little standardization in the types of data collected and the method of data collection and storage.[13]

7. There is no data collected that relates to the unmet or unexpressed needs that exists for mental health services. Reasons for this are numerous for example stigma and service unavailability.

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[10] Mood Disorders Society of Canada. *Quick Facts*. November 2009. Available at www.mooddisorderscanada.ca Note that the source of their data was not apparent in the report.

[11] Ibid.

[12] Guttmann A, Cohen E, and Moore C. Outcomes-based HHR Planning for Maternal, Child and Youth Health Care in Canada: A New Horizon for the 21st Century. *Paediatric Child Health* Vol 14 No 5 May/June 2009.

[13] Sinha M. *An Investigation into the Feasibility of Collecting Data on the Involvement of Adults and Youth with Mental Health Issues in the Criminal Justice System*. Prepared for the Canadian Centre for Justice Statistics, Statistics Canada. 2009. www.statcan.gc.ca/pub/85-561-m/85-561-m2009016-eng.pdf

8. The most reliable population-based measures of need for health services are the *MOS 36-item Short Form Health Survey*, *Health Utility Index, Health-Adjusted Life Expectancy*, self-assessed health status, and *Health Related Quality of Life* as measured by the HUI.[14]

9. Historically, most endeavours to project the need for services have been in the health sector and have focussed on the supply of physicians and nurses or/and utilization patterns for current services.

10. The most applicable needs-based planning initiatives occurring in Canada are: the Mental Health Commission of Canada's commissioned work by Risk Analytica; the Ministry of Health and Long Term Care of Ontario commissioned work by the Conference Board of Canada; and O'Brien-Pallas, Tomblin Murphy, Birch et al.'s commissioned work for various organizations.

***The Online Survey*** *showed that 87 per cent of respondents did not know of any other forecasting models provincially, nationally or internationally that could be used in mental wellness outside of the work being done by: the Mental Health Commission of Canada commissioned work by Risk Analytica; the Ministry of Health and Long Term Care of Ontario commissioned work by the Conference Board of Canada; and O'Brien-Pallas, Tomblin Murphy, Birch et al.'s commissioned work for various organizations.*

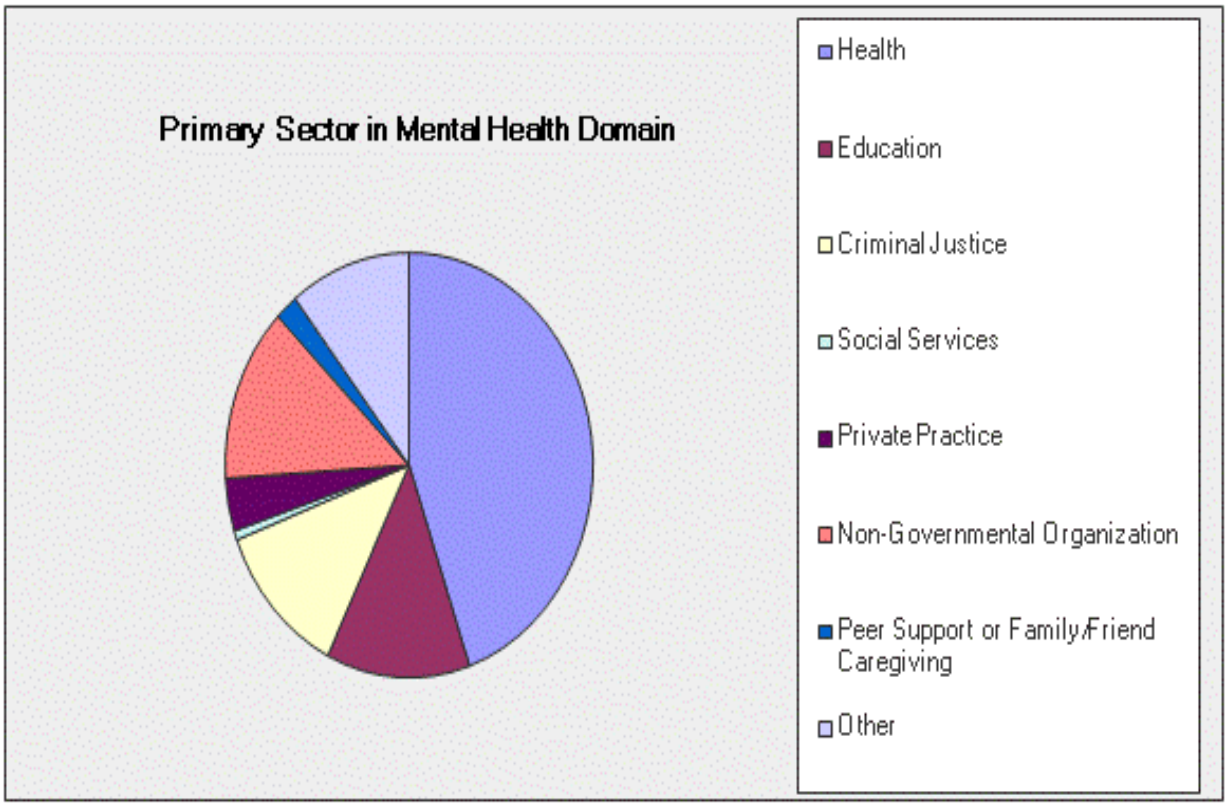
## Online Survey

During August and September 2010, IN4M staff surveyed experts on existing needs-based human resource planning models and strategies to deal with the current lack of data (see Appendix B). The strategies included a discussion of the use of data proxies – facts, figures or criteria. The eight question online survey was distributed to 225 identified experts and stakeholders in mental health services and human resource planning and/or forecasting and each was prompted to forward the survey link to any other interested parties. Given this, the exact sample size is not known however 150 responses were received with two surveys being completed in French. Survey Monkey was the electronic tool used for soliciting input. Cross sector representation was sought to ensure a balance of views and advice. Eight pre-testers provided feedback on the survey representing the five sectors listed above. Pretesting revealed that respondents would take up to 10 minutes to complete the survey. The distribution from the sample response is provided in a figure 3 below.

Valuable insight was provided by the online survey into additional models and data sets available for building a needs-based model for estimating human resources in the mental health domain. Given that the survey had to be distributed during the summer months due to the timeframes for the project, the response was considered strong, demonstrating stakeholders' willingness to help in this endeavour.

[14] Tomblin Murphy G, Birch S, and MacKenzie A. *The Challenge of Linking Needs to Provider Requirements*. 2007. Available at http://cna-aiic.ca/CNA/documents/pdf/publications/Needs_Based_HHR_Planning_2007_e.pdf

**Figure 3: Primary Sector in Mental Health Domain**




***Key Findings:***

- Almost half of respondents were from the health sector. A small number of respondents were from peer support, family/friend care giving or social services despite efforts to solicit additional feedback from this group.
- Eighty-seven percent of those surveyed were not aware of any other forecasting models provincially, nationally or internationally that would be applicable to mental wellness outside of three models listed in the survey.
- The most cited additional planning model that should be considered came from “down under” in Australia with *Tolkien II* by Gavin Andrews (University of South Wales).
- Data sets on mental health disorders (such as incidence, prevalence, mortality, risk factors, co-morbidities, etc.) were seen to be the best way to predict need in mental health although this was not a consistent finding across sectors.
- A significant list of data sources and proxies were provided by respondents that need to be reviewed for quality, access and consistency.
- Very little additional information was uncovered from social services and peer support sectors.

- Thought disorders (Schizophrenia and Alzheimer's disease) and substance abuse/problem gambling were seen to be the next priorities for the future for needs-based planning after the current disorders (depression, anxiety and ADHD) are completed.

The next component of this project included the selection, completion and reporting of a series of case studies.

## Case Studies

Case studies for the purpose of this project involved identifying autonomous or semi autonomous units or settings involved in needs-based health or mental health planning where the setting was a contributing factor to success or improvement. These studies are highlighted as "exemplars", cautionary models or instructive/illustrative examples. The approved IN4M project protocol provided for three case studies, yet four were conducted to provide additional insights. It was decided that the case studies selected could not be organizations involved in the request for proposal process.

A brief overview of each case study and key results is provided below (please see Appendix for details). The data from the key informant survey was then supported by further documentation and additional conversations with involved stakeholders.

***Vancouver Coastal Health Authority:*** Vancouver Coastal Health Authority (VCHA) exemplifies the power of an uncomplicated, Excel based system to look at the human resource supply through payroll data. Its focus is the health sector across the continuum of care due to the regional health authorities' mandate. Data provided from this 10 year old meso/micro system can also be rolled up to the macro level (i.e. provincial government) although it loses its granularity when aggregated.

Their model consists of three distinct parts: service requirements, recruitment gains, and employee losses.[15] It does have applicability for mental health but it is not designed to do this. Data results in "what if" scenarios for planning that balance the quantitative aspects with the qualitative discussion. Outputs are used to discuss plans for future needs with departmental level leaders. Overall it is a fairly inexpensive system to run (e.g. software, human resources) but it does require leadership to keep it moving forward in development. There are a number of limitations to the model including a lack of integration across sectors and professional groups (especially physicians). This is not due to the model's limitations but rather to how the health system and other human service systems are organized in the province. Physician services for the most part are paid for outside of the RHA budget.

***Vancouver Coastal Health Authority*** *uses payroll data to examine human resource supply at the various levels of the health system.*

[15] Jones, Brian, Leader Strategic Workforce Planning. Vancouver Coastal Health Authority. *Telephone Interview*. October 13, 2010.

***Algoma/Sault Ste. Marie:*** Algoma demonstrates the power of having schools as 'hubs of opportunity' for children and youth mental health services through collaboration and partnership. Children and youth at risk are identified early and evidence-informed, targeted intervention(s) are delivered to support each at-risk population. For children requiring specialized treatments, mental health treatment and support services are being delivered directly in the schools (e.g. drug counsellors in high schools), including day treatment. Referrals of children and youth with significant mental health issues are facilitated to the correct service providers. Algoma's website catalogues services available (segmented by prevention, support, treatment and crisis) and it allows the user to click on a type of service required and to identify the services available.

> ***The Algoma Model*** *is a school based approach to mental health services with a focus on prevention and some targeted interventions.*

The initiative involved cross jurisdictional collaboration between education (two school boards), children and youth services (Algoma Family Services), and some other community-based services such as the Children's Aid Society. Their model focus at this stage is more on the integration of services rather than human resources planning. Algoma is developing a school-based approach to mental health services with a focus on prevention with some targeted interventions. Algoma is very cautious in ensuring that mental health services do not overlap or interfere with the education sectors' primary mandate of instruction.

***Tolkien II Australia/New Zealand:*** Tolkien II is an international needs-based model that uses a 'bottom-up' approach to the planning of mental health services. Fifteen mental health disorders were modeled (representing 95% of the workload), however the researchers' main focus was on the direct costs of ideal treatment for people with mental disorders rather than human resources. The primary data source for this undertaking was a 1997 Australian Bureau of Statistics' National Surveys of Mental Health and Wellbeing that became the first survey about prevalence of mental illness in the country (second survey occurred in 2007).

> *Canada should consider using Australian epidemiological data to estimate need as the two countries are very comparable.*
>
> **Gavin Andrews, Tolkien II**

The modelling process involved preparing a research based synopsis for each disorder, calculating the number of people with that disorder seeking treatment, controlling for co-morbidity, and taking a decision regarding an optimal level of service. An expert working group met to describe the steps for optimal treatment that was then converted into clinical pathways. For example, for generalized anxiety disorder, four classifications were used: no disability, mild, moderate or severe disability. The resulting clinical pathway included: which provider did what for each level of severity; the resources required; and the direct costs of providing those resources. Core data was placed on their website for review and comment. *One of their most important findings was that a 30 per cent increase in budget could treat 60 per cent more people and produce a 90 per cent increase in health gains.*

***Alberta Health Services:*** Alberta has developed a suite of planning tools to predict the demand for health human resources based on population need for health services, service delivery trends and workload changes which can be applied at the regional and provincial levels in Alberta.[16] A joint Alberta Health Services (AHS) and Alberta Health and Wellness model is a population health focused approach aimed at the macro level of policy. Family physicians (along with nurses and medical radiation technologists) were the first provider group examined in a demand simulation model through a systems dynamic approach across the continuum of care. The second tool developed by AHS is aimed more at the meso/micro level of analysis. [17] It looks at 90 per cent of nurses across the continuum of care delivered by AHS (with the exception of primary care). Human resources and payroll data determines where the greatest sensitivity of variables occurs and then levers established influence behaviours to achieve a supply and demand balance (e.g. an internal shift or a new supply from the education sector). The model examines utilization that is occurring over time and integrates it from a workforce perspective.

> ***Alberta Health Services*** *has evolved two tools for human resource planning, one within the provincial health authority, and another through a partnership with Alberta Health and Wellness.*

Two models have evolved in Alberta that, if combined, can look at the meso, macro and micro levels. However the needs and capacities for government and health service organizations are different in terms of planning, so each has developed a model that is specific to business planning needs. Alberta took a 'data first, modelling second' approach to human resource modelling that front end loaded resources around existing data sets and expert involvement (health service professionals, researchers, the public, educators of professionals, etc) to ensure agreement on, and confidence in, the existing datasets.

Overall, case study findings make it clear that no single existing model is able to accurately predict mental health human resource needs in Canada. Each of these case studies addressed various parts of the Rubik's Cube. Some look at specific disease categories, others integrate services across sectors, whereas exemplars address the various planning levels of the health system. No example covered all aspects of the cube.

[16] Mahabir, H and Bloom J. The Alberta Population Needs-Based HHR Demand Model: Family Physician Project. *Powerpoint Presentation to the Pan-Canadian Workshop on HHR Forecasting Models in Canada*. April 27, 2010.

[17] Judy Bloom, Director, Workforce Planning, Alberta Health Services**.** *Telephone Interview***.** November 4, 2010.

## Request for Proposals

In late September, a request for proposals (RFP) posted on MERX invited consultants to indicate their capacity and interest to deliver a needs-based human resource planning tool for mental well-being (Appendix D). The RFP solicited an outline of the elements and intricacies of a human resource planning tool that builds from knowledge and data quantifying the current and future needs for mental health and wellness services. The purpose of the tool or model was to equip stakeholders to address critical resourcing issues that influence the quality and availability of mental wellness services and possibly serve as a template outside the arena of mental health services. *Project IN4M* staff assumed that the development of the model will require a significant financial investment in the next phase of this project.

**Project IN4M RFP Focus**

A needs-based human resource planning tool for mental well-being that is robust over time, across jurisdictions (including health, education, criminal justice, social services and the workplace), between the national, provincial/territorial and sub-provincial/territorial levels of forecasting, and in three mental disorders (anxiety, depression and attention deficit/hyperactivity disorder). The model must be replicable to other mental disorders in the future

The specific expectations from the forecasting tool as described in the RFP must include:

1. Supply-based, stock flow approach to mental wellness provider categories.[18]
2. Needs-based model built on demographics, disease burden (incidence, prevalence and mortality), risk factors, and base-line utilization.
3. Sub-model for productivity which considers the impact from information and communication technologies, funding (financing, compensation, funding models and incentives), system design (legislation, self-regulation, and wait times), and collaborative care.
4. Estimation of current and future need-supply gaps.
5. Back testing of the model, and robust development and use of scenarios.
6. Sector integration (including health, education, criminal justice, social services and the workplace, for both public and private services) and optimization of the best use of resources.
7. Covers the mental disorders of anxiety, depression and ADHD but must be significantly flexible to include other disorders in the future.

[18] Provider categories include: Physicians (General Practitioners, Psychiatrists, Paediatricians),Psychologists (clinical, industrial, school),Social Workers, Nurses (Licensed Practical Nurses, Registered Nurses, Psychiatric Nurses, Nurse Practitioner),Occupation Therapists, Councillors and Psychotherapists, Peer Support Workers, Family Caregivers, Support Workers, Social Welfare Case Workers ,Teachers, Teachers Assistants, Special Educational Assistants, Behavioural Technologists, Institutional and Community Parole Officers, Correctional Officers, Employee Assistance Program Workers, Workplace Health Coordinators, and Others in various settings and paid public or privately/non-publicly.

8. A methodology that can address issues such as co morbidities, healthy immigrant effects, wait times/access and stigma.

At the end of October, 2010, three strong proposals highlighted consultants' willingness and approach to this endeavour. These three organizations were invited to present and answer questions in November 2010 to the Project IN4M team, along with representatives of the Project's Advisory Committee. Conflict of interest guidelines were in place for this process. The following evaluation criteria using a five point Likert scale was employed:

- Quality of the proposed needs-based planning approach;
- Qualifications, experience, and expertise of the consultants and the proposed team in forecasting. This includes a track record with similar assignments;
- Workplan; and
- Budget.

Each of the proposals had their own unique strengths and some relative weaknesses, which made it very difficult for the review team to choose any one of the three high quality proposals. All three proposals were comprehensive and logical. All recognized that a predictive model requires three components: data on needs for mental health services; data on the supply of professionals who deliver mental health services; and expertise in the skills mix involved in particular mental health services. Based on their particular strengths and networks, each of the proposals proposed specific approaches to addressing those three components; the approaches varied in terms of scope and timelines as well as costs.

In the end, the review team felt that the best approach was to create a 'best of the best' relationship based on the unique contributions of each of the vendors. This collaborative approach was supported by the IN4M Advisory Committee. The result is a collaborative approach to moving forward with Phase II which is discussed in the conclusion and next steps section of this report.

## Research Roundtable

Project IN4M brought together thought leaders from across the country and across the different stakeholder groups on November 22/23, 2010, hosted by the Royal Ottawa Health Care Group. The conclusions from the roundtable formed an important part of this report to Health Canada on the proposed implementation for the next two phases of IN4M. The Roundtable objectives were:

> *We are in a data free zone in establishing the need for mental health services.*
>
> - Roundtable Participant

- To develop the future approach to both IN4M and the mental health human resources issue;
- To validate Project IN4M findings on approaches and data (and gaps), including generalizability of results beyond mental health; and
- To create "champions of change" among the community of health policy makers, health planners and mental health stakeholders.

A *fireside chat* featuring three distinguished leaders in the field (Ian Manion, Lisa Zigler and Wayne Helgason) provided an overview of their experiences in mental health and their perspective on needs-based human resource planning in the mental health field. Project findings to date were presented and then Joan Edwards Karmazyn provided a consumer's perspective on mental health services including the importance of peer support, relationship building, storytelling, and listening to consumers. Small group and plenary discussions occurred around data challenges, barriers and enablers, creating champions of change and actions for the future.

Some of the solutions identified around data challenges were: looking to the scientific literature and other countries for available, applicable data such as Australia; developing and implementing a national survey of mental health service needs in Canada; building the technological infrastructure required for future data collection and use; expanding knowledge around the type of mental health services required and what competencies are required to deliver those services; and establishing a national health human resource observatory that includes mental health. Roundtable participants also identified barriers and enablers and believed these could be addressed by undertaking solutions such as: developing partnerships between researchers and government to develop and implement research activities; and building the infrastructure (including technology) for a common repository of data.

Five core messages arose from the "Roundtable at the Royal" and were presented to Commissioner Kirby that evening by the project lead, Bill Tholl. These five messages were:

1. Roundtable participants were supportive of Project IN4M moving from Phase 1 (feasibility) to Phase 2 (proof of concept);

2. There is a window of opportunity for Project IN4M as a number of provincial/territorial governments have expressed interest in moving forward, in a tangible way, on mental health issues;

3. In order to leverage support, Project IN4M requires a document which outlines a clear, compelling, concise business case positioning the project as part of an overarching strategy to address mental health issues in Canada;

4. A plan is required to develop a repository for all data that currently exists, to make the best use of that data by systems planners, researchers and practitioners, and to begin the collection of data to fill existing data gaps; and

5. Roundtable participants are willing to act as 'Champions of Change' to mobilize a broad- based coalition to support future action.

Commissioner Kirby was very pleased that *Project In4M* had brought the mental health community together to discuss such an important, cross cutting leadership challenge and looks forward to having the results factored into the MHCC's deliberations around an integrated mental health strategy for Canada.

> *We do not have the data needed to obtain an adequate picture of the mental health status of Canadians. We lack a national information base on the prevalence of mental health problems and illnesses in all their diverse forms, as well as the information system required to monitor the mental health and well-being of Canadians….This lack of information also limits the extent to which policy-makers and people throughout the mental health system can be held accountable.*
>
> Mental Health Commission of Canada. *Toward Recovery and Well-Being*. 2009.

## Outcomes

*Project IN4M's* objectives and deliverables have met the objectives, outputs and outcomes of the Health Care Policy Contribution Program. The original multi-level risk management strategy outlined in the projects' contribution agreement related to the both the financial and operational aspects (including data quality, dynamic policy environment, managing expectations, professional parochialism, consultation fatigue, and negative perceptions among health professionals) were addressed and managed throughout the project deliverables for Phase 1 of IN4M that included: a literature review/environmental scan; an online survey; case studies (national/international); request for proposal for the development of a planning tool and a research roundtable. The target audiences for Project IN4M have English and French language requirements therefore all documents have been produced in English and the executive summaries in both official languages.

The major immediate and intermediate outcomes of IN4M are outlined below for the research, communication, financial and evaluation functions of this project.

> *Someone is sitting in the shade today because someone planted a tree a long time ago.*
>
> Warren Buffett

## Research

The outputs and immediate outcomes of the research deliverables were outlined in the previous section. However, two major summary research findings occurred and will form the foundation for moving forward in further phases of the project to address intermediate and longer term outcomes. These are:

1. ***A common platform for mental health planning is lacking in Canada. A needs-based forecasting model for mental health wellness is seen to be a more effective and more sophisticated approach to modelling health workforce demand.***

Decision-making tools like human resource planning frameworks are vital to the effectiveness of a mental health strategy. The World Health Organization believes that human resources for health must be built on an adequate workforce supply that is capable of addressing the needs of the population.[19] A significant amount of work must be done to develop a needs-based model that crosses the private and public sectors; links sectors; can move between the micro, meso and macro levels of forecasting; and can aggregate/disaggregate data into categories of mental disorder.

A window of opportunity exists to move forward on mental health needs-based planning as a number of provincial/territorial governments are working on implementing mental health strategies. As well, the imminent end of the ten year 2004 Accord provides an opportunity to put human resources and "levelling the playing field" in terms of access to mental health services (or "Kirby Gap") at the top of the list for future collaborative work and support. Planning of our health human workforce must be a foundational element of these new pan-Canadian strategies. A human resource planning tool for mental wellness that uses a common platform, tailored to the unique needs of provinces and territories, is clearly required. Furthermore, based on the November Roundtable, there appears to be the sufficient trust and acceptance needed to allow the federal government to play a catalytic role in this regard.

2. ***In Canada, there is no comprehensive national or provincial/territorial database on the incidence/prevalence of mental health problems/disorder and the related workforce.***

Improving access to mental health services means quantifying the need for those services, tailoring the response to those needs in the most effective ways and understanding the impact(s) of those services. The data required to assess need is beginning to be developed and collected although there are still significant gaps especially across sectors (outside of health care such as education, social services, private practice and criminal justice) and occupational categories (outside of physicians and nurses).

[19] World Health Organization. *Handbook on Monitoring and Evaluation of Human Resources for Health*. 2009. Geneva: WHO.

There is a need to create better mental health data sources for disease burden (incidence, prevalence, and mortality); attributable risk factors (including co-morbidities); workforce supply (stock and flow including informal care givers); and productivity — all at the most granular level possible (single age cohorts, all ages, location) without violating privacy legislation.

Australia has undertaken two national surveys on mental health prevalence including the number of people who sought treatment and as well the treatment they received. Canada should build on this and other work and consider a similar national longitudinal study to support planning efforts. Canada needs to create what it has been lacking, a "mental health system" that assists Canadians in receiving the services they need from different domains in as seamless, timely, efficient and cost effective fashion as possible. Provinces and territories are moving forward on significant mental health strategies, and the Mental Health Commission of Canada has brought an enhanced focus to mental health and will issue its national strategy in 2012. Common tools are required for planning mental wellness services that uses data as a foundation to build a new future.

## Communication

The Project IN4M Communications Plan (Appendix F) identified seven tactics to support achievement of the overall goal of Project *IN4M* (to improve availability and accessibility to high quality, necessary mental health services at the time and to the extent of need) as well as the one of the specific objectives of the first phase of *Project IN4M* (to disseminate to planners and policy-makers, knowledge on needs-based planning and data related to meeting growing mental health needs with available services.)

The communications activities undertaken by Project IN4M are described in the table below. Copies of the texts referred to in the table are appended separately.

| Tactic | Output/Action |
|---|---|
| Network with mental health stakeholders | • Four meeting of Advisory Committee<br>• Meetings with MHCC, CIHR<br>• Snowball survey (Spring 2010)<br>• Key informant interviews (summer 2010) |
| Support members of Advisory Committee to 'champions' learnings and status of *Project IN4M* | • Results of snowball survey (April 2010) and key informant interviews (September 2010) shared with Advisory Committee for discussion and comment.<br>• Learnings form literature review summarized and distributed (June 2010) to Advisory Committee for their use in communicating to networks<br>• Article summarizing purpose and workplan of IN4M project distributed (June 2010) to Advisory Committee |

| Tactic | Output/Action |
|---|---|
| | • Four case studies discussed with and summaries supplied to Advisory Committee members (November 2010)<br>• Advisory Committee members briefed to participate in discussions at Action Research Roundtable (November 2010)<br>• Results of Action Research Roundtable summarized and discussed with Advisory Committee (January 2011) |
| Develop articles for inclusion in trade journals and other periodicals and on web-sites of mental health NGOs about multi-disciplinary practices in the delivery of mental health services, decision-tools for HR planning, data and knowledge gaps related to the mental health domain; | • Article summarizing purpose and workplan of IN4M project distributed (June 2010) to Advisory Committee members for their use in communicating to networks<br>• Text summarizing results of literature review and key informant survey supplied to Advisory Committee members (September 2010) for their use in communicating to networks<br>• Text describing four case studies supplied to Advisory Committee members (November 2010) for their use in communicating to networks<br>• Report of Roundtable distributed to Advisory Committee members for their use in communicating to networks |
| • Discuss with government representatives the status and learnings of project and its relevance to them; | • Quarterly reports on workplan status<br>• Via membership on Advisory Committee, Health Canada, CIHI staff inform (pre) and advised of (post) learnings and directions of project<br>• Meetings with DM HC (Summer 2010) and other senior HC officials (Fall'10 and Spring '11)<br>• Meetings with MHCC senior staff (throughout the project) |
| • Interviews with professional associations and support advocacy associations on barriers and enablers;<br>• Develop article(s) for professional journals summarizing the results of interviews | • Snowball survey and key informant interviews included staff of national and provincial organizations in health sector<br>• Text summarizing results of literature review and key informant survey distributed to Advisory Committee whose membership included HEAL (which brings together 36 national health sector stakeholder organizations including CMA, CNA, CPhA, CPA, etc.) |
| • Post on CMHA website the reports of *Project IN4M*. | • Once executive summaries are translated, report on literature review, summary of key informant survey, case studies, Roundtable results , and elements of predictive model will be posted on CMHA website (March 2011) |

## Evaluation

*Project IN4M* has completed Phase I of its work, delivering multiple streams of activities – document/ literature review; survey of key stakeholders; case studies of mental health and other needs based planning tools; and a roundtable to bring together key stakeholders in mental health human resources. As a Health Canada funded project, under the Health Canada Policy Contribution Program (HCPCP), *Project IN4M* is subject to evaluation against its own stated goals and those HCPCP objectives identified as relevant in the IN4M funding proposal.

*Project IN4M* has been evaluated using the logic model framework shown below. These processes and outcomes have then been linked to the original stated objectives of the project (including those of HCPCP). These are tabulated below the logic model.


| Inputs to process | Activities | Outputs of project | Expected outcomes (longer term) |
|---|---|---|---|
| HCPCP funding<br><br>MHCC and CMHA support in kind<br><br>IN4M Team expertise | Literature review of MH and HHR models<br><br>Survey of stakeholders to identify models for case studies<br><br>Case studies of HHR/ MH models in action<br><br>Roundtable of stakeholders<br><br>RFP process to develop one model for Canada | Detailed review of existing modeling approaches and data sources – verified by numerous stakeholders<br><br>4 case studies of Canadian and international approaches to needs-based planning for MHHR modeling<br><br>Roundtable report and briefing note for needs-based planning in MHHR<br><br>Combined proposal on developing needs based planning model (bringing together the 3 groups with experience in Canada | Shared understanding of the need for needs-based planning for MHHR<br><br>Modeling tool for need- based planning for MHHR – generalizable to other HHR issues<br><br>Champions of change across MH stakeholders<br><br>Political support across Canada for investing in MHHR needs-based planning |

The processes that formed part of *Project IN4M* were completed within the budget lines allocated for them, and on time. Specifically, the case studies of needs-based planning approaches to HHR increased in number from three to four, and covered international approaches as well as those in Canada. The outputs from *Project IN4M* all related to the originally stated outputs for the project. Outputs also aimed to bring together key stakeholders in the mental health HR planning process in order to facilitate outcomes from the project. Outcomes from *Project IN4M* are in general expected ones, although some are already in evidence. The roundtable evaluation suggests that there is a shared understanding being developed around the need for needs based planning for mental health HR, and has identified some "champions of change" across stakeholder groups for mental health HR. There is also political support

for investing in needs-based planning beginning to develop, with Senator Michael Kirby voicing his support for the work of *Project IN4M* after the roundtable. A state-of-the-art modelling tool for mental health HR planning is now possible as a result of the *Project IN4M* RFP process.

**Table 1. Table of Achievement against Stated Objectives for Project IN4M**

| IN4M stated objective | Delivered upon? | Details | Evidence |
|---|---|---|---|
| To evaluate common elements of needs-based models for human resources planning. | Yes | Conducted literature review, survey and case studies designed to identify and evaluate the importance of elements of needs-based planning models. | Findings from literature review, survey and case studies in IN4M report. |
| To disseminate to planners and policy-makers, knowledge on needs-based planning and data related to the needs and services available. | Yes (and ongoing) | Roundtable with planners and policy-makers has already developed a shared understanding of the data for needs-based planning.<br><br>Materials for disseminating more widely are being developed. | Evaluation report from Roundtable (see Appendix A).<br><br>Communications plan for IN4M and existing drafts of briefing notes for policy-makers and planners. |
| **HCPCP stated objective** | **Delivered upon?** | **Details** | **Evidence** |
| Foster the development and implementation of health care system policies and strategies to address identified health care system priorities (access to mental health services, needs based service development, needs based health human resources). | Yes | Developed an evidence base to address mental health service access, needs based service development and HHR issues.<br><br>Brought together leading Canadian experts in HHR planning to build needs-based model for mental health HR planning. | IN4M final report with literature review of evidence for needs-based planning in mental health HR.<br><br>Development of consortium of leading Canadian HHR planning organizations through RFP process. |
| Contribute to improvements in the accessibility, responsiveness, quality, sustainability and accountability of the health care system. | Ongoing | This is a long-term outcome for the project and will arise if/when recommendations on the way to plan for a needs-based mental health HR strategy is implemented. | Buy in from policy-makers and planners in the roundtables (attendance and roundtable evaluation feedback). |
| Increase knowledge of factors determining the performance and | Yes | Literature review of international as well as Canadian approaches to mental health human resource planning, specifically needs- | Literature review document and case studies of existing mental health needs-based planning |

| | | | |
|---|---|---|---|
| responsiveness of the health care system and its responsiveness to users' needs (service gaps and resources needed to fill them). | | based planning, has identified where needs-based planning approaches can improve the responsiveness of the mental health system. | approaches. |
| Increase knowledge and application of evidence and best practices, leading to improved health care system planning and performance. | Yes (and ongoing) | Knowledge of best-practices around needs-based planning and mental health HR planning has been collated and analysed. It was presented to a diverse stakeholder group including planners and policy-makers who have agreed to support the development of policy briefing note. | IN4M report collating and analyzing evidence on needs-based planning for mental health HR.<br><br>Briefing note development for (and with) policy-makers. |
| Knowledge tools, products and innovations (planning tool) and modifying knowledge products, dissemination of knowledge, health system renewal. | Yes – Ongoing | The Project IN4M team are in discussions with the three expert groups in developing HHR planning tools in Canada. The aim is to work with the three groups as a meta-consortium, to produce the highest quality, fit-for-purpose needs-based mental health HR planning tool. | RFP process and developing partnership on phase II of project IN4M. |
| Evaluation or trial adoption (pilot) of knowledge, approaches, models, strategies or promising practices on a limited scale. | To be developed | Phase II of project IN4M will be the time when the pilot version of a new needs-based planning tool for mental health HR is put in place and evaluated. This will build on the knowledge developed in phase one, and the relationship built through the RFP process. | Strategy for phase II of IN4M.<br><br>Partnership of HHR modelling groups. |
| Increased awareness and understanding of knowledge, tools/products, approaches, models, innovations and health system reform issues. | Yes | The roundtable of diverse stakeholders provided the opportunity for increasing the awareness around mental health HR planning, and for needs-based planning in general. | Evaluation of the roundtable (see Appendix A) |
| Decreased barriers to knowledge development, translation, use and health system renewal. | Ongoing | The barriers to needs-based planning in mental health HR were identified for multiple stakeholder groups through the roundtable. Individuals with greater knowledge of systemic barriers and barriers affecting other stakeholders have the opportunity to address the barriers based on firm evidence. | Evaluation of the roundtable shows a greater understanding of the barriers facing needs-based planning for mental health HR.<br><br>The survey of stakeholders suggested some of the major barriers to be addressed. |

| | | | |
|---|---|---|---|
| Broadened adoption of knowledge/innovations resulting in changes to policy, practice and/or organizational structure. | Ongoing | Policy-makers and planners have been made aware of the issues around needs-based planning for mental health HR, and will be targeted in the communications strategy from phase I of project IN4M (including with a briefing note on the project). | Briefing note for policy-makers and planners.<br><br>Interest confirmed in taking forward the ideas from the roundtable. |
| The long-term outcome of improvements in the health care system. | Ongoing | There is great potential for improvements to the health system through needs-based planning for mental health HR. | Evidence from the literature review and case studies suggests positive outcomes for the health system from needs-based planning approaches to HHR. |

Overall, the objectives stated in the proposal for *Project IN4M* have all either been achieved (where the timescale for evaluation is appropriate to measure achievement), or are moving towards being achieved (where the timescale is longer, but the intermediate steps toward achievement are being taken). These objectives have been achieved within the budget and timeline set aside for Project IN4M, but for the longer-term achievements to arise there must be a combination of: a) funding for the development of a needs-based planning tool; b) a stable consortium for developing the planning tool; c) a commitment to communicating the findings from IN4M and the desirability of needs-based planning to the full breadth of stakeholders in mental health HR planning.

## Budget

Initial support, including the provision of $10,000, was provided by the Mental Health Commission of Canada. Under the aegis of CMHA, the team applied for and received $250,000 from Health Canada in March 2010. Substantial in-kind contributions have been provided by the original host organization (Canadian Policy Research Network), the Royal Ottawa Healthcare Group, and the Mental Health Commission of Canada. The members of the Advisory Committee made significant commitments of time.

The project was completed on time and within budget. A reallocation of funds was requested and approved in spring 2011 to bring together the consulting groups on March 1st to develop a consensus around an approach for working together to move from Phase One to Phase Two. Further work is still required in this area.

## Conclusion and Next Steps

Supply side approaches to human resources planning in Canada has resulted in overshooting the mark ("boom-bust" cycle). Much has been said, but little has been tried or done to move to a needs-based approach. A needs-based forecasting model, such as those developed by and for *Project IN4M,* provides for more sophisticated and potentially more effective approaches to modelling health workforce demand, although this has yet to be proven. Noteworthy work is beginning in Canada on health human resource needs-based models and more systematic evaluation would be worthwhile. Of the needs-based models or case studies found in Canada, most take differing approaches to assessing need and typically for select provider groups like physicians and nurses.

> *The way to get started is to quit talking and begin doing.*
>
> Walt Disney

Importantly, the data required to assess need is beginning to be developed and collected. That said, there are still significant gaps, especially across sectors outside of health care such as education, social services and criminal justice. None of the models found to date look at workers broadly (i.e. existing both in the public and private sectors, informal as well as formal, and outside of the health sector).

To build a common needs-based mental health HR planning platform and create a comprehensive database, we need a similarly comprehensive solution. *Project IN4M* is proposing the development of a research consortium or collaborative as the preferred pathway to build the predictive platform and necessary data elements in support of needs-based HR planning.

The solution involves an extraordinary collaboration among two of Canada's leading human resource forecasting organizations: RiskAnalytica and The Conference Board of Canada. Each responded to an open 'Request for Proposals' and each demonstrated their respective strengths. They have agreed to work together as a collaborative to leverage up their collective strength. The collaborative would work from a set of first principles or values: openness, professionalism, excellence, respect and accountability (OPERA). They have also agreed to having *Project IN4M* continue in a coordinating role with the ongoing support of a high-level advisory committee (made up of, for example, CMHA, MHCC, Health Canada, CIHI, CHLIA, CPA).

In partnership with *Project IN4M*:

- RiskAnalytica will lead the development of the elements of the framework related to burden of illness and epidemiology (the "demand side"); and
- the Conference Board of Canada will lead the development of the occupation framework (or the "supply" side).

While each of the partnering groups would be asked to take the lead in various areas, it is understood that in the spirit of a true Canadian collaborative, there will be a significant intersection of sets and opportunities for joint work.

As we come to the end of WHO's "Decade for Human Resources in Health", it is safe to say that when all is said and done, more has still been said than done in terms of needs-based planning for health care. This is especially true in the mental health arena, where needs are complex, large and growing exponentially. It is time to 'change the channel' and begin to act in a collaborative and concerted way, cutting across health, education, criminal justice, social services and the private sector. It has been said that a story always overcomes the evidence.

The major challenge in mental health is that it is seen as a 'data free zone'. Given the dearth of data, all you are left with is stories. Building the necessary framework and data elements through this type of collaborative arrangement will create a deeper understanding of the impacts caused by a modern society in the context of the looming transformation/modernization of mental health services across Canada.

The collaborative approach to predictive modelling set out here will help the mental health community, governments and business work together to qualify and quantify "needs" at the individual/ organizational/system levels. It will also provide the basis for promoting evidence-based decision-making. The predictive tool that will emerge — if Phase Two support is forthcoming — will alleviate confusion and anxiety by creating a more comprehensive and coherent blueprint for action based on best available evidence. In other words: stories based on evidence, rather than stories that are the only evidence. Mental health sufferers deserve better, they just need a little help from their friends.

# Appendix A: Literature Review and Environmental Scan

CANADIAN MENTAL HEALTH ASSOCIATION
ASSOCIATION CANADIENNE POUR LA SANTÉ MENTALE

*Project IN4M*

# Integrating Needs for Mental Well-Being into Human Resource Planning

## Literature Review and Environmental Scan

**December 24, 2010**

## Preface

Project IN4M was commissioned by Health Canada to undertake an analysis of the common elements of needs-based human resource planning for mental wellbeing. This represents Phase I of a potentially three phased project. It is managed by the Canadian Mental Health Association.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## Executive Summary

In the spring of 2010, Project IN4M began Phase I of a proposed multi-phased project. IN4M is a national effort to develop a needs-based human resource framework and model based on current data sources and those that need to be developed in the mental wellness area. IN4M involves identifying and analyzing data sources in the health, education, social services, and criminal justice sectors within the public domain as well as those in the private, workplace and not-for-profit domains. IN4M is focusing on three conditions: Depression, Anxiety and Attention-Deficit Hyperactivity Disorder (ADHD). Phase I was led by the Canadian Mental Health Association and funded by Health Canada, with support from the Mental Health Commission of Canada.

The workplan for Phase I involved four main components: a diagnostic/situational analysis (i.e. a literature review and environmental scan); an inventory of existing needs-based and other HHR planning practices (i.e. on-line survey); a feasibility study of predictive modelling building in and upon a series of case studies (i.e. case studies and request for proposal process); and action research roundtable to create champions of change and a future approach. This literature review and environmental scan represents the first component of the workplan.

Peer reviewed and grey literature was reviewed and compiled from March to December 2011. The research framework began with a broad discussion on health needs narrowing to forecasting models in health human resources for mental health disorders. A detailed search protocol can be found in the methodology section of the report. Databases were searched in May, 2010 mainly for articles arising in the last five years. Grey literature sources focused on reports and studies primarily from national and provincial initiatives in human resource modelling especially in mental health. An initial snowball survey provided a basis for direction and approach. Through the online survey and ongoing consultation (especially with the advisory committee and the research roundtable), additional articles and publications after the first database search were provided to the IN4M Project team to add further insight.

This review reaffirmed that there is very limited information currently available on needs-based human resource planning and forecasting in mental health especially across other sectors outside of health care. Findings included:

- In Canada, there is no comprehensive national or provincial/territorial database on the prevalence of mental health problems and disorders.
- The most broad data source on the prevalence for depression and anxiety is the *Canadian Community Health Survey* although there are limitations such as that mental health survey was repeated once nationally, data is for those over the age of 15 years, and it does not include institutionalized populations. There will be a need to seek and create better data sources for incidence, prevalence, and mortality.
- The *Hospital Mental Health Database* of the Canadian Institute of Health Information includes data for mental disorders and stratifies mood disorders and anxiety disorders.

- Disability claims are high for mental disorders with most recent figures at 79 per cent of long term disability claims and 75 per cent of short term disability claims.[1] Depression is the fastest growing disability cost to Canadian employers.[2]
- In terms of quantifying needs for mental health services among children and youth, several data sources may be useful: the *Canadian Community Health Survey;* the *National Longitudinal Survey of Children and Youth* (Statistics Canada); *Health Behaviour in School-Aged Children* (Public Health Agency of Canada), and the *Canadian Health Measures Survey* (Statistics Canada).[3] Within the education system, limited data are available on incidence and prevalence in children and youth for mental health disorders.
- In the criminal justice system (police, courts/review boards, and corrections), there is little standardization in the types of data collected and the method of data collection and storage.[4]
- There is no data collected that relates to the unmet or unexpressed needs that exists for mental health services. Reasons for this are numerous for example stigma and service unavailability.
- The most reliable population-based measures of need for health services were the *MOS 36-item Short Form Health Survey*, *Health Utility Index, Health-Adjusted Life Expectancy*, self-assessed health status, and *Health Related Quality of Life* as measured by the HUI.[5]
- Historically, most endeavours to project the need for services have been in the health sector and have focussed on the supply of physicians and nurses or/and utilization patterns for current services.
- The most applicable needs-based planning initiatives occurring in Canada are: the Mental Health Commission of Canada's commissioned work by Risk Analytica; the Ministry of Health and Long Term Care of Ontario commissioned work by the Conference Board of Canada; and O'Brien-Pallas, Tomblin Murphy, Birch et al.'s commissioned work for various organizations.

Overall the data required to assess need is beginning to be developed and collected on mental health and well being, although there are still significant gaps especially across jurisdictions and outside of health care (i.e. education, social services and criminal justice). Some models use proxy data to estimate need for workforce requirements when gaps are missing. None of the models examined in this review look at workers broadly (i.e. existing both in the public and private sectors, and outside of the health sector). Including private sector professions and informal caregivers will be a challenge from both a data availability and policy/ intervention perspective.

A significant amount of work must be done to begin to develop a coherent, comprehensive reliable needs-based model that: crosses the private and public sectors; links jurisdictions; can move between the micro, meso and macro levels of forecasting; and can aggregate/disaggregate data into disorder categories. To this end, IN4M is developing Phase II and III for proposed funding. This future work would involve putting a practical, predictive needs-based human resource planning model into practice

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1 Mood Disorders Society of Canada. *Quick Facts*. November 2009. Available at www.mooddisorderscanada.ca Note that the source of their data was not apparent in the report.

2 Ibid.

3 Guttmann A, Cohen E, and Moore C. Outcomes-based HHR Planning for Maternal, Child and Youth Health Care in Canada: A New Horizon for the 21st Century. *Paediatric Child Health* Vol 14 No 5 May/June 2009.

4 Sinha M. *An Investigation into the Feasibility of Collecting Data on the Involvement of Adults and Youth with Mental Health Issues in the Criminal Justice System*. Prepared for the Canadian Centre for Justice Statistics, Statistics Canada. 2009. www.statcan.gc.ca/pub/85-561-m/85-561-m2009016-eng.pdf

5 Tomblin Murphy G, Birch S, and MacKenzie A. *The Challenge of Linking Needs to Provider Requirements*. 2007. Available at http://cna-aiic.ca/CNA/documents/pdf/publications/Needs_Based_HHR_Planning_2007_e.pdf

and then disseminating and promoting up-take of a model across Canada as part of an overarching, integrated mental health strategy.

# Contents

# IN4M Literature Review and Environmental Scan

## Introduction

"*Mental health is a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community*."[6]

A report of the Surgeon General in the United States defines a continuum, which includes mental health, mental health problems, and mental disorders:

"*Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity. Mental health is indispensable to personal well-being, family and interpersonal relationships, and contribution to community or society. The term mental health problem is used for signs and symptoms of insufficient intensity or duration to meet the criteria for any mental disorder. Almost everyone has experienced mental health problems in which the distress one feels matches some of the signs and symptoms of mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behaviour (or some combination thereof) associated with distress and/or impaired functioning*." [7]

Mental health is a large and growing challenge for Canadians. One in five Canadians will experience a mental health issue in their lifetime. In 2003, an estimated 1.9 million adults in Canada had a mental disorders diagnosis and 1.6 million reported symptoms but were not treated.[8] Mental health (especially depression) is one of the six major chronic diseases in Canada with an estimated economic burden of $51 billion in 2003.[9] One-third of hospital stays in Canada are due to mental health disorders.[10] To address this, and to plan a course for the future, in November 2009 the Mental Health's Commission of Canada released it's *Toward Recovery and Well-Being: A Framework for a Mental Health Strategy for Canada* outlining seven goals, one of which is that "people have equitable and timely access to appropriate and effective programs, treatments, services, and supports that are seamlessly integrated around their needs."[11]

Health Canada commissioned this "scoping" project to examine the feasibility of putting in place an integrated, needs-based planning for mental well-being. *Project IN4M* is a multi-sectoral project

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6 World Health Organization. *The World Health Report 2001: Mental Health-New Understanding, New Hope.* Geneva: WHO, 2001.

7 United States Surgeon General. *Mental Health: A Report of the Surgeon General*. 1999. www.surgeongeneral.gov/library/mentalhealth/chapter1/sec1.html#mental_points

8 Lim KL and Jacobs P. *How Much Should We Spend on Mental Health?* Reported prepared for the Alberta Institute of Health Economics. 2008. Available at: www.ihe.ca/documents/Spending%20on%20Mental%20Health%20Final.pdf

9 Public Health Agency of Canada. *Centre for Chronic Disease and Prevention*. 2010.

10 Government of Canada. *The Human Face of Mental Health and Mental Illness in Canada*, 2006.

11 Mental Health Commission of Canada. *Toward Recovery and Well-Being: A Framework for a Mental Health Strategy for Canada.* November 2009.

managed by the Canadian Mental Health Association (CMHA) in association with the Mental Health Commission of Canada (MHCC). This collaborative initiative proposes to explore the feasibility of taking needs-based human resources planning from theory to practice in the mental health domain. The MHCC sees a need for a predictive tool that would supplement its research agenda. *Project IN4M* is designed to produce a human resources planning tool that will be robust over time, across jurisdictions and across major diagnostic categories. The predictive tool would give governments, service providers and the public a better picture of what is needed in terms of human resource capacity for both formal and informal care-giving (including peer support and peer workers) to address the demand, both now and in the future, for mental health services.

*Project IN4M* is envisaged as a three-phase project constituting:

1. an analysis of the feasibility of identifying common elements to integrate needs-based planning for mental well-being (hence *Project "IN4M*");
2. putting a practical, predictive needs-based human resource planning model into practice ("i.e. proof of concept); and
3. dissemination of and promotion for the up-take of the model across Canada as part of an overarching, integrated mental health strategy.

Phase 1, the initial or feasibility phase of the project, comprises four parts:

**Part 1: A diagnostic/situational analysis**. The situation analysis involves a review of the literature and an environmental scan based on a "snowball survey."[12]

**Part 2: Creating an inventory of existing needs-based and other HHR planning practices**. The inventory draws on the results of key informant interviews and an on-line survey of stakeholders in both community and institutional settings.

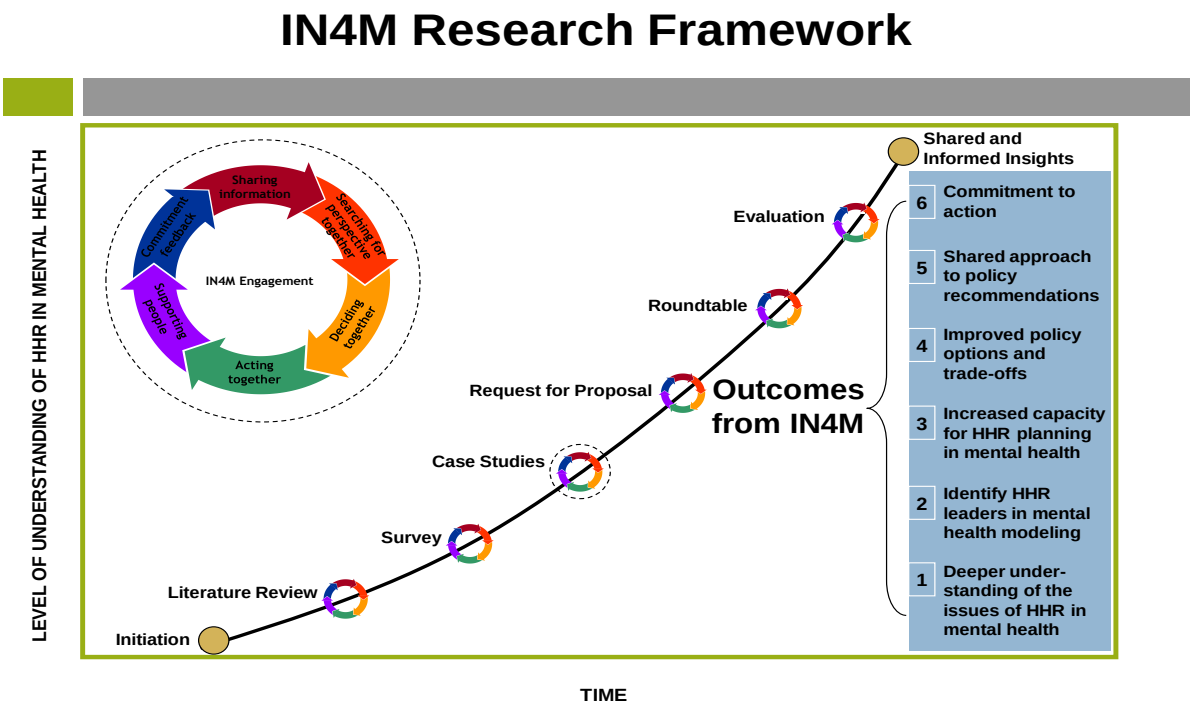
**Part 3: A feasibility study of predictive modelling building in and upon a series of three case studies**. The feasibility study involves a cross-case analysis of four case studies to identify macro-level trends and forecasts of population mental health. The case studies will use three of the most common diagnoses: depression, anxiety, and ADHD (attention deficit / hyperactivity disorder). The request for proposal is provided to a select group of leading modellers.

**Part 4: An action research roundtable**. The results of the analysis will be summarized in a *Leadership Challenge* that will provide the springboard for discussion at a consensus conference or *Action Research Roundtable*. A report on the conclusions and recommendations of the *Roundtable* will be developed.

Figure 1 outlines the IN4M research framework used for the project with proposed outcomes and deliverables. The first phase of *Project IN4M* began in March 2010 and will be completed in early 2011. This synthesis addresses **Part 1**, the diagnostic/situational analysis that comprises a literature review and environment scan. . An online survey was conducted over the summer months of 2010 culminating in case studies in September. This was further synthesized into the request for proposals with all results presented at a Roundtable held in late November 2010.

[12] The snowball survey was a series of telephone interviews. Interviewees were found from referrals of initial interviews to gather initial information on the subject.

**Figure 1: IN4M Research Framework**



## Methodology

MEDLINE, the Cochrane Library, Human Resources for Health Global Resource Centre, ERIC, and PsycINFO, were the primary databases used for peer-reviewed studies. These databases were searched in May, 2010 mainly for articles arising in the last five years. Grey literature sources focused on reports and studies primarily from national and provincial initiatives in human resource modelling especially in mental health. The initial snowball survey provided a basis for direction and approach. Through the online survey and ongoing consultation, additional articles and publications after the first database search were provided to the IN4M Project team to add further insight into this literature review and environmental scan.

Key words for the search, with synonyms and variations in spelling considered, were a combination of: health care needs, needs-based planning, forecasting, modelling/models, mental health, mental health needs, mental disorders, mental illness, health human resources, policy options, policy trade-offs, caregivers, family, informal help (peer support), education, schools, social welfare, criminal justice, incidence and prevalence. Inclusion and exclusion criteria are listed in table 1. Given the large amount of key words for the search, hundreds of abstracts arose of which just over 100 articles and publications were found to be of most relevance for this endeavour.

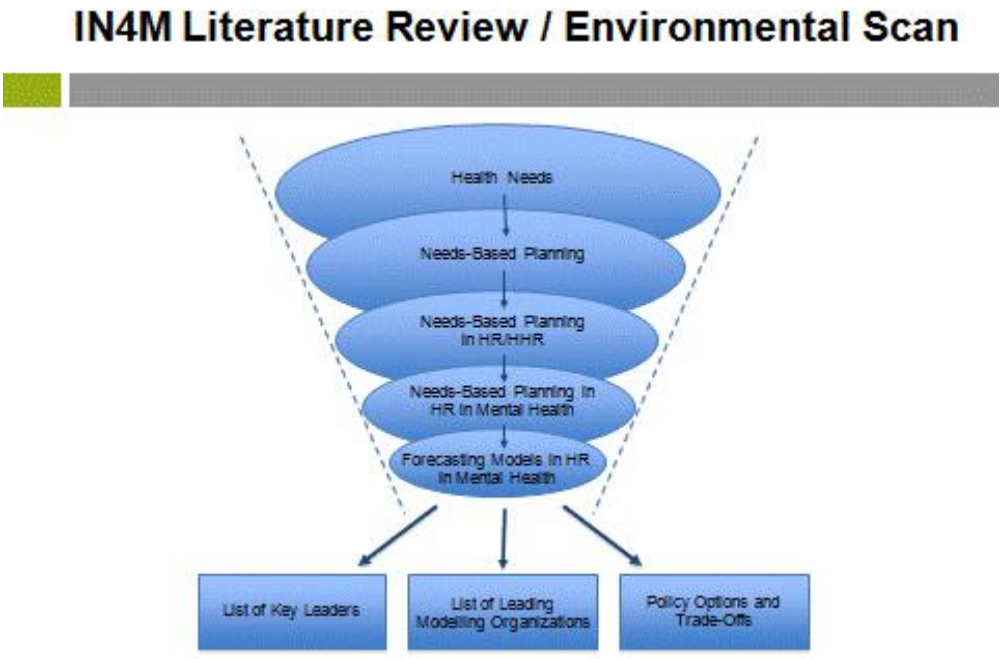
**Table 1: Inclusion and Exclusion Criteria**

| Inclusion Criteria | Exclusion Criteria* |
|---|---|
| • reputable journal and/or source<br>• extensive list of references<br>• education sector (limited)<br>• criminal justice (limited)<br>• social welfare (limited)<br>• international sources (limited)<br>• social science literature (limited to psychology) | • business sources<br>• private sector sources<br>• supply only or utilization only models |

*Note: These exclusion criteria were used due to the scope of the work.

Figure 2 outlines the approach used for the literature review and environmental scan. It builds from a broad discussion on health needs narrowing to forecasting models in health human resources for mental health disorders. Arising from this was a list of key leaders, leading modelling organizations, and some discussion on policy options and trade-offs that fed into next deliverables for the project.

**Figure 2: IN4M Research Methodological Approach**



## Results

Success in human resource planning in mental health can be assessed in terms of ensuring that there are sufficient workers (both formal and informal caregivers) to meet the mental health care needs of the Canadian population. This literature review and environmental scan uncovered that there is very limited information currently available on needs-based human resource planning and forecasting in mental health especially across other sectors outside of health care. Historically, most endeavours have focussed more on the supply side of the equation based on utilization patterns rather than demand based on need. Therefore it should be noted that this document is a working one and will be updated based on advice from the advisory committee and through the online survey.

In 2009, *Cameron Health Strategies Group Ltd*, on behalf of the Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources conducted an inventory of forecasting models and tools in Canada and remarked that "forecasting is an inexact science and needs are difficult to define. No single model meets everyone's needs, and individual users must balance overall costs and complexity against their respective needs and capacities when making a model selection."[13] In 2009, *Western and Northern HHR Planning Forum* noted that "HHR planning is not just about data and modelling, it is about establishing the right model of health care delivery and optimizing the performance and effective productivity of the workforce."[14] Both of these statements offer words of wisdom that should be considered in the movement forward of needs-based planning models for mental health well-being.

Overall, it was difficult to uncover pertinent work outside of the health sector. For example, in areas such as criminal justice, family/youth services, and education on needs-based planning, however, some limited information on health needs was found and is discussed. This was not a surprising finding. Models uncovered outside of mental health, but in the health sector, tended to focus at the macro level (i.e. policy makers) although a few studies exist at more meso/micro levels (i.e. organization or practice). Integration of these levels of planning and forecasting will be a challenge due to limited resources at the organizational level from provincial/territorial governments for this type of endeavour. It seems that the best model for mental health needs-based planning will be one that brings together elements of various models currently available, although data limitations and definitional issues will be significant.

[13] Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

[14] Gibson P. *Collaborative HHR Planning: Advancing the Evidence-Base*. A Workshop on Data and Modelling for Effective HHR Planning. Vancouver, British Columbia. March 2009. Report prepared by Intersol Group.

## Health Needs

"*Population health needs are the characteristics of individuals that create the demand for curative and preventative health services. Health needs are influenced by social, cultural, political, contextual, geographical, environmental and financial factors."*[15]

Determining and measuring the health needs of a given population is a difficult undertaking. But needs around mental health are even harder to define given the large unmet or unexpressed need that exists (because of stigma, service unavailability, etc).[16] To develop a picture of health needs, one must examine the predicted health status of a population, associated demographics, and utilization. This includes looking at the prevalence of diseases/disorders, mortality rates, risk factors (such as genetics and lifestyles), social and physical environments, income, accessibility, quality of health services, etc.[17] It is assumed that health needs will cross the continuum of care that includes health prevention and promotion services, intervention services, inpatient acute care, rehabilitation, treatment and support services. Cameron notes that:

*"At the moment there appears to be no clear and consistent understanding of what needs-based planning actually is. The operative definitions used by planners seem to range from identifying specific components of population health on one hand, to being considered synonymous with evidence-based planning or any kind of 'needs' identified within the health care delivery systems on the other. Conceptual models that attempt to encompass a wide range of factors (population characteristics, service utilization, socio-politico-economic context and heath system outcomes based on differential staff utilization) tend to be referred to generally as "needs-based approaches."*[18]

A 2007 study of needs-based planning models showed that the three indicators of health status typically used at a national level are: mortality and morbidity rates, life expectancy, and infant health indicators. The authors also found that the most reliable and valid population-based measures of need for health care services were the *MOS 36-item Short Form Health Survey*, *Health Utility Index (HUI), Health-Adjusted Life Expectancy (HALE)*, self-assessed health status, and *Health Related Quality of Life (HRQOL)* as measured by the HUI.[19] In 2009, Tomblin-Murphy, Kephart, et al., by looking at morbidity, mortality and self-assessed health, showed that health care needs by age are changing over time (1994 to 2005) in Canada.[20]

For First Nations populations, the federal government is working on the *First Nations and Inuit Health's Aboriginal Health Human Resources Initiative* (AHHRI) intended to develop and implement Health

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15 Canadian Nurses Association. *Tested Solutions for Eliminating Canada's Registered Nurse Shortage*. 2009. Available at www.cna-aiic.ca/

16 Wang P, Aguilar-Gaxiola S, Alonso J, et al. Use of Mental Health Services for Anxiety, Mood and Substance Disorders in 17 Countries in the WHO World Mental Health Surveys. September 8, 2007. *The Lancet.* Vol 370.

17 Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

18 Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

19 Tomblin Murphy G ,Birch S, and MacKenzie A. *The Challenge of Linking Needs to Provider Requirements*. 2007. Available at http://cna-aiic.ca/CNA/documents/pdf/publications/Needs_Based_HHR_Planning_2007_e.pdf

20 Tomblin Murphy G, Kephart G, Lethbridge L, O'Brien-Pallas L, and Birch S. Planning for What? Challenging the Assumptions of Health Human Resource Planning. *Health Policy* Vol. 92 No 2. October 2009.

Human Resource (HHR) strategies that respond to the unique needs and diversity among First Nations, Inuit and Métis (their work completes in March 2012).

## Depression, Anxiety and Attention Deficit/Hyperactivity Disorders

This project focuses on three conditions: depression, anxiety and ADHD. These three conditions were chosen for four principal reasons: the number of people affected; potential economic impact; cut across the age spectrum; and the potential generalizablity of results. Anxiety and depression are highly prevalent in Canadian society, and ADHD is a child/youth disorder. In these areas, incidence and prevalence can be used in developing a picture around need. ICD-10[21] classifies mental/behavioural disorders and includes disorders of psychological development. In this classification, depression falls under mood disorders (also included are bipolar disorder and seasonal affective disorder). Anxiety disorders in ICD-10 classification are comprised of obsessive compulsive, phobias and panic disorders, and post traumatic stress. Overall a national database on prevalence of mental health problems and disorders is missing although smaller pieces do exist.

**Prevalence:** For mental disorders prevalence is typically measured in Canada through self-perceived data derived from the *Canadian Community Health Survey* (CCHS) and previous to that by the *National Population Health Survey* (NPHS). Mortality rates are typically not useful in this discussion (with the exception of suicide), as death is not a common outcome of these disorders. As well, hospitalization occurs less frequently. The CCHS can stratify data for First Nations people living off reserves. However it does not survey the homelessness and those in institutions. The most recent CCHS (2002), cycle 1.2 focused on mental health and well-being questions to provide data on mental health determinants, mental health status and mental health system utilization (Table 2).

**Table 2: Percentage of Canadians 15 years and Over Who Reported Having a Mental Health Problem in the Last 12 Months, by Sex, 2002**

| Mental Disorder or Substance Dependence | Total | | Men | | Women | |
|---|---|---|---|---|---|---|
| | Number | % | Number | % | Number | % |
| Any Measured Disorder or Substance Dependence | 2,600,000 | 10.4 | 1,190,000 | 9.7 | 1,410,000 | 11.1 |
| Major Depressive Episode | 1,120,000 | 4.5 | 420,000 | 3.4 | 700,000 | 5.5 |
| Any Anxiety | 1,180,000 | 4.7 | 440,000 | 3.6 | 740,000 | 5.8 |

Source: Statistics Canada, Canadian Community Health Survey, Mental Health and Well-being, 2002, Updated September 2004

The *Ontario Health Survey* and the *Edmonton Survey of Psychiatric Disorders* in the 1980's and early 1990's also collected data on incidence and prevalence of mental health disorders in Canada.[22] Overall

[21] This is the World Health Organizations' International Statistical Classification of Diseases, 10th revision, version 2007. Another commonly used classification for mental disorders is the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) 6, popular in North America. However, it seems that for forecasting, modelers often use ICD-10 classification.

[22] Prevalence measures the total number of cases of a disorder in a population at a given time divided by the population size and incidence measures the number of new cases in a population at a given time divided by the population size. Life time prevalence is the number of people who experience a disorder over their life time in a population.

studies show that over one million Canadians have a major depressive episode each year. Life time prevalence of depression is 10-12 per cent with an annual prevalence of 4 to 5 per cent.[23] Studies on anxiety estimate a life time prevalence of 10 per cent with an annual prevalence of 4 to 5 per cent.[24] Overall anxiety is the most common mental health disorder in Canada.[25] The rise in chronic diseases may also be accompanied by an increase in mental disorders as diseases such as stroke and cancer have higher risks for depression. Depression is highest for those under 20 years of age and anxiety is highest for ages 20 to 29 years, with women twice as likely as men to develop depression.[26]

National data sources for children and youth exist that are useful for establishing need including: the *CCHS;* the *National Longitudinal Survey of Children and Youth* (Statistics Canada); *Health Behaviour in School-Aged Children* (Public Health Agency of Canada), and the *Canadian Health Measures Survey* (Statistics Canada).[27] Quebec and Ontario child health studies have estimated prevalence of ADHD (found under behavioural and emotion disorders in ICD-10 classification) in school aged children from 5 to 10 per cent with boys having higher rates than girls.[28] Onset of ADHD tends to be early, typically in 3 to 6 year olds that often carries into adulthood (with a prevalence of 4.2 per cent in higher income countries).[29] Anxiety in children and youth is estimated at 6.4 per cent with depressive orders at 2.1 per cent.[30] Waddell, Offord and Shepherd found that 14 per cent of youth have a mental disorder.[31] Kutcher and Davidson believe that youth mental health services need is significant and should be better addressed.[32]

**Service utilization:** The Canadian Institute of Health Information (CIHI) in its *Hospital Mental Health Database* does collect hospitalization data for mental disorders and stratifies mood disorders and anxiety disorders. For general hospitals, mood disorders were the most common primary separation diagnoses[33] in general hospitals (31.5 per cent) while anxiety was one of the smallest at 4.6 per cent of separations (table 3).[34] The *Ontario Mental Health Reporting System* also collects data on admissions to adult mental health beds in Ontario including: reasons for admission, length of stay, pre-admission and

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23 Patten S and Juby H. A *Profile of Clinical Depression in Canada*. 2008. https://dspace.ucalgary.ca/bitstream/1880/46327/1/RSS1Clinical%20Depression%20in%20Canada.pdf

24 Patten S, Adair C, Williams J, et al. Assessment of mental health and illness by telephone survey: experience with an Alberta mental health survey. *Chronic Diseases in Canada*, Vol 27, No 3, 2006.

25 Mood Disorders Society of Canada. *Quick Facts*. November 2009. Available at www.mooddisorderscanada.ca.

26 Mood Disorders Society of Canada. *Quick Facts*. November 2009. Available at www.mooddisorderscanada.ca

27 Guttmann A, Cohen E, and Moore C. Outcomes-based HHR Planning for Maternal, Child and Youth Health Care in Canada: A New Horizon for the 21st Century. *Paediatr Child Health* Vol 14 No 5 May/June 2009.

28 Romano E, Baillargeon RH, and Tremblay RE. *Prevalence of Hyperactivity-Impulsivity and Inattention among Canadian Children: Findings from the First Data Collection Cycle (1994-95) of the National Longitudinal Survey of Children and Youth.* 2002. Available at Human Resources Development Canada. www.hrsdc.gc.ca/eng/cs/sp/sdc/pkrf/publications/research/2002-000170/page04.shtml

29 Fayyad, R. De Graaf, R. Kessler, J. Alonso, M. Angermeyer, K. Demyttenaere, G. De Girolamo, J. M. Haro, E. G. Karam, C. Lara, *et al.* Cross-national prevalence and correlates of adult attention-deficit hyperactivity disorder. The *British Journal of Psychiatry*, May 1, 2007; 190(5): 402 - 409.

30 Waddell C and Sheperd C. *Prevalence of Mental Disorders in Children and Youth.* Research Update Prepared for the British Columbia Ministry of Children and Family Development. 2002.

31 Waddell C, Offord DR, Shepherd CA et al. Child Psychiatric Epidemiology and Canadian Public Policy-Making: The State of the Science and the Art of the Possible. *Can J Psychiatry* 2002; 47:825-32.

32 Kutcher S and Davidson S. Mentally Ill Youth: Meeting Service Needs. *CMAJ.* February 13, 2007 176(4).

33 CIHI defines primary separation diagnosis as the most significant condition of the patient during hospitalization.

34 CIHI. *Hospital Mental Health Service*s. 2005-06. Available from www.cihi.ca

post-discharge living settings, and clinical outcomes. No integrated, national data could be found on emergency department visits for mental health disorders.[35]

Disability claims are high for mental disorders with most recent figures at 79 per cent of long term disability claims and 75 per cent of short term disability claims.[36] Depression is the fastest growing disability cost to Canadian employers.[37] Another key consideration in utilization is the large amount of service that is provided outside of publicly funded system in the private sector (especially for psychology services, peer support services provided by not for profit organizations and services provided by family members) and therefore billing data will not be as useful as it is in the physical health domain.

**Table 3: Separations and Average Length of Stay (LOS) for General and Psychiatric Hospitals, 2005-06.**

| Diagnosis Category | Separations | | Average LOS (days) | |
|---|---|---|---|---|
| | General | Psychiatric | General | Psychiatric |
| **Mood Disorders** | 53,822 | 5,186 | 15.8 | 53.9 |
| **Anxiety Disorders** | 7,844 | 758 | 9.5 | 36.6 |
| **Total** | 170,705 | 19,549 | 16.4 | 99.5 |

Source: Hospital Mental Health Database 2005-2006, CIHI

**Peer support:** Cornwall's public inquiry on the survivors of sexual violence in the province of Ontario examined the benefits, risks and challenges of peer support in this area. They defined peer support as "a common way in which people attempt to give and receive support or create change."[38] Alcoholic Anonymous (AA) is the classic example of a successful peer support program. One US study showed that 18 per cent of the population participates in self-help initiatives and that "Americans make more visit to self-help groups for substance abuse and psychiatric problems than they do for all mental health professionals combined." The Ontario Self-Help Network estimates that one million Canadians are members of a self-help/mutual-aid group. Patton and Goodwin in their research found three main forms of mental health peer support: naturally occurring, consumer-run and peer-providers.[39] Prevalence of peer support groups varies among disorders, for example AIDs patients are 250 times more likely to participate in a support group than hypertension patients.[40] As well, increases are being seen in the peer support area, both in the paid peer-provider role where mental health consumers are being hired for these positions and in internet/chat rooms (especially those that address psychosocial concerns).

### Risk Factors and Other Impacts on Need

Needs-based models often use risk factors to help in forecasting resource requirements. The Senate Committee report *Out of the Shadows at Last* found that for mental health "with so many factors at play, it is difficult to be sure of the impact of each determinant individually."[41] Therefore the use of risk factors in measuring mental health need will have to be considered carefully. Research has shown that

[35] CIHI does have data on homelessness and mental health for emergency department visits.

[36] Mood Disorders Society of Canada. *Quick Facts*. November 2009. Available at www.mooddisorderscanada.ca Note that the source of their data was not apparent in the report.

[37] Ibid.

[38] Patton, M, Goodwin R. Survivors Helping Survivors: A Study of the Benefits, Risks and Challenges of Peer-Support with Survivors of Sexual Violence in the Province of Ontario. 2008,

[39] Ibid.

[40] Ibid.

[41] Standing Senate Committee on Social Affairs, Science and Technology. *Out of the Shadows at Last.* 2006.

mental disorders are the result of a complex mix of genetic, environmental and other factors (biological, psychological and/or social such as income, employment, poverty, education and access to community resources). The Public Health Agency of Canada highlights that the most common risk factors or determinants for mental health disorders are family, workplace, and more importantly life event stresses.[42]

The CCHS data shows that one third of Canadians report work as the major stressor.[43] Lower income Canadians are 3 to 4 times more likely to report mental health issues than those adults with higher incomes and mental health status improves with the level of education achieved.[44] WHO's 2002 *Health Behaviour of School-Aged Children (HBSC) Study,* a cross-national study that Canada participates in on health-related behaviours, determined that almost five per cent of grade six girls did not feel confident, but by grade ten the number rises to 18 per cent due to feelings of helplessness and isolation, and a lack of social supports.[45] Potential links are being made to genetics and mothers who smoked or used alcohol during pregnancy as risk factors in ADHD.[46]

Canada is not alone in trying to get a better handle on mental wellbeing. The United Kingdom (UK) embarked on a project to look at the challenges and opportunities around 'mental capital' (a person's cognitive and emotional resources) and well being.[47] Their report highlighted that the demand for service will be affected by:

- demographic age shift (both underuse by older adults and maintaining the best mental capital);
- changes in global economy and the world of work (globalisation and new skills required);
- changing nature of society (evolving mix of cultures, family structures and migration);
- changing attitudes, new values and expectations of society (self responsibility for health);
- changing nature of public services (more personal choice and active citizenship); and
- new science and technology (advances in new technologies for treatment).

A recent study funded by the King's Fund in England, projected the cost of mental health care through to 2026. The study determined that mental disorders cost estimated at £50 billion in 2007, with almost 50 per cent being spent on direct National Health Service and social care services.[48] The other fifty per cent is the estimated (indirect) cost to the economy for earnings lost because of people being unable to work. In terms of projections, with the exception of dementia, the authors believe that the prevalence of most mental health disorders will *remain stable over the next 20 years*. The United Kingdom included informal caregivers in looking at the need for mental health services and the cost of providing care.

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42 Government of Canada. *The Human Face of Mental Health and Mental Illness in Canada*, 2006. Available at the Public Health Agency of Canada, www.phac-aspc.gc.ca/publicat/human-humain06/

43 Government of Canada. *The Human Face of Mental Health and Mental Illness in Canada*, 2006. Available at the Public Health Agency of Canada, www.phac-aspc.gc.ca/publicat/human-humain06/

44 Ibid.

45 Ibid.

46 National Institute for Mental Health. *ADHD*. 2008. www.nimh.nih.gov/health/publications/attention-deficit-hyperactivity-disorder/complete-index.shtml

47 The Government Office for Science. *Foresight Mental Capital and Wellbeing Project (2008).Final Project Report – Executive Summary*. 2008. London, England. Available at: www.bis.gov.uk/assets/biscore/corporate/migratedD/ec_group/116-08-FO_b

48 McCrone P, Dhanasiri S, Patel P, et al. *Paying the Price: The Cost of Mental Health Care in England to 2026*. 2008. Available at the King's Fund www.kingsfund.org.uk/publications/paying_the_price.html.

Australia, to take another example, undertook a similar analysis of demand factors and suggested that demand is impacted by: rising income levels and wealth; new technologies; changing disease profiles; changing public health priorities; and a focus on the prevention of chronic disease. The authors argued that the role of aging on demand is not certain "as the observed relationship between age and health care use and thus health workforce requirement is entirely mediated through illness. It simply is not correct to use cross-sectional data of health care costs by age, for projecting health care use and health care workforce demand. End-of-life events are consistently found to make a major contribution to health care costs, which, correlated with increasing age, does not mean aging is an independent determinant of health care costs." [49]

Risk factors for mental health disorders can be minimized through enhancements to social supports, employment, adequate income, physical activity, and healthy child development; many of which fall outside of the health sectors jurisdiction. As well, early detection can minimize the impact of mental disorders.

## Health Need across Jurisdictions

Access to mental health services is through an extensive range of access points including: government agencies (e.g. health, education, criminal justice, social welfare, several federal government departments, worker's compensation), the workplace (e.g. in-house programs and administrative processes, employee assistance programs), private practitioners (e.g. psychology, social work), not-for-profit organizations (e.g. Canadian Mental Health Association), self-help groups, family members, community organizations and foundations, and consumer groups related to physical health diseases, disorders and disabilities, and non-regulated providers (e.g. counsellors, therapists). IN4M hopes to develop a forecasting tool that involves collaboration across jurisdictions, government agencies and the various ways of delivering service; therefore health need across these other sectors will need to be examined.

Within the education system, some data is available on incidence and prevalence in children and youth for mental health disorders, as discussed previously. Utilization data at all levels, but especially in an aggregate form, is less available for this sector and will need to be sought through other mechanisms. More anecdotally, the *People for Education's Ontario* annual report on publicly funded schools found a rise in mental health services in the last seven years with 27 per cent of secondary schools and 37 per cent of elementary schools in the province having regularly scheduled access to psychologists.[50] However, they also found that the majority of time is taken up on assessment rather than treatment services. The province of Ontario has also developed a project entitled the "Student Support Leadership Initiative" to look at more collaborative planning for mental health.

The criminal justice system also has serious data availability issues across its system (divided into police, courts/review boards, and corrections). In 2009, the *Canadian Centre for Justice Statistics* released a report finding that there is little standardization in both the types of data collected as well as the

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[49] Segal L and Bolton T. Issues Facing the Future Health Care Workforce: The Importance of Demand. *Australia and New Zealand Health Policy* 2009, 6:12.

[50] People for Education. *Annual Report on Ontario's Publicly Funded Schools: A New Goal for Education with Schools at its Center.* 2010. Available at http://www.peopleforeducation.com/annualreport/ONpublicschools2010.

method of data collection and storage.[51] Each criminal justice sector examines mental disorders based on their particular roles and legislated obligations. Researchers have attempted to assess the prevalence of mental disorders in each of these sectors, although samples were smaller and no nationally representative sample exists. Most believe that prevalence is increasing due to factors such as the lack of mental health services and resources available in communities.[52] Data sources include: the *Integrated Criminal Court Survey* (used by most provinces/territories in the court sector), the *Integrated Correctional Services Survey* (corrections sector), and as well Correction Service of Canada (CSC covers federally sentenced offenders) which collects some indicators on mental health status. CSC is implementing a system wide standardized, system wide mental health screening tool called the *Computerized Mental Health Intake Screening System* that is currently being pilot tested. For the years 2006/07, CSC found that 10 per cent of federal inmates had a mental disorder at the time of admission.[53] In 2008, CIHI data showed that the prevalence of mental health disorders in youth is higher in the incarcerated population than in the society at large.[54]

Correctional Services Canada research shows that mental disorders such as schizophrenia and major depression are two to three times more prevalent in Canadian prisons than in the general population.[55] Numbers are rising with 10 per cent of male offenders in federal custody being identified at admission as having mental health problems.[56] Some mental disorders are present before an offender enters prison however others develop through the stress of the prison environment. In 2001, Brink, Doherty and Boer compared prevalence rates of mental disorders for incarcerated males (in British Columbia) with those in the general population. Mood disorders showed a rate of 30.2 per cent compared to 7.1 per cent for non-offenders and anxiety at 18.3 per cent for offenders compared to 8.7 per cent for non-offenders.[57] Women offenders report higher rates of mental health problems than men (31 per cent versus 18 per cent).[58]

Other smaller research studies support that the conclusion that the criminal justice system is experiencing higher prevalence of mental health disorders. United States (US) studies show rates of between 10 to 14.5 per cent of all males jailed in a one-year period having a diagnosis of a serious mental disorder and up to 31 per cent for females.[5960] Depression seems to be higher in jailed

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[51] Sinha M. *An Investigation into the Feasibility of Collecting Data on the Involvement of Adults and Youth with Mental Health Issues in the Criminal Justice System.* Prepared for the Canadian Centre for Justice Statistics, Statistics Canada. 2009. www.statcan.gc.ca/pub/85-561-m/85-561-m2009016-eng.pdf

[52] Ibid.

[53] Public Safety Canada. *Corrections and Conditional Release Statistical Overview – 2007.Portfolio* Corrections Statistics Committee, 2007

[54] CIHI. *Improving the Health of Canadians 2008: Mental Health, Delinquency and Criminal Activity.* 2008. Available at www.cihi.ca

[55] Moloughney B. A Health Care Needs Assessment of Federal Inmates in Canada, *Canadian Journal of Public Health*, 95(Supplement 1), March/April 2004, www.cpha.ca/shared/cjph/archives/CJPH_95_Suppl_1_e.pdf

[56] Corrections Services Canada. *The Changing Federal Offender Population Highlights: Offender Management System*. 2008.

[57] Brink, J.H., Doherty, D., & Boer, A. (2001). Mental disorder in federal offenders: A Canadian prevalence study. *International Journal of Law and Psychiatry, 24,* p.339-356.

[58] Moloughney B. A Health Care Needs Assessment of Federal Inmates in Canada, *Canadian Journal of Public Health*, 95(Supplement 1), March/April 2004, www.cpha.ca/shared/cjph/archives/CJPH_95_Suppl_1_e.pdf

[59] Constantine R, Andel R, Petrila J, Becker B, Robst J, Teague G, et al. Characteristics and Experiences of Adults With A Serious Mental Illness Who Were Involved in the Criminal Justice System. *Psychiatr Serv* 2010 61:451-457.

populations and anxiety lower in some US research.[61] Mears, in his 2004 research on mental health needs and services, suggests that more research is required on the mental health needs-services gaps at each stage of the justice system: arrest, probation, jail, prison, and parole/release in the US.[62] Only minimal data is currently available at these points, although more for the jailed/prison segments on need and services is available. Some coordinating work is being undertaken in the U.S. through the Centre for Mental Health Services National GAINS Center that is collecting and disseminating data on effective mental health and substance abuse services for people with co-occurring disorders in contact with the justice system.

Overall, mental health needs are defined differently across and within sectors. A needs-based planning approach tries to estimate future need founded on the estimated health status of a population and associated risk factors. Given data limitations, estimating needs will be a difficult undertaking, especially across jurisdictions, but it is not insurmountable. Possible data sources that should be further considered could include insurance companies and associations (who were included in project IN4M's companion online survey). In Canada, the best data on incidence and prevalence for depression and anxiety is the CCHS, supplemented by smaller research studies. For ADHD, the Quebec and Ontario provincial studies seem to be referred to most often.

## Needs-Based Planning in Human Resources/Health Human Resources

Workforce planning is *"to ensure that sufficient (but not over-sufficient) numbers of appropriate qualified personnel are available, in the right place and at the right time to match the demand for their services."*[63]

### Forecasting Approaches

Workforce planning tries to balance the supply of workers with the demand (requirements) for services. Segal and Robertson describe five health workforce forecasting approaches:[64]

1. *Historic allocation*- workers to population ratios.
2. *Budget driven* - service levels and workforce size determined by expenditure targets.
3. *Waiting lists* – when demand exceeds supply.
4. *Professional group planning* – where health professionals develop their roles and responsibilities and then determine the approach to determining needs and the associated level of supply.
5. *Needs-based* – model based on best practice care maps and prevention protocols applied to the changing health status of the population.[65]

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60 Steadman HJ, Osher F, Clark Robbins P, Case B, Samuels S. Prevalence of Serious Mental Illness Among Jail Inmates. *Psychiatric Services*. June 2006. Available at: http://consensusproject.org/publications/prevalence-of-serious-mental-illness-among-jail-inmates/PsySJailMHStudy.pdf

61 Mears D. Mental Health Services and Needs in the Criminal Justice System. *Houston Journal of Health Law and Policy* 255-284. 2004. Available at: http://consensusproject.org/downloads/mears-mh-services-in-cj-system.pdf

62 Mears D. Mental Health Services and Needs in the Criminal Justice System. *Houston Journal of Health Law and Policy* 255-284. 2004. Available at: http://consensusproject.org/downloads/mears-mh-services-in-cj-system.pdf

63 Buchan J. *Nurse Workforce Planning in the UK: A Report from the Royal College of Nursing*. 2007.

64 Segal L, Robertson J. *Allied health services planning framework for chronic diseases.* Melbourne: Monash University. 2004.

65 Some movement for needs-oriented to more outcomes-based planning.

In comparison, Roberfroid, *et al*. in their 2009 review of physician forecasting highlighted four main approaches:[66]

1. *Supply projection* – or *trend model* uses provider-per-population ratios and uses health care services being currently delivered. It assumes that the current level, mix, and distribution of providers in the population are adequate; age and sex-specific productivity of providers is constant in the future; and that size and demographic profile of providers change over time based on current trends.
2. *Demand-based – or requirements/utilization-based approach* uses the quantity of health care services demanded by the population. Demand is the amount of health services that a population currently uses. Forecasts are estimated using provider-per-population ratios (population usually divided by age and sex) and the number and type of projected services (often billing data is used for physicians). It assumes that current demand for health care is appropriate and that is suitably met by the current level, mix and distribution of providers; age and sex resource requirements remain constant in the future; and the size and demographic profile of the population changes over time based on current trends. Three methods are used for estimations: service utilization, workforce-to-population ratio, and economic demand (current and future social, political and economic factors are considered)
3. *Needs-based – or epidemiological approach* uses data on health status of a population with disease prevalence, demographics and appropriates standards of care. It assumes that health needs can and should be met; cost-effective methods of addressing needs are identified and used; and health care resources are used based on relative levels of needs. Considers unmet needs.
4. *Benchmarking – or peer comparison approach* identifies regions or countries that are similar in demographics and health profiles but different in costs and use of health care resources.

Forecasting models in human resources, especially health human resources, have tended to focus on the supply side (i.e. the number of workers required) by examining past/current utilization patterns and projecting the future based on the predicted demographic changes. Better data now exists beyond just physicians and nurses to expand these efforts, for example about six years ago, the federal government through the Sector Council Program funded sector studies on physicians, nurses, pharmacists, oral health, executives/administrators of hospitals and home health care aids. CIHI has created new supply-based databases for HHR with 24 health occupations groups now tracked. Although there are definition and data availability issues, Table 4 outlines the professions most pertinent for this discussion on mental health provider supply. CIHI is also looking at developing a unique identifier to track health care providers.

Research shows there is still no single accepted model to forecasting HHR, however great value is found in looking at the current and emerging trends for policy-makers to respond.[67] In a comparative review of HHR planning in five countries, Bloor and Maynard show countries often ignore relationships between

[66] Roberfroid D, Leonard C, and Stordeur S. Physician Supply Forecast: Better Than Peering in a Crystal Ball? *Health Resources for Health*. 2009, 7:10. Available at www.human-resources-health.com

[67] Roberfroid D, Leonard C, and Stordeur S. Physician Supply Forecast: Better Than Peering in a Crystal Ball? *Health Resources for Health*. 2009, 7:10. Available at www.human-resources-health.com

professions.[68] In fact, the recently released June 2010 federal report on HHR, stated that "the federal government needs to be more effective in its promotion of collaborative planning in HHR with interested jurisdictions, either through existing mechanisms or the establishment of new ones," with the area of mental health specifically named through continued funding of endeavours by the Mental Health Working Group.[69] A competency-based approach to planning of health human resources may be a more successful strategy in addressing the demand for mental health services. But as well, literature is beginning to discuss cultural competence as a way to reduce racial and ethnic disparities in health.[70],[71]

**Table 4: Number of Health Personnel in Selected Health Professions in Canada, by Registration Status, 2008**

| **Registered** | **2001** | **2004** | **2008** | **% Change 2001 to 2008** | **Per 100,000 Population†** |
|---|---|---|---|---|---|
| Social Workers | 22,648 | 28,689 | 26,204 | * | * |
| **Active Registered** | **2001** | **2004** | **2008** | **% Change 2001 to 2008** | **Per 100,000 Population†** |
| Nurse Practitioners | - | 878 | 1,669 | - | 5 |
| Physicians (Excluding Residents) | 58,546 | 60,612 | 65,440 | 12 | 196 |
| Psychologists | 12,928 | 14,687 | 15,780 | 22 | 47 |
| **Employed Active Registered** | **2001** | **2004** | **2008** | **% Change 2001 to 2008** | **Per 100,000 Population†** |
| Licensed Practical Nurses | 73,306 | 63,443 | 74,380 | NC | 223 |
| Pharmacists | 25,643 | 28,537 | 29,344 | NC | 88 |
| Registered Nurses | 231,512 | 246,557 | 261,889 | 13 | 786 |
| Registered Psychiatric Nurses | 5,416 | 5,121 | 5,162 | NC | 11†† |

Note: 'Registered' represents all individuals who are registered with an organization. The count may include individuals in all registration categories (active, inactive, honorary, etc.).
'Active registered' represents all registered/licensed individuals who are legally able to work under the title of the specified health profession. Individuals may or may not be currently employed in the profession.

[68] Bloor K and Maynard A (2003) *Planning Human Resources in Health Care: Towards an Economic Approach. An International Comparative Review.* Ottawa: Canadian Health Services Research Foundation www.chsrf.ca/final_research/commissioned_research/programs/pdf/bloor_report.pdf

[69] Report of the Standing Committee on Health. *Promoting Innovative Solutions to HHR Challenges*. June 2010.

[70] Ornelas I. Cultural Competency at the Community Level: A Strategy for Reducing Racial and Ethnic Disparities. *Cambridge Quarterly of Health Care Ethics*. 2008, 17, 185-194.

[71] Thom D, Tirado M, Woon T, and McBride M. Development and Evaluation of a Cultural Competency Training Curriculum. BMC Medical Education. 2006, 6:38.

'Employed active registered' represents personnel who are registered/licensed with an organization and currently working in the specified health profession.
*Canada totals may not be representative due to unavailable data from one or more provinces and should be interpreted with caution.
†Due to the variation in regulatory requirements, interprofessional comparisons should be interpreted with caution
†† Per-population data is based on the combined population of the four provinces in which the RPN profession is regulated, Manitoba, Saskatchewan, Alberta and British Columbia.
NC: Data is not comparable due to a change in data source from 2001 to 2008.

Source: Health Personnel Database, Canadian Institute for Health Information; population estimates from Statistics Canada, *Table 051-0001—Estimates of Population, by Age Group and Sex for July 1, Canada, Provinces and Territories, Annual (Persons Unless Otherwise Noted)*, CANSIM Database.
http://secure.cihi.ca/cihiweb/products/provincial_profiles_2010_e.pdf

**Family/Friend Caregiver**: Informal care giving is now being given an increased and warranted presence as a critical aspect to the delivery of service especially for mental wellness services.[72] In Canada, Keefe, Légaré, and Carrière examined strategies to support informal and formal support of the elderly with disabilities using Statistics Canada's *LifePaths* micro simulation model and found that the continued focus on family to meet the needs of elderly Canadians is not sustainable.[73] As a result the authors advocate for new public policies that include financial support and support to family/friend caregivers such as respite care. In 2009, Stadnky, Fletcher, *et al* delved into the impact of public policies on caregivers' costs and used the following definition for family/friend caregiver, "a person who provides assistance to a relative, friend or neighbour because of that person's long term health or physical limitations."[74] The caregiver should also have a personal history with the person receiving care and is typically unpaid and not contracted through a formalized organization. These researchers estimated that it would cost $24.2 billion to replace the amount of care provided by caregivers aged 45 to 64 years to older adults. Their study also showed that most policy and programs currently in place provide minimal benefits to caregivers. The National Institute for Mental Health in England has mapped clinical governance in voluntary sector organizations and outlines a relationship where the voluntary sector can deliver mental health services.[75]

## Needs-Based Planning

There is an emerging consensus that needs-based planning is where the future lies in human resource forecasting, however the definition of this approach varies widely.[76] [77]Needs-based planning looks at need for services based on the estimated health status of the population (using incidence, prevalence,

[72] The Sainsbury Centre for Mental Health. *Policy Paper the Future of Mental Health: A Vision for 2015*. 2006.
[73] Keefe J, Légaré J, and Carrière Y. Developing New Strategies to Support Future Caregivers of Older Canadians with Disabilities: Projections of Need and Their Policy Implications. *Canadian Public Policy* Vol XXXIII, 2007.
[74] Stadnyk R,*Employed Family/Friend Caregivers to Adults with Disabilities: The Impact of Public Policies on Caregivers' Costs*. Department of Human Ecology, University of Alberta. February 2009.
[75] National Institute for Mental Health in England. *Mapping Clinical Governance in Voluntary Sector Organizations*, 2004.
[76] Tomblin Murphy G ,Birch S, and MacKenzie A. *The Challenge of Linking Needs to Provider Requirements*. 2007. Available at http://cna-aiic.ca/CNA/documents/pdf/publications/Needs_Based_HHR_Planning_2007_e.pdf
[77] World Health Organization. *Human Resources and Training in Mental Health*. 2006.

self-reported health, mortality, etc.) and then factors in 'appropriate' utilization of services data.[78] Unmet need is considered in this planning approach as total need for services as compared with total supply of services.[79] Modellers have evolved needs-based planning to ones that include both simulation and productivity modelling. Earlier this year, Evans, Schneider and Barer expanded the typical input/output definition of productivity to the "relationship between health outcomes achieved (health status protection or improvement for individuals or populations) and health human resource inputs (time, effort, skills and knowledge)."[80] Also a 'systems approach' to modelling is becoming more prevalent (often called dynamic modelling) that crosses planning/geographic jurisdictions.[81] Health Canada's *Microsimulation Modelling & Data Analysis Division* has done some prototype work on HHR modelling for professions across health sub sectors such as acute, home care and long-term care.

In Canada, O'Brien-Pallas, *et al*.'s framework on collaborative HHR planning, moved forecasting in a broader direction (See Figure 3). Their approach is based on a conceptual model that identifies other factors that impact the planning process to achieve an efficient mix of resources including: supply, education and training (production), management, organization and delivery of services across sectors, and financial resources.[82] It also looks at the system factors that define health needs including social, political, geographical, technological and economic. Currently the model has been applied within health care and for one provider group at a time (discussed later in the document).

Some work has been done outside of the health sector on needs and/or needs-based planning such as the public sector areas of criminal justice, social services, and the education system (discussed in the previous section). Integration of services across sectors rarely occurs and in most cases studies show that the provision and funding of mental health services to be highly fragmented and poorly coordinated.[83]

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[78] Segal L and Bolton T. Issues Facing the Future Health Care Workforce: The Importance of Demand Modelling. *Australia and New Zealand Health Policy* 2009, 6:12. Available from http://archive.biomedcentral.com/content/pdf/1743-8462-6-12.pdf

[79] Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

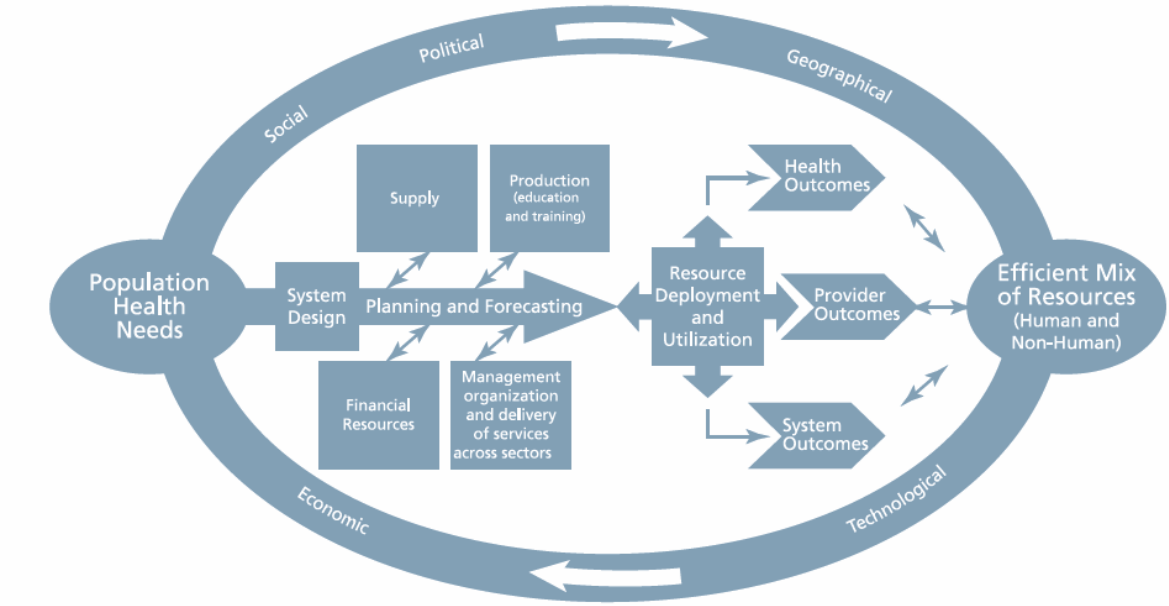
[80] Evans RG, Schneider D, Barer M. *Health Human Resources Productivity: What it is, how it's measured, why (how you measure) it matters, and who's thinking about it.* February 2010. Available at CHSRF www.chsrf.ca.

[81] Masnick K and McDonnell G. A Model Linking Clinical Workforce Skill Mix Planning to Health and Health Care Dynamics. *Human Resources for Health.* 2010, 8:11. Available at www.human-resources-health.com

[82] O'Brien-Pallas, Tomblin Murphy, Birch, and Baumann. *Framework for Collaborative Pan-Canadian Health Human Resource Planning*. Prepared for ACHDHR. 2005 revised 2007.Available at www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/pubs/hhr/2007-frame-cadre/2007-frame-cadre-eng.pdf

[83] McDaid, D, Oliveira M, Jurczak K et al. Moving Beyond the Mental Health Care System: An Exploration of the Interfaces Between Health and Non-Health Sectors. *Journal of Mental Health* Vol 16 No 2, April 2007.

**Figure 3: Health System and Health Human Resources Conceptual Model**




Source: O'Brien-Pallas, Tomblin Murphy, Birch and Baumann (2001) adapted from O'Brien-Pallas and Baumann (1977).

Little evidence of formal long term planning that is needs-based was found for the education sector, probably as most planning is based on current student enrolment and projections. As well, there is a movement in education to student integration rather than congregated programming that may impede this kind of thinking about planning. Models of providing mental health services vary considerably among Canada's school boards with some employing their own psychologists, social workers, speech language pathologists, drug addiction counsellors, etc. whereas others contract out services or develop partnerships. Mental health need in the education system is normally assessed in terms of how it affects the child's learning and is documented in a specific child's individualized education plan.

As previously mentioned, the criminal justice system is moving to measuring health needs more accurately across its various components and the Correctional Services of Canada's mental health strategy is developing services to meet these requirements. But similarly, little evidence was found on needs-based planning in the criminal justice system although it could be a terminology issue which could be explored further in the online survey (such as evidence-based hr planning).

## Internationally

Outlined below is some of the key international work being done on needs-based planning for health and health-related services. Australia has done a lot of work on needs/demand based models especially in medical services. Two prevalent models are in development for general practitioners (GPs): the first *MedDemandMOD* uses Australia's national health survey data (from its Bureau of Statistics on socioeconomic status and health determinants) to forecast GP requirements; and the second is the *Medicare Model,* using Medicare administrative data (i.e. numbers of GPs, services provided, prices

charged, patients seen in a geographic area combined with census data, mortality data, etc.).[84] Both models have strengths and limitations and therefore one has not been promoted over another.

Sega, Dalziel and Bolton have gone even further by using an evidence-based approach to health workforce planning in Australia to support the adoption of best practice care in chronic diseases. The model uses data on health status of a regional population by disease category and stage with best practice guidelines to estimate the clinical skills or competencies required for that area.[85] Health status was determined by estimating the size of a population with a chronic disease, and creating subgroups by severity of condition and prevalence of specific co-morbidities and socioeconomic variables.[86]

The Australian state of Queensland's government disability services is also using a needs-based approach. Disability needs are quantified by factors including a person's life stage, duration of the disability condition, and complexity of the disability condition. But interestingly, they look at most people with disabilities as part of a 'family package' where the needs of the family as a whole are considered.[87] Queensland has broken need into five types: expressed (stated), indicative (statistics on the population), clinical (specialist assessment of an individual's condition), comparative (regional differences), and normative (desirable benchmark such as universal access to a specific service).[88] Data sources include: census data surveys of disability populations, disability questions on general population surveys, disability support payments, focus groups, etc.

In the UK, work on measuring mental health need and its associated costs was discussed earlier in: *Foresight Mental Capital and Wellbeing Project* and *Paying the Price: The Cost of Mental Health Care in England to 2026.* In 2009, the UK's Kings Fund recommended the creation of a Network of Centres of Excellence to move towards needs-based planning or demand side labour market strategies and the progress on this is unclear.[89] The 2010 UK's *New Horizons'* project is a cross governmental program to improve the mental health and wellbeing of its population. Through this initiative, other sectors are being integrated into a mental health strategy such as: in schools for early intervention and as a means to educate to remove the stigma around mental health; and for families/caregivers in terms of peer support and networks.[90] Scotland as well is taking a broader approach to mental health planning and assessment.[91]

In the United States, Konrad, Ellis, Thomas et al. using current provider treatment patterns estimated need in the US for mental health professionals for workforce planning. Need was taken from the *National Comorbidity Survey Replication*, the *U.S. Census* and *Medical Panel Expenditure Survey* data. Their results showed that at the county level, 96 per cent had unmet need for prescribers and 18 per

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84 Schofield D, McRae I, Shrestha R. *Modelling Demand for Health Services in* Australia. 2008.

85 Segal L, Dalziel K and Bolton T. A Work Force Model to Support the Adoption of Best Practice Care in Chronic Diseases – Missing Piece in Clinical Guideline Implementation. *Implementation Science* 2008, 3:35.

86 Ibid.

87 Disability Services Queensland. *Needs-Based Planning Framework*. 2008.

88 Ibid.

89 Dixon A, Firth J and Buchan J. *Proposals for a Center of Excellence for Workforce Strategy and Planning:A Consultancy Report for the King's Fund*. 2009. Available a

90 UK Department of Mental Health. *New Horizons A Shared Vision for Mental Health*. 2010.

91 Scottish Government. *Towards a Mentally Flourishing Scotland: Policy and Action Plan 2009-2011*. 2009. Available at: www.scotland.gov.uk/Resource/Doc/271822/0081031.pdf

cent for non-prescribers with rural counties having even higher unmet need.[92] The U.S. Department of Health and Human Resources has developed a *Health Resources County Comparison Tool* that compares health status and available health resources at a county level. The tool compares the *Community Health Status Indicators* comprised of 200 measures (mortality and behavioural factors like smoking, alcohol consumption, physical activity, etc.) for each of the 3,141 U.S. counties.[93]

## Canada

At a macro level, two provinces, Ontario and Alberta have models in development and/or implementation phases on needs-based planning. Ontario's partnership with the Ontario Medical Association and the Conference Board of Canada forecasts population need using a disease–based model based on the prevalence of major disease (based on ICD-10 classification) and physician demand while also incorporating risk factors (highlighted further below). Alberta Health and Wellness has developed a partnership with Praxia Information Intelligence and Hay Group (Praxia and Hay) with Alberta Health and Wellness on a model to predict the demand for health human resources, based on population need for health services (and service delivery trends and workload changes), which can be applied at the regional and provincial level in Alberta.[94] Family physicians are the first Alberta provider group (nurses are also underway) being examined in the demand simulation model through a systems dynamic approach across the continuum of care. The *Family Physician Demand Model* is composed of eight components: historical utilization of family physician services; population characteristic adjuster; population health status adjuster; unmet need adjuster; health services needed per capita; projected total health Services needed; service delivery adjuster; and projected human resource requirements. Tomblin Murphy, O'Brien-Pallas, Birch, et al. have made extensive forays into needs-based modelling especially using simulation-based models (highlighted further below). Multiple projects have been undertaken with the most current work being undertaken for the Canadian Nurses Association (nurses and nurse practitioners[95]), and the provinces of Nova Scotia and Ontario.

The Ontario Ministry of Health and Long Term Care's *Nursing Health Human Resources Planning Demonstration Project* initiative has also developed a tool on HR forecasting in hospitals. It looked at staffing needs in nursing and health disciplines groups in six health care organizations based on three years of historical data (2007 to 2009). However, on closer inspection, this seems to be a supply side only model based on current utilization as it uses variables such as headcounts, vacancies, estimated future separations (turnover), future transfers, leaves of absence, hires, etc.[96] The final report is not yet available as the partners are reviewing it.

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92 Konrad T, Ellis A, Thomas K, Holzer C, Morrissey J. County-level estimates of need for mental health professionals in the United States. *Psychiatric Services (Washington, D.C.)* [serial online]. October 2009;60(10):1307-1314. Available from: MEDLINE with Full Text, Ipswich, MA. Accessed May 25, 2010.

93 US Department of Health and Human Resources. *Community Health Status Indicator Report*. 2008. Available from: www.communityhealth.hhs.gov/homepage.aspx?j=1

94 Mahabir, H and Bloom J. The Alberta Population Needs-Based HHR Demand Model: Family Physician Project. Powerpoint Presentation to the Pan-Canadian Workshop on HHR Forecasting Models in Canada. April 27, 2010.

95 Tomblin Murphy G. *Health Human Resource Component Literature Review Report: Health Human Resource Planning/ Activities for Primary Health Care Nurse Practitioners*. 2005. Prepared for the Canadian Nurse Practitioner Initiative.

96 Ontario Hospital Association. *Workforce Demand Forecaster Tool: Health Human Resources Crystal Ball*. Webcast on May 20, 2010.

Manitoba has undertaken projection models for both nurses and physicians however these do not seem to be need-based but rather demand models (*The Manitoba Registered Nurse Projection Model* and *Manitoba Centre for Health Policy/Physician Resource Projection Model*).[97] *Vestimetra International Inc*. in their review of HHR models in Canada suggested that these models at local levels, rather than at the national level, may have more utility and impact.[98]

Highlighted below are several Canadian needs-based planning models developed more recently that could be used in forecasting mental health services.

### *The Conference Board of Canada*

| **Model Description – Ministry of Health and Long-Term Care in Ontario[99]** |
|---|
| In January 2008, the Ministry of Health and Long-Term Care in Ontario, with the Ontario Medical Association and with support from The Conference Board of Canada (CBoC) developed a physician modelling tool (GPs and specialists). The tool created a risk/disease-specific model (based on ICD-10 classifications) on the future need for physicians, the supply of physicians, and the gap that exists between the need and supply. |
| **Characteristics** |
| It is a population needs–based model that:<br>• utilizes population health needs to forecast the prevalence of major disease (30 diseases) and physician demand;<br>• incorporates risk factors in the forecasting of future population health;<br>• considers physician productivity using an innovative approach in addition to accounting for physician inflows and outflows; and<br>• uses data at a health region/local health integration network (LHIN or county) level. |
| **Variables** |
| *Population module* – birth, age, deaths, immigration, and emigration.<br>*Supply module* – inflow and outflow to give future supply.<br>*Demand module* – socioeconomic/lifestyle factors (smoking, heavy drinking, physical inactivity, etc.) and burden of disease to give future needs (including productivity sub model). Uses incidence, prevalence and mortality data plus physician survey (hours of care by disease group) that resulted in disease-weights. Productivity sub model considered information and communication technologies, other providers, funding, and system change (see Figure 6). |
| **Considerations** |
| It has the capability to look at mental health disorders and has data built in it for depression, anxiety, schizophrenia, bipolar disorders and substance dependence. Complex model with high data requirements. Only physicians are forecasted at this time. |

### *Atlantic Health Human Resources /Med-Emerg Inc.*

Med-Emerg and its research team have developed significant needs-based planning models across the country including the Canadian Nurses Association (CNA), the provinces of Ontario and Nova Scotia, and

97 Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

98 Ibid.

99 Roberts G. *Design and Development of a Forecasting Model for Physician HR Requirements*. PowerPoint Presentation. Conference Board of Canada. May 2008.

the Atlantic region. Each endeavour builds on their previous learnings. Three models are highlighted, specifically Atlantic, CNA and Nova Scotia. The Cameron report noted their models have evolved over time. For example, the Atlantic model looked at a single need indicator based on self-assessed health status and now researchers are using indicators for need (including chronic conditions and injuries) that are specific to the sub-sectors of health (such as long term care) and professions.[100]

**Model Description – Atlantic HHR Planning Study[101]**

In 2005, Med-Emerg Inc. conducted this study for the Atlantic Health Human Resources Association (AHHRA) on behalf of the four Atlantic provinces. They developed a team that included Kephart, Tomblin Murphy, Birch, and O'Brien-Pallas (Alder is also often included in the team). The goal of the study was to carry out a comprehensive investigation of the regional requirements for health professionals in Atlantic Canada, and the regional requirements for available educational/training programmes in and outside Atlantic Canada. It was never fully implemented.

**Characteristics**

Consisted of an HHR simulation model and data with four modules on: supply, training, work and productivity and needs. See Figure 3 on the conceptual approach.[102]

**Variables**

- *Population Health Needs and Service Requirements* -population health status, utilization data by profession.
- *Supply of Health care Providers* -registration data from associations and public payroll data.
- *Education/Training and Production of Health Human Resources* - attributes of training programmes e.g., number of seats, years required to complete the programme, cost of tuition and fees, and throughput; and the attributes of graduates e.g., age, sex, debt load, and percent entering the current stock of providers in the Atlantic Provinces.
- *Financial Variables* - public expenditures on each provider group, and salaries and average earnings by provider.
- *Management, Organization and Delivery of Services* -environmental scan.
- *Resource Deployment and Utilization* -volume of services provided in each sector e.g. acute care hospitals by population age and sex; utilisation of provider groups by population age and sex; distribution of healthcare provider groups by sector; and measures of productivity for each provider group.
- *Patient Outcomes*-data on population health needs, including risks to health, self-assessments of health and morbidity.
- *Provider Outcomes* **-**information on worked versus earned hours, sick leave and disability.
- *System Outcomes* -rates of hospitalization and the amount of money spent on the various health sectors, the number of people treated in each health sector, case intensity, discharge efficiency, proportion of acute versus non-acute care, outpatient/inpatient surgery rates, and occupancy rates.

**Considerations**

The authors concluded that HHR policy should be developed based on the health needs of the population measured independently of utilization, supply, and demand. But as well, they outlined that

[100] Cameron Health Strategies Group Ltd. *An Inventory of Health Human Resource Forecasting Models in Canada*. 2009. Prepared for the F/P/T Advisory Committee on Health Delivery and Human Resources.

[101] Med-Emerg Inc. AHHRA. *Atlantic HHRs Planning Study*. 2005. www.ahhra.ca/images/docs/MEI_ExecSummary_Eng.pdf

[102] Birch S, Kephart G, Tomblin-Murphy G, O'Brien-Pallas L, Alder R and MacKenzie A. Human Resources Planning and the Production of Health: A Needs-Based Analytical Framework. *Canadian Public Policy*, Vol. XXXIII , Supplement 2007. November 2008.

policy makers should remember that there are really only two categories of policy options: changing the number of providers; and/or make better use of the providers. The model is not disease-based and more macro-oriented. Some consideration of unmet need was included in the model but not fully explored. Need was measured by self-assessed health status.

## *Canadian Nurses Association*

**Model Description – Canadian Nurses Association**[103]

National supply and needs based planning model, specific to registered nurses (RN). Uses demographics, need, service levels and productivity to forecast need. It considers the effects of policy on the supply of RNs. They have also developed a model for nurse practitioners.

**Characteristics**

The models looked at two perspectives: *future requirements* for RNs' services based on the size, distribution and levels of health-care needs of the population; and *future availability* of RNs' services based on the size and characteristics of the current workforce as well as trends in entries to and exits from the workforce. Six policy scenarios were tested in the model: increasing RN productivity (by 1 per cent per year), reducing RN absenteeism (by 50 per cent over three years), increasing enrolment (by 1,000 per year from 2009 to 2011), improving the retention of practicing nurses (by 2 per cent for RNs under age 60 and 10 per cent over age 60), reducing attrition rates in RN entry-to-practice programs (28 per to 15 per cent) and reducing international in-migration (by 50 per cent). Simulation model showed that the combined effect of six scenarios would eliminate the nursing shortage within 15 years.

**Variables**

- *Training module* **-** enrolments, program length, program attrition, graduate out-migration, and new graduates.
- *Supply module* -existing RN stock in-migration and exit rates.
- *Work and productivity module* - participation rate, activity rate (worked hours of RNs), and productivity (the number of services performed per FTE RN per year).
- *Needs module* - population (by age and sex), need (different measures for needs were used for each sector as outlined in the table below) and level of service (amount of care/services a person requires by level of need and due to absence of data existing levels were used, where available).

[103] Tomblin Murphy G, Birch S, Alder R, et al. *Tested Solutions for Eliminating Canada's Registered Nurse Shortage.* 2009. Prepared for the Canadian Nurses Association. www.cna-aiic.ca/CNA/documents/pdf/publications/RN_Highlights_e.pdf

| Sector | Needs Indicators | Data Source |
|---|---|---|
| Acute care | Injury | CCHS |
| | Number of chronic conditions | CCHS |
| Long-term care | Living alone and requiring assistance with activities of daily living (ADLs) | CCHS |
| | Use of alternative level of care (ALC) beds in hospitals | OHA |
| | Residence in long-term care facilities | RCFS |
| Home care | Receipt of home-care nursing services (publicly or privately funded) | CCHS |
| | Self-reported unmet need for home-care nursing services | CCHS |
| Community care | Self-assessed health status by income level | CCHS |
| | Self-assessed unmet need | CCHS |

Note: RCFS is the Residential Care Facilities Survey

**Considerations**

Limited data availability in many areas (so a number of planning assumptions were made such as level of unmet need) and the report calls for more investment in data especially around: retention, rates of attrition, registered nurses work outside of acute care, and amount/type of services registered nurses provide based on the health needs of the population. The model is not disease-based and therefore would require adjustments to estimate supply and need for mental health and specifically the three conditions selected for this project. However it does use needs indicators based on injury and number of chronic conditions so it could be expanded. As well the model focuses on the health sector although it does divide up the health sector into its various subcomponents such as acute and long term care. It relies on the CCHS as its primary data source to establish need.

## *Nova Scotia*

**Model Description – Nova Scotia Simulation Model for Nurses[104]**

Tomblin Murphy et al's more recent work on HHR modelling done for the registered nurses in Nova Scotia is based on population health need. The simulation model estimates the supply or and requirements for nurses although has been applied to other professions (including family physicians, Medical Radiation Technologists, and Medical Imaging Assistants), sub sectors of health, and delivery modalities.

**Characteristics**

Study looked at: *provider supply* – stock of individuals and flow of time from the stock; and *provider requirements* – demography (size and demographic profile of the population), epidemiology (levels and distribution of health and illness as well as risk factors in the population), level of service (quantity and mix of health care services to be provided for individuals at different levels of health, illness, or risk of illness) and productivity (the amount of health care services produced per unit time of provider input). RN service requirements were calculated for acute care, long term care, home care, community and

[104] Tomblin Murphy G, MacKenzie A, Alder R, Birch S, Kephart G, and O'Brien-Pallas. An Applied Simulation Model for Estimating the Supply of and Requirements for Registered Nurses Based on Population Health Needs. *Policy, Politics and Nursing Practice* 10(4) 240-251 2009.

public health. Policy options considered were: increased training seats by 20 per cent, improved retention of existing RNs by decreasing RN exit rate by 10 per cent; improved RN productivity by 0.5 per cent per year; and improving health of the population through three simulation scenarios (assuming current levels, continue trends observed in health surveys over last 10 years, and thirdly health improving to the level of Canada as a whole in 15 years.

**Variables**

- *Supply module* - existing RN stock in-migration, and exit rates.
- *Training module* - enrolments, program length, program attrition, graduate out-migration, and new graduates.
- *Work and productivity module* - size of RN stock and contributions of RNs to the health care system. Uses participation rate, activity rate (worked hours of RNs), and productivity (the number of services performed per FTE RN per year).
- *Needs module* - population (by age and sex), need (self-assessed health status and income adequacy within the population), and level of service (amount of care/services a person requires by level of need and due to absence of data existing levels were used, where available).

**Considerations**

Authors concluded that no single policy approach will solve the supply of RNs issue. Model can be applied to other professions or jurisdictions. Similarly to the CNA model considerations, the model is not a disease-based one and therefore would require adjustments to estimate supply and need for mental health and specifically the three conditions. Proxies were used for some data especially for the level of service (utilization) by level of need. Model is currently in use.

### *Vancouver Coastal Health Authority*

## Model Description – Vancouver Coastal Health Authority (VCH)

Model is very simple (excel based) and uses actual human resource data to project need for staffing based on a baseline assumption of two per cent growth. Results are used as a baseline tool for discussion with directors within VCH on their need for future staff but are also combined with other health authorities to influence the Ministry of Health and by extension the Ministry of Education.[105]

**Characteristics**

Covers HR needs in long term care, residential, community and acute care levels, which are the areas that the authority is responsible for. Have not yet forecasted for mental disorders although believe that they can as the model can be brought down to the unit or specialty level. VCH believe that they are very good at its projections although it did not account for the increase in hours/nurse during the recession. It does help them estimate the level of recruitment needed, for example locally, nationally and/or internationally.

**Variables**

Use payroll data to project need based on how much funding they are going to get. Variables include number of employees, hr services required, vacancies, retirements, resignations, conversions from regular to casual status, newly created positions, returns from leave, employment status by age, etc.

**Considerations**

This meso level model is labour intensive at this stage and can be broken into categories of health providers' delivery of mental disorders including community mental health. As they are not responsible

[105] Harvey A, Vice President HR for Providence Health Care, Provincial Health Services Authority and Vancouver Coastal Health Authority. *PowerPoint Presentation and Telephone Interview.* March 22, 2010.

for needs outside of the health system they cannot forecast need in the criminal justice system or education systems for examples. Need is based on the level of funding rather than measurements of health status and therefore is not a true needs-based planning approach.

## Forecasting Models in Human Resources in Mental Health

Many of the above models discussed could be used in forecasting human resources in mental health although at this point have not been developed to do this. Australia has done some work on mental health needs-based models and found that a 30 per cent rise in budget would treat 60 per cent more people and produce a 90 per cent increase in health gain.[106] The basis of these findings was through the *Tolkien II Report* that modelled mental health services (15 disorders representing 95 per cent of the workload) by looking at best treatment interventions at each level of severity, by staff and facilities required.[107] This report was more of a bottoms-up approach to looking at need for mental health services. It provided estimates of cost and effectiveness of treatment with an ideal mix of interventions. In Canada, some work has been done at a local level in needs-based planning for people with schizophrenia residing in board and care homes. Client need was assessed through the standardized tool, *Colorado Client Assessment Record*.[108] A US study, used the *severity of psychiatric illness-community mental health (SPI-CMH) scale* to assess service requirements for persons living in residential care facilities.[109]

Outlined below are more specific initiatives that are occurring across Canada. Some are more simplistic than others.

### *Vancouver Island Health Authority ('Bridges')*

**Model Description – Vancouver Island Health Authority (VIHA)[110]**

VIHA developed an information technology solution in partnership with Infoway and Strata Health Solutions Inc. entitled *Bridges*. It is an electronic health record for mental health and addictions services. The goal of the project is to provide more effective services for the populations of high needs/high risk clients that are priority targets for mental health and addiction services.

**Characteristics**

The IT solution also has a very important component that will act as a navigator tool to track the patient through their health care journey although it will only be used for acute type mental disorders (see Figure 4). It will support service integration and continuity of care across a diverse array of providers. But as well across three levels of the health system (macro, meso and micro). Macro defined by service system evaluators, planners, and policy makers. Meso level are the managers of service and micro are clinicians. The scope of the project includes hospital and community-based service. VIHA also

[106] Andrews A and Titov N. Changing the Face of Mental Health Care Through Needs-Based Planning. *Australian Health Review* April 2007 Vol 31 Suppl 1.

[107] Andrews , Tolkien II Team. *Tolkien II: a Needs-Based, Costed, Stepped-Care Model for Mental Health Services* (2nd edition). Sydney. World Health Organization Collaborating Centre for Classification in Mental Health, 2007.

[108] Durbin J, Goering P, Cochrane J, et al. Needs-Based Planning for Persons with Schizophrenia Residing in Board-and-Care Homes. *Schizophrenia Bulletin*. Vol 30 No 1, 2004.

[109] Anderson R and Lyons J. Needs-based planning for Persons with Serious Mental Illness Residing in Intermediate Care Facilities. *Journal of Behavioral Health Services Research*, 28(1): 104-1110, 2001.

[110] Vancouver Island Health Authority, Infoway and Strata Health Solutions Inc. *VIHA Bridges Description*. 2009. Available at http://ehrsolutionproviders.ca/victoria/VIHA_Bridges_description_February172009.pdf

collaborates with four post-secondary institutions in workforce planning to support the supply side of planning.[111]

**Variables**

VIHA has found that the best way to estimate need is not a clinical signs and symptoms approach, but the use of functional status and behavioural risk profiles. Includes:

- *Mental Health and Addiction Services (MHAS) Clinical Profile (CP)* – client clinical/functional status, drug abuse/addiction, multi-dimensional risk profile, and health risk/promotion behaviour.
- *PathWays/MHAS* – this tool assists clinicians in managing the movement of clients and their health information through the array of MHAS services. PathWays pulls data from the CP to assist the clinician in matching clients to services that are appropriate to their needs and risks.
- *Outcome-based Evaluation/Planning Framework* – captures information about service demand and service outcomes from CP and PathWays, as well as other information such as hospital discharge data and emergency room encounters.

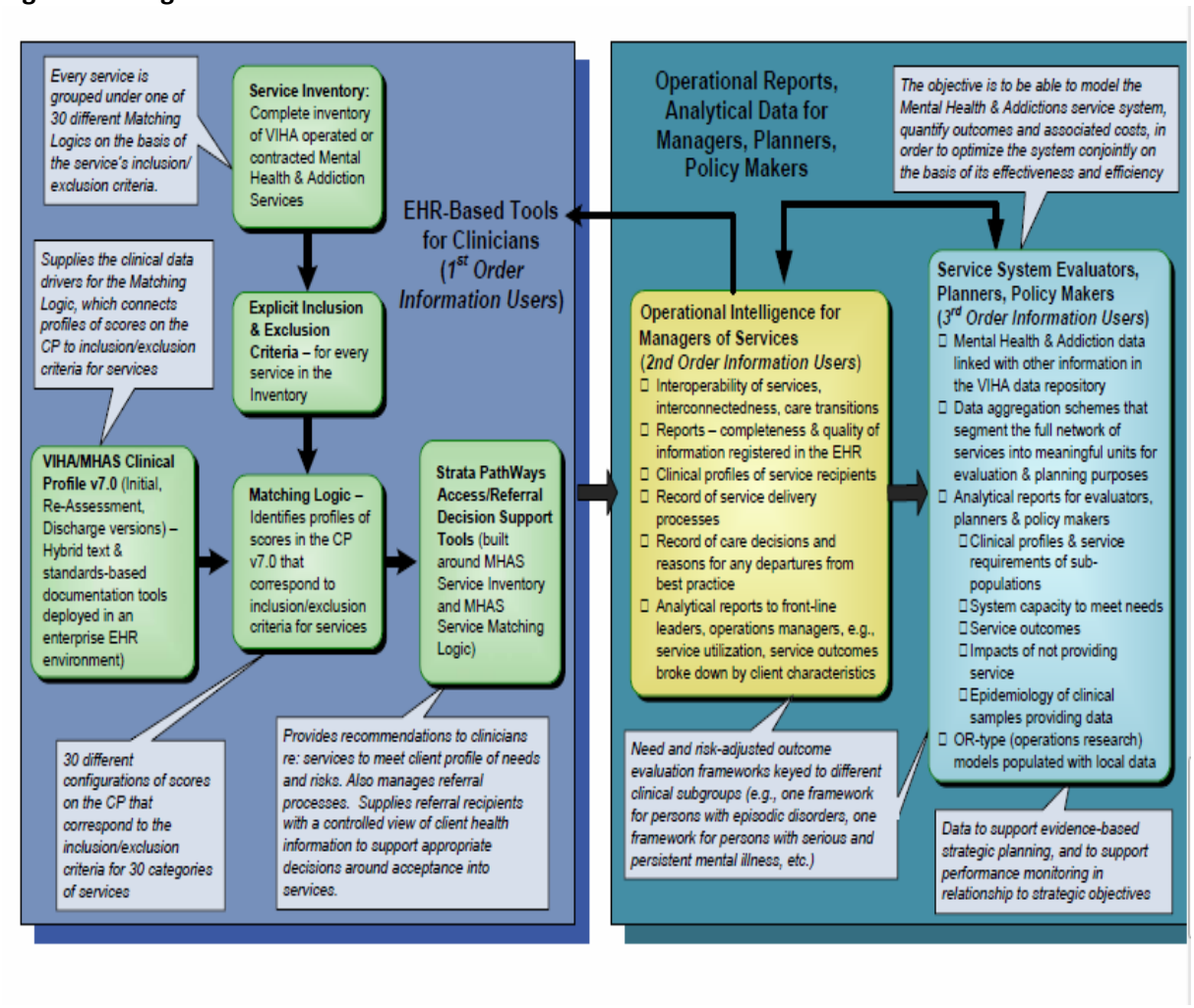
**Considerations**

It has a great potential to do modelling of mental health needs down the road. The IT solution only deals with data from the health sector and as such will not incorporate at this stage data elements needed from the criminal justice system or education systems. Currently, there are major data cleaning issues that requires considerable work. The solution also has a very important component that will act as a navigator tool to track the patient through their health care journey although it will only be used for acute type mental disorders such as schizophrenia (not depression and anxiety).Using functional status and behavioural risk profiles as an estimate of need which would mean that these instruments would need to be used universally for a more macro-economical approach. At this stage, VIHA feels that they are flying blind on the needs-based planning for mental disorders (in health), although the data elements will allow for this down the road.[112]

[111] Purkis ME, Herringer B, Stevenson L, et al. Conditions Underpinning Success in Joint Service-Education Workforce Planning. *Human Resources for Health* 2009 7:17.

[112] Kenneth A. Moselle, Manager, Performance Standards & Monitoring Mental Health & Addictions Services, Vancouver Island Health Authority. *Telephone Interview*. March 24, 2010.

**Figure 4: Bridges – An End-to-End Information Solution**



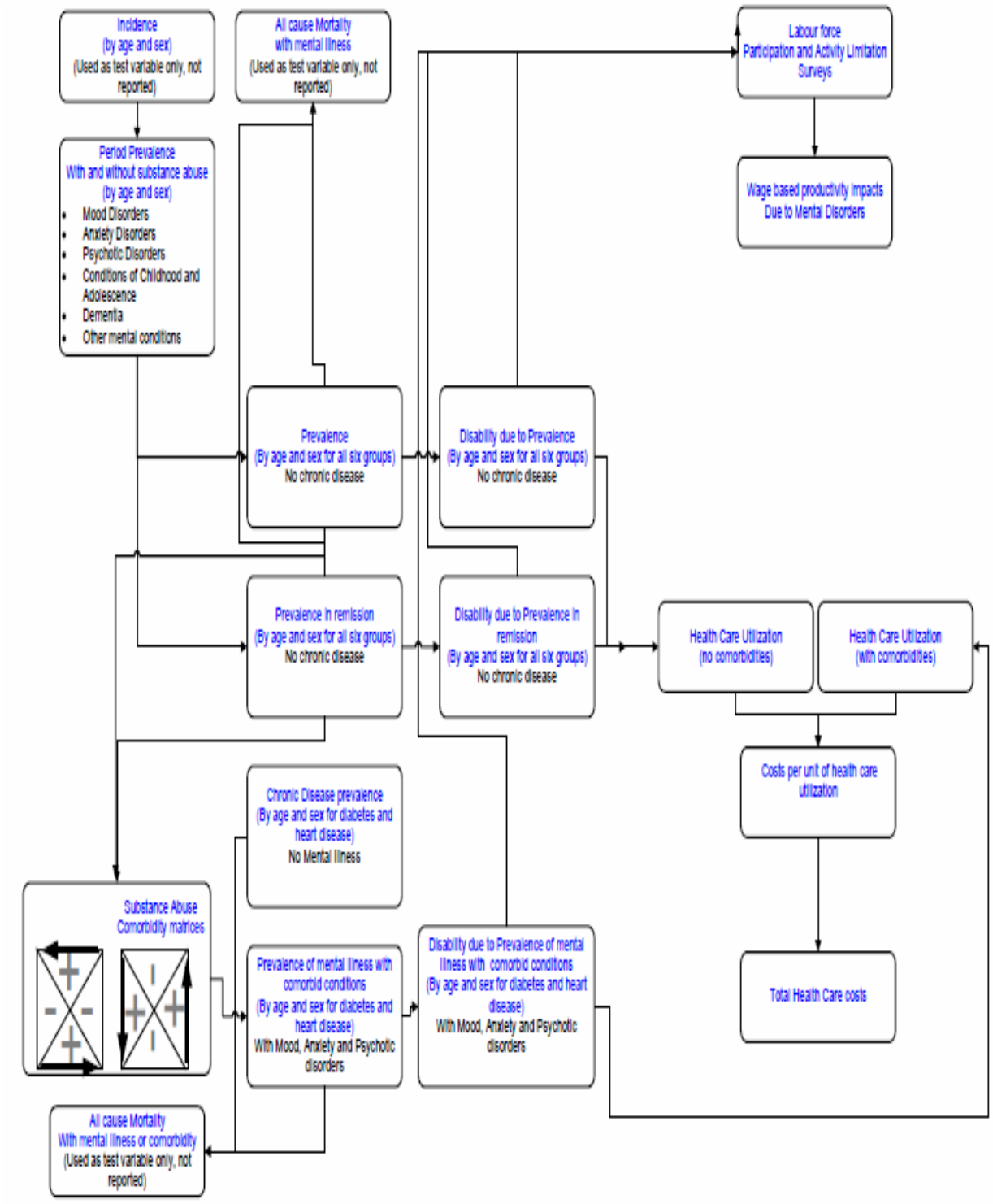

Source: Vancouver Island Health Authority, Infoway and Strata Health Solutions Inc. *VIHA Bridges Description*. 2009.

## *Risk Analytica*

| **Model Description – Risk Analytica**[113] |
|---|
| Macro-economic model designed to estimate the costs of mental disorders to the economy from direct and indirect sources. Disease-based model that looks at the burden of illness associated with mental illness. Collaborative project with the Mental Health Commission of Canada and looks at mood, anxiety, childhood (including ADHD), and psychotic disorders based on ICD-10 classifications. |
| **Characteristics** |
| Estimates the current and future population-based life and economic impacts of mental health conditions in Canada (see Figure 5). Provides information that will contrast the size and shape of mental health impacts against other chronic conditions. Also incorporates disability estimates associated with conditions to compute the current and future wage-based productivity impacts. Historical (administrative or from literature if necessary) health care utilization data will be used in the model to establish the future health care service consumption requirements. The consumption requirements along with the future (simulated in the model) prevalence levels will determine the future staff and resource levels. |
| **Variables** |
| *Population module*: divided into groups based on age, sex and health state (mental disorders type).<br>*Disease module*: uses mental disorders and two chronic diseases (heart disease and Type 2 diabetes), as well as co morbidity populations such as mood disorders with Type 2 diabetes. Uses incidence, prevalence, and mortality, but also health care utilization data.<br>*Disability economic module*: incorporates disability estimates associated with conditions to compute the current and future wage-based productivity impacts.<br>Data sources include: CCHS, Ontario Household Survey, Report on Mental Illness in Manitoba (2004), Edmonton Survey of psychiatric disorders (1983-'86), Netherlands Mental Health Survey and Incidence survey (1996-'97). |
| **Considerations** |
| The linkages between the burden of disease (demographics, risk factors, prevalence, incidence, and mortality) to staffing levels (i.e. full time equivalents of social workers, psychologists, etc.) are unclear. As well, the supply side of the model was not defined in material provided and will require further follow-up. It seems to be health sector specific and therefore does not go across jurisdictions. |

[113] Risk Analytica. *Mental Health Commission of Canada Life at Risk Mental Health Application: Modelling Strategy.* April 2010.

**Figure 5: Risk Analytica's Continuum Map Template for Each Conditioning Group**



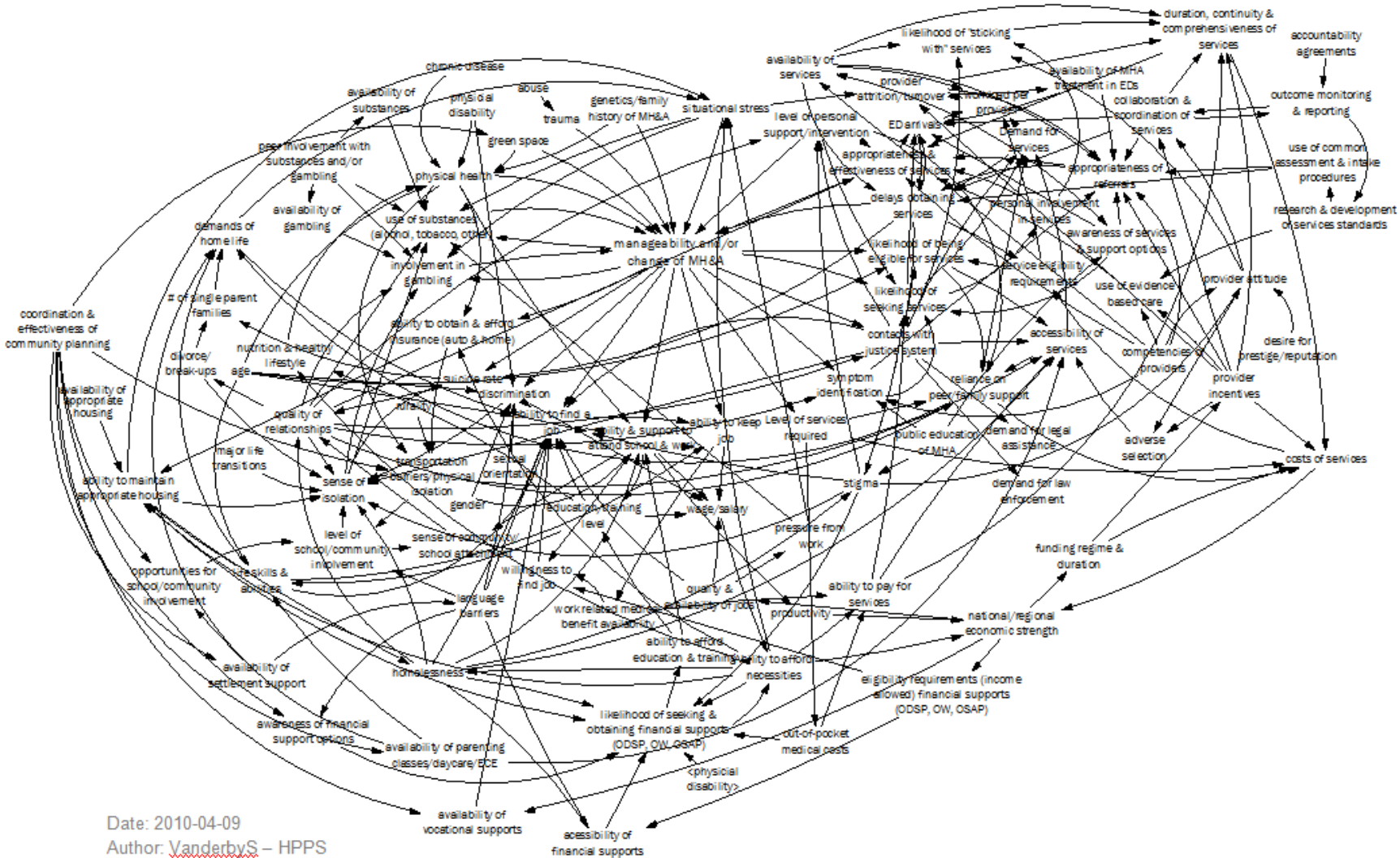

Source: Risk Analytica, 2010

## *Ontario Ministry of Health and Long Term Care*

| **Model Description – Ministry of Health and Long-Term Care in Ontario[114]** |
|---|
| Model based on system dynamics (SD), a methodology for modelling and understanding complex systems. It involves a two staged process: development of a causal loop diagram providing a high level view of the system; and a stock-an-flow simulation to quantify the relationships between system elements to demonstrate the behaviour over time. The model has not been fully developed or applied yet however it does have applicability across jurisdictions. |
| **Characteristics** |
| Uses a systems perspective so involvement of mental health and addiction experts from Ministry of Health and Long-Term Care, Children and Youth Services, Education, and Municipal Affairs and Housing. |
| **Variables** |
| 99 system variables in core model including: demand for services, service eligibility requirements, use of evidence based care, competencies of providers, provider attitude, education/training levels, homelessness, nutrition and healthy lifestyles, demands of home life, chronic disease, etc. Several convergence factors were identified that directly affect by the manageability of and changes in mental health and addictions including: collaboration and coordination of services, competencies of providers, provider incentives, use of common assessment and intake procedures, stigma, wage/salary, quality and availability of jobs, transportation barriers/physical isolation, availability of appropriate housing, language barriers, and eligibility requirements (income allowed) financial supports. |
| **Considerations** |
| The model shows the complexity of the mental health and addiction system (See Figure 6). It expanded beyond health to factors that considered socioeconomics, employment, family and relationships, education, and social supports. For many of the relationships between variables defined in the model, data is not available. Model demonstrated the need for an inter-ministerial approach to get this systems perspective is required for mental health services that addresses service and care provision, access barriers, housing and employment. It is unclear if this model will be used to forecast and from information obtained to date, it does not seem that simulations have been developed yet. |

[114] Vanderby S. *Final Report: Mental Health and Addiction Model*. Prepared for Ministry of Health and Long Term Care Ontario. April 2010.

**Figure 6: Final Mental Health and Addiction Causal Loop Diagram, Ministry of Health and Long-Term Care of Ontario, 2010**



## Policy Options and Trade-offs

Policy decisions in one sector must consider the spill over effects (positive and negative) in other sectors or jurisdictions, which is very rarely done in Canada. The classic example in mental health is the deinstitutionalization of mental health patients to the community; it did not consider the ramifications in the social services, criminal justice system, or even within health for community mental health services. WHO, in its report on strategic planning for health, developed a tool to evaluate policy options and their effect on planning.[115] In applying that tool, researchers found that more systematic reviews would be welcome in terms of assessing the effect of policy options on HR planning.[116]

New models of care and other delivery processes continuously change the supply side of modelling especially in terms of innovation and productivity. Changing copes of practice, evolving competencies, advances in treatment and technologies, new provider types, and advent of interprofessional teams all affect supply requirements. But, as well, policies on the demand side such as financial constraints, expansion of primary and community services, compensation/incentives, information technology and privacy/confidentiality requirements also affect our ability to forecast overall workforce requirements.

A plethora of policy options and tradeoffs will need to be considered in model development to ensure an evidenced-based approach to workforce requirements. Items to consider include:

- improved mental health promotion and prevention activities and interventions;
- desired outcomes for patients;
- effect of current and desired policies and practices across jurisdictions on mental health supply and services;
- national data standardization including definitional issues and methods of collection;
- availability of data including new instrument development;
- best practices in the provision of mental health services; and
- measuring effective productivity of workers.

In deciding the best approach or mix of approaches to selecting a model for integrated needs-based forecasting for mental wellbeing, criteria are needed. Cameron outlines potential selection criteria for HHR forecasting models that would be useful as well in this instance (text box below). Stakeholders will need to work collaboratively to ensure that any model developed is in alignment with policy priorities across jurisdictions.

[115] Bossert T, et al. *Assessing Financing, Education, Management and Policy Context for Strategic Planning of Human Resources for Health*. 2007. Available at WHO www.who.int/hrh/tools/assessing_financing.pdf.

[116] Chopra M, Munro S, Lavis JN, Vist G, Bennett S (2008). Effects of policy options for human resources for health: an analysis of systematic reviews. *Lancet,* 371 (9613), 668-74.

**Forecast Model Selection Criteria:**

- Valid and reliable
- Consistent and timely
- Comprehensive and innovative
- Feasible and simple
- Practical and flexible
- Comparable and portable
- Accessible and translatable
- Affordable and sustainable
- Relevant and supportive

*Source: Cameron Health Strategies Group Ltd., 2009*

## Conclusion

A needs-based forecasting model for mental health wellness may be a more effective and more sophisticated approach to modelling health workforce demand although this has yet to be proven. Noteworthy work is beginning in Canada on HHR needs-based models and a more systematic evaluation/demonstration would be worthwhile. Definitional issues may be one of the reasons why little evidence of needs-based planning was found in other sectors.

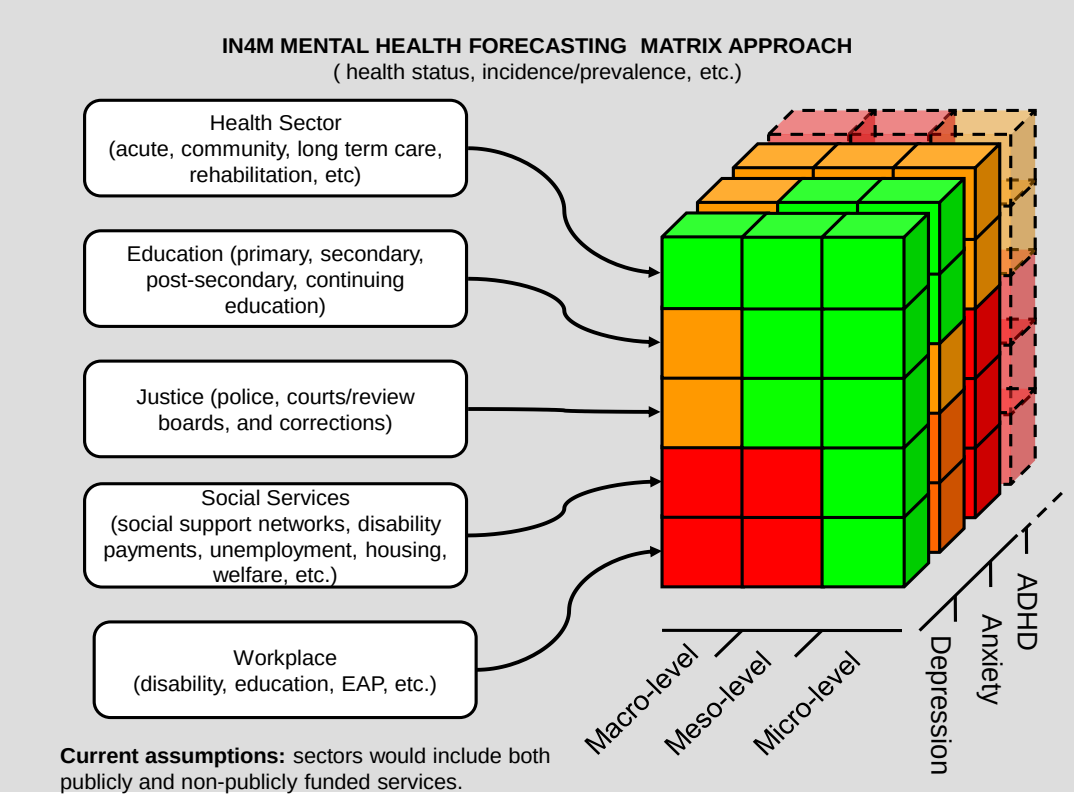
The data required to assess need is beginning to be developed and collected, although there are still significant gaps especially across jurisdictions and outside of health care (i.e. education, social services and criminal justice). Some models use proxy data to estimate need for workforce requirements when gaps are missing. None of the models examined in this report look at workers broadly (i.e. existing both in the public and private sectors, and outside of the health sector). Including private sector professions and informal caregivers will be a challenge from both a data availability and policy/intervention perspective. Of the needs-based models found in Canada, most take differing approaches to assessing need and typically only for select provider groups like physicians and nurses. Informal caregiving is typically overlooked entirely.

Overall a significant amount of work must be done to begin to develop a coherent, comprehensive reliable needs-based model that: crosses the private and public sectors; links jurisdictions; can move between the micro, meso and macro levels of forecasting; and can aggregate/ disaggregate data into disorder categories. Figure 7 outlines a potential framework in considering the many multidimensional aspects of this project as discussed above.

While it is a tall order, as one key informant stated, 'let us not stand on the box we are trying to raise.' Needs-based planning is not an impossible task but an evolving process, and the eventual solution will likely be a synthesis of models that builds on the structures, key insights and learnings discovered to date. It is hoped that the mental health wellness predictive model(s) developed and implemented through subsequent phases of the project will be robust over time and across major diagnostic categories. The predictive model(s) should provide a picture of what is required both now and in the future in terms of HR capacity for both formal and informal care giving to address the need for mental health services. As well, it should support the Mental Health Commission of Canada's evolving overarching mental health strategy for Canada to ensure equitable access to service.

*As it is often said, there is no health without mental health.*

**Figure 7: Matrix Approach to Mental Wellness Forecasting**



# Analyse documentaire et de l'environnement

## Résumé

C'est au printemps de 2010 qu'a commencé la phase I d'un projet proposé en plusieurs étapes, appelé Projet IN4M, dont le but est d'améliorer la capacité de répondre aux besoins en matière de services de santé mentale. Le Projet IN4M consiste à trouver et à analyser des sources de données dans les secteurs de la santé, de l'éducation, des services sociaux et de la justice pénale relevant des domaines public, privé, sans but lucratif et du milieu de travail. L'équipe du projet se concentre sur trois états : la dépression, l'anxiété et le trouble d'hyperactivité avec déficit de l'attention (THADA). La phase I a été menée à bien par l'Association canadienne pour la santé mentale et financée par Santé Canada, avec le soutien de la Commission de la santé mentale du Canada.

Le plan de travail de la phase I comprenait quatre principales composantes : une analyse diagnostique/de situation (c.-à-d. une analyse documentaire et de l'environnement); un inventaire des pratiques existantes de planification des ressources humaines en santé, aussi bien celles qui sont fondées sur les besoins que sur d'autres paramètres (au moyen d'une enquête en ligne); une étude de faisabilité d'un modèle de prévision faisant fond sur une série d'études de cas (comprenant des études de cas et un processus de demande de propositions); et une table ronde de recherche active, ou de recherche-action, visant à créer des champions du changement et à établir une approche pour l'avenir. Cette analyse documentaire et de l'environnement représente la première composante du plan de travail.

Entre mars et décembre 2011, l'équipe du projet a réuni et examiné des documents évalués par les pairs et de la littérature grise (documentation parallèle). Le cadre de recherche prévoyait d'abord un vaste examen des besoins liés à la santé, suivi d'un examen plus restreint des modèles de prévision des besoins de ressources humaines en santé pour les troubles mentaux. La section de ce rapport qui traite de la méthodologie décrit le protocole de recherche de façon détaillée. En mai 2010, l'équipe a fait des recherches dans des bases de données en vue de trouver principalement des articles écrits au cours des cinq dernières années. La littérature grise était composée en grande partie de rapports et d'études découlant principalement d'initiatives nationales et provinciales de modélisation des ressources humaines, surtout dans le domaine de la santé mentale. Un premier sondage en boule de neige a permis d'établir une base pour l'approche et la suite des recherches. Afin d'approfondir ses connaissances de la matière, l'équipe a obtenu d'autres articles et publications après la première recherche dans les bases de données, au moyen d'une enquête en ligne et de consultations continues (notamment auprès du comité consultatif et de la table ronde établis pour la recherche).

Cet examen a de nouveau confirmé que l'information actuellement disponible sur la planification et la prévision des ressources humaines en santé mentale fondées sur les besoins est très limitée, notamment dans les secteurs autres que celui des soins de santé. Voici quelques-uns des résultats de l'analyse documentaire et de l'environnement :

- Au Canada, il n'existe pas de base de données nationale ou provinciale/territoriale complète sur la fréquence des problèmes et troubles de santé mentale.
- La source de données la plus vaste sur la fréquence de la dépression et de l'anxiété est l'*Enquête sur la santé dans les collectivités canadiennes*. Elle comporte toutefois des limitations. Par exemple, l'enquête sur la santé mentale n'a été menée qu'une fois à l'échelle nationale, les données ne portent que sur les personnes de plus de 15 ans et les populations vivant en établissement sont exclues. Il faudra chercher et créer de meilleures sources de données pour déterminer l'incidence, la fréquence et la mortalité.
- La *Base de données sur la santé mentale en milieu hospitalier* de l'Institut canadien d'information sur la santé comprend des données sur les troubles mentaux et stratifie les troubles de l'humeur et les troubles anxieux.
- Les demandes d'indemnisation pour invalidité visant des troubles mentaux sont nombreuses, les chiffres les plus récents indiquant qu'elles représentent 79 % des demandes de prestations d'invalidité de longue durée et 75 % des demandes de prestation d'invalidité de courte durée[20]. La dépression est l'invalidité dont le coût pour les employeurs canadiens augmente le plus rapidement[21].
- Pour ce qui est de quantifier les besoins de services de santé mentale chez les enfants et les jeunes, plusieurs sources de données pourraient être utiles : l'*Enquête sur la santé dans les collectivités canadiennes*; l'*Enquête longitudinale nationale sur les enfants et les jeunes* (Statistique Canada); l'*Enquête sur les comportements liés à la santé chez les enfants d'âge scolaire* (Agence de la santé publique du Canada) et l'*Enquête canadienne sur les mesures de la santé* (Statistique Canada)[22]. Dans le système d'éducation, il y a peu de données sur l'incidence et la fréquence des troubles de santé mentale chez les enfants et les jeunes.
- Dans le système de justice pénale (services de police, tribunaux/commissions de révision et services correctionnels), il y a peu d'uniformité quant aux types de données recueillies et à la méthode de collecte et de sauvegarde des données[23].
- On ne recueille pas de données ayant trait aux besoins insatisfaits ou non exprimés de services de santé mentale. Les raisons de cet état de fait sont nombreuses, comme la stigmatisation rattachée aux troubles mentaux et le manque de disponibilité de services.
- Les mesures les plus fiables du besoin de services de santé basées sur la population étaient les suivantes : *MOS 36-item Short Form Health Survey*, *Health Utility Index, Health-Adjusted Life Expectancy*, l'auto-évaluation de l'état de santé et *Health Related Quality of Life*, tels que mesurés par la HUI[24].

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[20] Société pour les troubles de l'humeur du Canada. *Quick Facts*, novembre 2009. Disponible sur le site www.mooddisorderscanada.ca. Il convient de faire remarquer que la source des données de la Société n'était pas évidente dans son rapport.

[21] Ibid.

[22] Guttmann, A., E. Cohen et C. Moore. « Outcomes-based HHR Planning for Maternal, Child and Youth Health Care in Canada: A New Horizon for the 21st Century », *Paediatric Child Health*, vol. 14, n° 5, mai-juin 2009.

[23] Sinha, M. *Une recherche sur la faisabilité de recueillir des données sur les adultes et les jeunes souffrant de problèmes de santé mentale qui ont des démêlés avec le système de justice pénale*, préparée pour le Centre canadien de la statistique juridique, Statistique Canada, 2009. www.statcan.gc.ca/pub/85-561-m/85-561-m2009016-fra.pdf.

[24] Tomblin Murphy, G., S. Birch et A. MacKenzie. *Planification des ressources humaines de la santé fondée sur les besoins : le défi d'établir un lien entre les besoins de la population et les exigences en fournisseurs de soins*, 2007. Pour y accéder, allez à : http://cna-aiic.ca/CNA/documents/pdf/publications/Needs_Based_HHR_Planning_2007_f.pdf.

- Dans le passé, c'est dans le secteur de la santé qu'ont eu lieu la plupart des tentatives visant à prévoir le besoin de services et elles ont surtout été axées sur l'offre de médecins et d'infirmières ou les tendances de l'utilisation des services actuels.
- Les initiatives de planification fondée sur les besoins qui ont été prises au Canada et qui s'appliquent le plus sont : le travail que la Commission de la santé mentale du Canada a commandé à Risk Analytica; le travail commandé par le ministère de la Santé et des Soins de longue durée de l'Ontario au Conference Board du Canada; et le travail commandé par diverses organisations à O'Brien-Pallas, Tomblin Murphy et Birch et ses collaborateurs.

Quant à la situation dans son ensemble, on commence à développer et à recueillir les données requises pour évaluer le besoin en matière de santé et de bien-être mentaux, bien que d'importantes lacunes subsistent, notamment entre les provinces et territoires et les divers éléments du continuum de soins et à l'extérieur du secteur de la santé (c.-à-d. dans les domaines de l'éducation, des services sociaux et de la justice pénale). Certains modèles utilisent des données substitutives pour estimer le besoin de main-d'œuvre lorsque des lacunes existent. Aucun des modèles étudiés lors de cette analyse n'examine les travailleurs de façon générale (c.-à-d. qui existent dans le secteur public ainsi que dans le secteur privé et à l'extérieur du secteur de la santé). L'inclusion des professions du secteur privé et des soignants naturels sera un défi tant du point de vue de la disponibilité de données que de celui des politiques/de l'intervention.

Beaucoup de travail sera nécessaire pour commencer à élaborer un modèle fondé sur les besoins qui soit cohérent, complet et fiable et qui englobe les secteurs privé et public; établit des liens entre les provinces et territoires et les différents segments du continuum de soins; et permet de passer d'un niveau de prévision aux autres (micro, méso et macro) et d'agréger et de désagréger les données en catégories de troubles. À cette fin, l'équipe du Projet IN4M élabore les phases II et III en vue d'obtenir un financement. Ce futur travail consisterait à mettre en pratique un modèle de planification des ressources humaines fondée sur les besoins qui soit pratique et prédictif, puis à le diffuser partout au Canada et en encourager l'utilisation dans le cadre d'une stratégie globale intégrée en matière de santé mentale.

# Appendix B: Online Survey Results

CANADIAN MENTAL HEALTH ASSOCIATION
ASSOCIATION CANADIENNE POUR LA SANTÉ MENTALE

*Project IN4M*

# Integrating Needs for Mental Well-Being into Human Resource Planning

## Online Survey Results

**October 5, 2010**

## Preface

Project IN4M was commissioned by Health Canada to undertake an analysis of the common elements of needs-based human resource planning for mental wellbeing. This represents Phase I of a potentially three phased project. It is managed by the Canadian Mental Health Association.

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# Executive Summary

In the spring of 2010, Project IN4M began Phase I of a proposed multi-phased project. IN4M is a national effort to develop a needs-based human resource framework and model based on current data sources and those that need to be developed in the mental wellness area. IN4M involves identifying and analyzing data sources in the health, education, social services, and criminal justice sectors within the public domain as well as those in the private, workplace and not-for-profit domains. IN4M is focusing on three conditions: Depression, Anxiety and Attention-Deficit Hyperactivity Disorder (ADHD). Phase I was led by the Canadian Mental Health Association and funded by Health Canada, with support from the Mental Health Commission of Canada.

The workplan for Phase I involved four main components: a diagnostic/situational analysis (i.e. a literature review and environmental scan); an inventory of existing needs-based and other HHR planning practices (i.e. on-line survey); a feasibility study of predictive modelling building in and upon a series of case studies (i.e. case studies and request for proposal process); and action research roundtable to create champions of change and a future approach. This online survey report represents the second component of the workplan.

This survey of experts focused on questions around existing needs-based human resource planning models and strategies to deal with the current lack of data. Findings showed the following:

- Eighty-seven of those surveyed were not aware of any other forecasting models provincially, nationally or internationally that would be applicable to mental wellness outside of three models listed in the survey.
- The most cited additional planning model that should be considered was *Tolkien II* by Gavin Andrews at the University of South Wales.
- Data sets on mental health disorders (such as incidence, prevalence, mortality, risk factors, co-morbidities, etc.) were seen to be the best way to predict need in mental health although this was not a consistent finding across sectors.
- A significant list of data sources and proxies were provided by respondents that need to be reviewed for quality, access and consistency.
- Very little additional information was uncovered from social services and peer support sectors.
- Thought disorders (Schizophrenia and Alzheimer's disease) and substance abuse/problem gambling were seen to be the next priorities for the future for needs-based planning after the current disorders (depression, anxiety and ADHD) are completed.

To this end, IN4M is developing Phase II and III for proposed funding. This future work would involve putting a practical, predictive needs-based human resource planning model into practice and then disseminating and promoting up-take of a model across Canada as part of an overarching, integrated mental health strategy.

# Contents

## Introduction

During August and September 2010, IN4M staff surveyed experts on existing planning models and to determine strategies to deal with the current lack of data; these strategies included a discussion of the use of data proxies – facts, figures or criteria. The survey was part of IN4M, which is a Canadian Mental Health Association project, funded by Health Canada and the Mental Health Commission of Canada designed to built a needs-based model for estimating human resources in the mental health domain. The survey results will form the basis for a national roundtable of policy-makers from a variety of sectors (including education, criminal justice, social services, health, private sector, private practice, informal caregivers and NGOs) in November 2010. The invitational roundtable will consider the results of an environmental scan, a review of peer-reviewed and grey literature, and these results to give expert advice on the development of a needs-based model for mental health human resources for Canada, and its provinces and territories.

## Methodology

The eight question online survey (Appendix A) developed by the IN4M Project team was distributed to 225 identified experts and stakeholders in mental health services, human resource planning and/or forecasting. Survey Monkey was used as the electronic tool for soliciting input. Cross sector representation was sought to ensure a balance of views and advice. Eight pre-testers provided feedback on the survey representing the sectors listed above. Pretesting revealed that respondents would take up to 10 minutes to complete the survey.

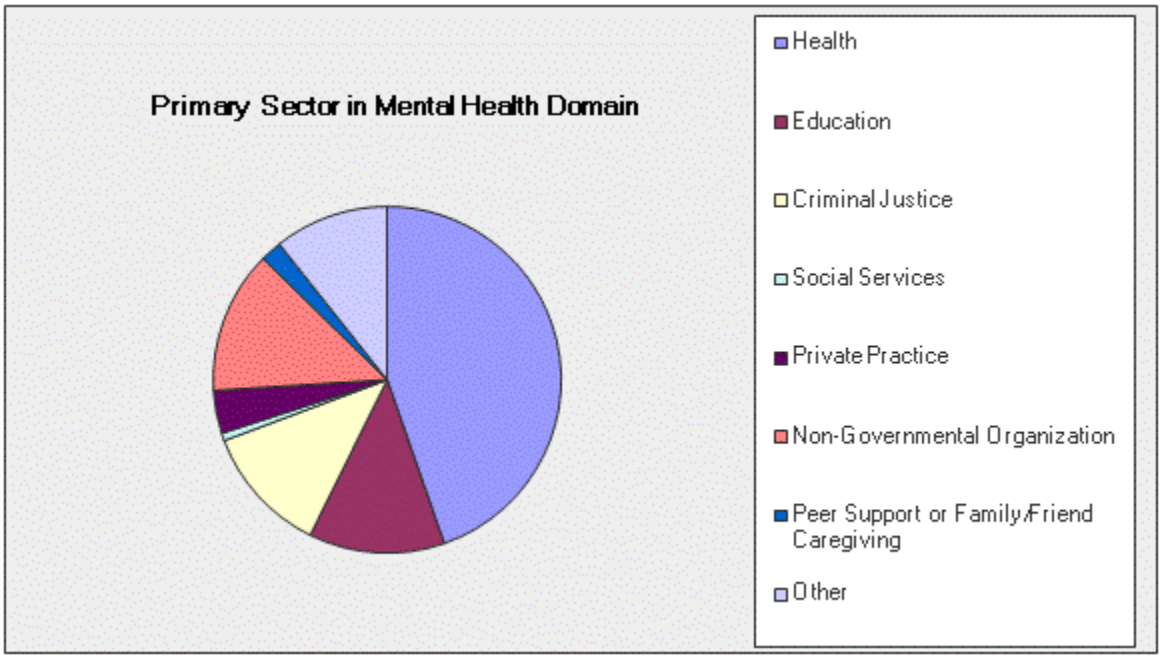
On Friday August 13, 2010 the survey was distributed organizations, and each was prompted to forward the survey link to any other interested parties. Only one survey could be completed per computer. Given this, the exact sample size is not known however 150 responses were received with two surveys completed in French. The survey was closed one month later on Friday September 15, 2010 and data aggregated shortly thereafter.

# Results

## Respondent Profile

Almost half of respondents (48 per cent) to the online survey were from the health sector followed by the education, criminal justice and non-governmental organizations at 12 to 13 per cent each (see figure 1). Only a small number of respondents (three) were from peer support, family/friend care giving or social services despite efforts to solicit additional feedback from this group. It is presumed that this group may just have seen the survey as not being in their field of expertise. Ten percent of those surveyed identified that they were in the 'other' category and the majority of these were researchers who didn't see themselves in a specific role in the mental health domain.

**Figure 1: Primary Sector in Mental Health Domain**

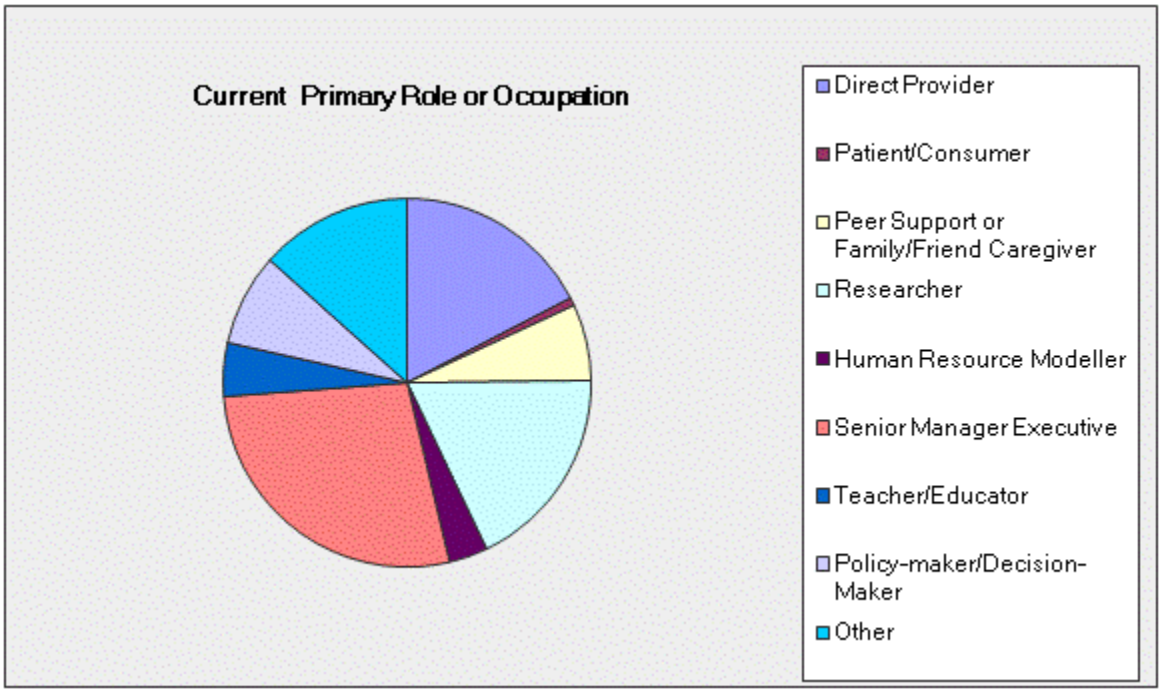



The three top roles or occupations for respondents were senior manager/executive (28 per cent), researcher (18 per cent) and direct providers of professional services (17 per cent). Thirteen per cent were in the 'other' category and the most of these were either consultants or planners who do not see them in any of the primary roles identified in the mental health domain (see figure 2).

Seventy-nine per cent of those surveyed had a system level perspective of mental health services such as a provincial/territorial/national government or organization. More than one perspective could be chosen, therefore 69 per cent brought an institution level perspective such as a university, hospital, correctional facility or school board; and a slightly smaller percentage (66 per cent) had a service level

perspective such as at the practice or delivery level including formal and informal care giving to the individual. Overall there was good representation among the various levels.

**Figure 2: Primary Role or Occupation**




## Needs-Based Human Resources Planning Models

The majority of respondents (87 per cent) were not aware of any other forecasting models provincially, nationally or internationally that would be applicable to mental wellness outside of three models listed in the survey: *the Mental Health Commission of Canada* commissioned work by Risk Analytica; *the Ministry of Health and Long Term Care of Ontario* commissioned work by the Conference Board of Canada; and *O'Brien-Pallas, Tomblin Murphy, Birch et al.'s* commissioned work for various organizations. The most cited additional model was a report done by Gavin Andrews entitled *Tolkien II* at the University of South Wales for the World Health Organization Collaborating Centre for Classification in Mental Health. Other models which may or may not be applicable included:

- United States Department of Health & Human Resources' work on health professional shortage areas for mental health.
- The Report of the Standing Committee on Health (June 2010) on *Promoting Innovative Solutions to Health Human Resources Challenges.*

- Centre for Applied Research on Mental Health and Addiction (CARMHA) at Simon Fraser University and the British Columbia Ministry of Health Services.
- Fujitsu Consulting (2002) Health Human Resources Supply and Demand, and follow-up that is currently in progress.
- Provincial government work such as Health Force Ontario and Manitoba's mental health strategic plan.

## Data Sets and Proxies

Needs-based planning models require a way to identify the "needs" of the population. The survey asked respondents to rank the data sets most important in establishing "need" for mental health services. Data sets on mental health disorders (such as incidence, prevalence, mortality, risk factors, co-morbidities, etc.) were found to be the most important followed by data on health at the population level (such as perceived health status, population health index, etc.) and then lastly data sets for an index, tool or instrument (such as the Brief Child and Family Phone Interviews, Level of Service Inventory, Psychopathy Checklist, disability index, personality profile, etc.). When responses were cross tabulated by respondent role in the mental health domain, the education sector was more evenly split in ranking importance among the three types of data sets.

Additional data sources identified by respondents, which may or may not be relevant to this endeavour included by sector:

**Health** – the National Physician Survey; Canadian Wait Times Alliance; Canadian Institute for Health Information; Canadian Council on Social Development/ Community Social Data Strategy for disability rates; Adolescent Health Survey; Public Health Agency of Canada's surveillance databases; Statistics Canada's Canadian Community Health Survey; provincial regulatory bodies; sector specific level of functioning measures (such as InterRAI scores in long term care); and provincial administrative data (especially in British Columbia and Manitoba).

**Education** - Canadian Post-MD Education Registry (CAPER); Association of Faculties of Medicine of Canada; teacher/counsellor feedback; university/college registration profiles; Canadian Council on Social Development - Community Social Data Strategy; Student Wellness Perception Surveys; World Health Organization; affiliated provider services from teacher organizations; elementary school data ( dropouts, absences, expulsions, achievement scores, special education by postal code, school test results); and provincial education ministries (relative to school and teacher workforce planning to population projections).

**Criminal Justice** - Judges and probation officers; Correctional Service of Canada's (CSC) Computerized Mental Health Intake Surveillance System; CSC's national snapshot offender mental health profiles; Canadian Council on Social Development's- Community Social Data Strategy; Surveys of judges/lawyers/ police officers regarding prevalence (across time) of mental health issues in the courts/policing; types of

programs available within the institutions; police events and incarcerations by postal code; Public Safety Canada; and provincial offender information systems maintained by respective correctional agencies.

**Social Services** - social assistance; provincial disability support programs; child welfare; registries of chronically homeless such as British Columbia's Homeless Intervention Project; and the Canadian Council on Social Development's Community Social Data Strategy on income characteristics.

**Private Practice** – professional associations on attitudes, practice intake biases, cultural and language appropriateness, and access to a range of health professionals who can support better & sustained outcomes.

**Peer Support and Family/Friend Caregivers**- family and friends of patients; and the Ontario Peer Development Institute.

**Workplace** - workplace absenteeism; return to work policies; program availability/linkages; employee assistance program plans and workers; data on employer education programs for retention of employees, and types of benefits available; and data on insurance claims and access to essential alternatives .

When no data sets are available to support decision-making, proxies (substitute facts or figures) for human resources forecasting one quarter of respondents use proxies and 65 per cent found this to be an effective approach. Some proxies identified included: self-reported mental health problems, assessments of needs of cases referred by staff or self-referred, the Ontario Child Health Survey, qualitative feedback on unmet needs, quantitative estimates of incidence and prevalence from smaller studies, expert groups data, and physician billing patterns.

## Future Priorities

The final question of the online survey highlighted that three disorders were chosen for phase I of Project IN4M (anxiety, depression, and attention deficit hyperactivity disorder) for a number of reasons corresponding to publications by organizations such as Health Canada, the National Institute for Mental Health and the World Health Organization. Respondents were asked to list the categories that should be given priority attention next. Thought disorders (e.g. Schizophrenia, Alzheimer's disease) and substance abuse/problem gambling were seen to be the highest priorities followed by developmental disorders (e.g. Fetal Alcohol Syndrome, Pervasive Developmental Disorder that interrupts normal development in childhood and/or youth). Self harm/suicide and learning disabilities ranked lowest. Results on priorities were fairly evenly distributed among sectors in the mental health domain.

## Key Messages

Valuable insight was provided by the online survey into additional models and data sets available for building a needs-based model for estimating human resources in the mental health domain. Given that the survey had to be distributed during the summer months due to the timeframes for the project, the response rate was quite high demonstrating stakeholders' willingness to help in this endeavour. The main messages were:

- Almost half of respondents were from the health sector.
- Eighty-seven of those surveyed were not aware of any other forecasting models provincially, nationally or internationally that would be applicable to mental wellness outside of three models listed in the survey.
- The most cited additional planning model that should be considered was *Tolkien II* by Gavin Andrews at the University of South Wales.
- Data sets on mental health disorders (such as incidence, prevalence, mortality, risk factors, co-morbidities, etc.) were seen to be the best way to predict need in mental health although this was not a consistent finding across sectors.
- A significant list of data sources and proxies were provided by respondents that need to be reviewed for quality, access and consistency.
- Very little additional information was discovered from social services and peer support sectors.
- Thought disorders (Schizophrenia and Alzheimer's disease) and substance abuse/problem gambling were seen to be the next priorities for the future for needs-based planning after the current disorders (depression, anxiety and ADHD) are completed.

## Appendix A: Online Survey Questionnaire

Your views on the needs of Canadians are important to improving access to appropriate mental health services. Your responses will help frame advice to policy makers in government. The survey has eight questions and should take up to 10 minutes to complete. Please note that the website will not save your answers should you navigate away.

### Part A: Respondent Profile

1. Which of the following sentences best describes your primary role in the mental health domain (choose one):

   - I work/worked in health
   - I work/worked in education
   - I work/worked in criminal justice
   - I work/worked in social services
   - I work/worked in private practice
   - I work/worked in a non-governmental organization (including consumer groups and professional organizations)
   - I work/worked in a privately funded organization such as an employee assistance program
   - I work/worked in peer support or family/friend care giving
   - Other, please specify:

2. Please indicate your current primary role or occupation (choose one):

   - Direct provider of professional services
   - Patient/consumer
   - Family/friend caregiver or peer support
   - Researcher
   - Human resource modeller
   - Senior manager executive

- Teacher/educator
- Policy-maker/decision-maker
- Other, please specify:

3. Please indicate which perspectives of mental health services you have experienced (check all that apply):
    - System level such as provincial/territorial/national government or organization
    - Institution level such as a university, hospital, correctional facility, school board, etc.
    - Service level such as practice or delivery levels including formal and informal care-giving to the individual

## Part B: Forecasting Models

Project IN4M's research to date has uncovered three Canadian forecasting models that can be applied to needs-based planning for mental well-being. These are: *the Mental Health Commission of Canada* commissioned work by Risk Analytica; *the Ministry of Health and Long Term Care of Ontario* commissioned work by the Conference Board of Canada; and *O'Brien-Pallas, Tomblin Murphy, Birch et al.'s* commissioned work for various organizations.

4. Do you know of any other forecasting models provincially, nationally or internationally, that would be applicable to mental well-being?
    - Yes,
    - No

    If yes, please identify them below:

    Name of organization overseeing the forecasting model (box for organization name)

    Name of contact person (box for contact information)

    Model description (box for model description)

    Add another model (repeat boxes up to three times)

5. Needs-based planning models require a way to identify the "needs" of the population. Please rank the following data sets according to their importance in establishing "need" for mental health services. Place a "1" next to the data sets that are most important, a "2" next to the data sets that are next most important, and so on. Please note that no two data sets can have the same ranking

- Data on mental health disorders (such as incidence, prevalence, mortality, risk factors, co-morbidities, etc.)

- Data on health at the population level (such as perceived health status, population health index, etc.)

- An index, tool or instrument (such as the Brief Child and Family Phone Interview (BCFPI), Level of Service Inventory, Psychopathy Checklist, disability index, personality profile, etc.)

- Other, please specify.

## Part C: Data Sources

Project IN4M is looking for data to populate a human resources forecasting model (future workforce predictor) for mental well-being. Currently there is data available from the *Canadian Institute of Health Information*, *Statistics Canada*, the *Ontario Health Survey* and *Manitoba's* health utilization data that would be useful to this endeavour.

6. Please list any additional data sources that would be relevant to needs-based human resource planning for mental well-being : NOTE: THESE HAVE BOXES BESIDE EACH IN SURVEY MONKEY
    a. Health
    b. Education
    c. Criminal justice
    d. Social services
    e. Private practice
    f. Peer support
    g. Family/friend care giving
    h. Workplace/employee assistance/insurance
    i. Other areas, please specify:

7. In your work, when no data sets are available to support decision-making, have you been able to identify a proxy (substitute facts or figures) for human resources forecasting?

    - Yes
    - No

    If yes, please answer the next two questions:

    a. Was this an effective approach in human resource forecasting?
        - Yes

- No

b. Can you please briefly explain why or why not?

c. What proxy (substitute facts or figures) did you use?

## Part D: Future Priorities

8. The three disorders chosen for Phase 1 of Project IN4M (anxiety, depression and attention deficit hyperactivity disorder) were selected for a number of reasons including the number of people affected, the potential economic impact, an attempt to cover the age spectrum and the potential generalizablity of results. This corresponds to publications by organizations such as Health Canada, the National Institute of Mental Health and the World Health Organization. Over the next five years, which of the following categories should be given priority attention next? Please rank the categories in terms of their importance in establishing "need." Place a "1" next to the category that is most important, a "2" next to the category that is next most important, and so on. Please note that no two categories can have the same ranking.

    - thought disorders (e.g. Schizophrenia, Alzheimer's Disease)
    - learning disabilities (e.g. problems reading, writing, calculating, understanding)
    - developmental disorders (e.g. Fetal Alcohol Syndrome, Pervasive Developmental Disorder that interrupts normal development in childhood and/or youth)
    - substance abuse and problem gambling
    - self harm and suicide
    - other, please specify:

# Résultats de l'enquête en ligne

## Résumé

C'est au printemps de 2010 qu'a commencé la phase I d'un projet proposé en plusieurs étapes, appelé Projet IN4M, dont le but est d'améliorer la capacité de répondre aux besoins en matière de services de santé mentale. Le Projet IN4M consiste à trouver et à analyser des sources de données dans les secteurs de la santé, de l'éducation, des services sociaux et de la justice pénale relevant des domaines public, privé, sans but lucratif et du milieu de travail. L'équipe du projet se concentre sur trois états : la dépression, l'anxiété et le trouble d'hyperactivité avec déficit de l'attention (THADA). La phase I a été menée à bien par l'Association canadienne pour la santé mentale et financée par Santé Canada, avec le soutien de la Commission de la santé mentale du Canada.

Le plan de travail de la phase I comprenait quatre principales composantes : une analyse diagnostique/de situation (c.-à-d. une analyse documentaire et de l'environnement); un inventaire des pratiques existantes de planification des ressources humaines en santé, aussi bien celles qui sont fondées sur les besoins que sur d'autres paramètres (au moyen d'une enquête en ligne); une étude de faisabilité d'un modèle de prévision faisant fond sur une série d'études de cas (comprenant des études de cas et un processus de demande de propositions); et une table ronde de recherche active, ou de recherche-action, visant à créer des champions du changement et à établir une approche pour l'avenir. Ce rapport sur l'enquête en ligne représente la deuxième composante du plan de travail.

Cette enquête auprès de spécialistes était axée sur des questions concernant les modèles existants de planification des ressources humaines fondée sur les besoins et les stratégies visant à remédier au manque actuel de données. Les résultats ont révélé ce qui suit :

- Quatre-vingt-sept pour cent des répondants ne connaissaient aucun modèle de prévision provinciale, national ou international qui pourrait s'appliquer au bien-être mental, autre que les trois modèles mentionnés dans l'enquête.
- Le modèle de planification supplémentaire le plus souvent cité qui devrait être considéré était le *Tolkien II* mis au point par Gavin Andrews à l'University of South Wales.
- Les ensembles de données sur les problèmes de santé mentale (comme l'incidence, la fréquence, la mortalité, les facteurs de risque, les comorbidités, etc.) étaient considérés comme le meilleur moyen de prédire les besoins en matière de santé mentale, bien que cet avis n'ait pas été partagé par tous les secteurs.
- Les répondants ont fourni une assez longue liste de sources de données et de mesures approximatives qu'il y aurait lieu d'examiner pour en déterminer la qualité, l'accessibilité et l'uniformité.
- Très peu d'information supplémentaire a été obtenue pour les secteurs des services sociaux et du soutien entre pairs.
- Les troubles de la pensée (schizophrénie et maladie d'Alzheimer) et la toxicomanie/le jeu compulsif étaient considérés comme les prochains domaines prioritaires sur lesquels il faudrait se pencher pour la planification fondée sur les besoins, une fois que les travaux actuels sur la dépression, l'anxiété et le THADA auront été achevés.

À cette fin, l'équipe du Projet IN4M élabore les phases II et III en vue d'obtenir un financement. Ce futur travail consisterait à mettre en pratique un modèle de planification des ressources humaines fondée sur les besoins qui soit pratique et prédictif, puis à le diffuser partout au Canada et en encourager l'utilisation dans le cadre d'une stratégie globale intégrée en matière de santé mentale.

# Appendix C: Case Study Report

CANADIAN MENTAL HEALTH ASSOCIATION
ASSOCIATION CANADIENNE POUR LA SANTÉ MENTALE

*Project IN4M*

# Integrating Needs for Mental Well-Being into Human Resource Planning

## Case Study Report

**December 23, 2010**

## Preface

Project IN4M was commissioned by Health Canada to undertake an analysis of the common elements of needs-based human resource planning for mental wellbeing. This represents Phase I of a potentially three phased project. It is managed by the Canadian Mental Health Association.

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This paper was prepared by Ms. Kelly Grimes, Dr. John Service, Dr. Glen Roberts and the Project IN4M Project Team on behalf of the Canadian Mental Health Association with financial support from Health Canada.

December, 2010

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# Executive Summary

In the spring of 2010, Project IN4M began Phase I of a proposed multi-phased project. IN4M is a national effort to develop a needs-based human resource framework and model based on current data sources and those that need to be developed in the mental wellness area. IN4M involves identifying and analyzing data sources in the health, education, social services, and criminal justice sectors within the public domain as well as those in the private, workplace and not-for-profit domains. IN4M is focusing on three conditions: Depression, Anxiety and Attention-Deficit Hyperactivity Disorder (ADHD). Phase I was led by the Canadian Mental Health Association and funded by Health Canada, with support from the Mental Health Commission of Canada.

The workplan for Phase I involved four main components: a diagnostic/situational analysis (i.e. a literature review and environmental scan); an inventory of existing needs-based and other HHR planning practices (i.e. on-line survey); a feasibility study of predictive modelling building in and upon a series of case studies (i.e. case studies and request for proposal process); and action research roundtable to create champions of change and a future approach. This case study report represents one deliverable from the third components of the workplan.

In order to provide contextual qualitative information on the design and delivery of needs-based planning models four case studies were conducted: Vancouver Coastal Health Authority, Algoma/Sault Ste. Marie, Tolkien II Australia/New Zealand, and Alberta Health Services. Case studies were selected based on specific criteria aligned with the Rubik's cube referred to in the literature review/ environmental scan[1]. Each case study used multiple methods to identify information on the planning tool employed. Findings included:

- Vancouver Coastal Health Authority (VCHA) exemplifies the power of a uncomplicated, Excel based system to look at the human resource supply through payroll data. Its focus is the health sector across the continuum of care due to the regional health authorities' mandate. Data provided from this 10 year old meso/micro system can also be rolled up to the macro level (i.e. provincial government) although it loses its granularity when aggregated.

- Algoma demonstrates the power of having schools as 'hubs of opportunity' for children and youth mental health services through collaboration and partnership. The model focus at this stage is more on the integration of services rather than human resources planning. Services offered in the district have been catalogued and the team is now seeking evidence on the effectiveness of these services in improving education benchmarks.

[1] The Rubik's Cube uses three dimensions to forecast the need for mental health services: by sector (health, eduation, criminal justice, social services, and the workplace/private sector), by condition (depression, anxiety and ADHS), and by level of service delivery (macro, meso and micro).

- Tolkien II is an international needs-based model that uses a 'bottom-up' approach to the planning of mental health services. Fifteen mental health disorders were modeled (representing 95% of the workload), however the main focus was on the direct costs of ideal treatment for people with mental disorders rather than human resources. The primary data source for this undertaking was a 1997 Australian Bureau of Statistics' National Surveys of Mental Health and Wellbeing that became the first survey about prevalence of mental illness in the country (with a second survey occurring in 2007). Gold standards and best practices based on expert advice, like the United Kingdom's National Institute for Health and Clinical Excellence, allowed the Tolkien II team to decide what services were needed in their stepped approach to the clinical pathway development. Tolkien II showed that a 30 per cent increase in budget could treat 60 per cent more people and produce a 90 per cent increase in health gains.

- Alberta has developed a suite of planning tools to predict the demand for health human resources based on population need for health services, service delivery trends and workload changes which can be applied at the regional and provincial levels. Alberta took a 'data first, modelling second' approach to human resource modelling that front end loaded resources around existing data sets and expert involvement to ensure agreement on, and confidence in, the existing datasets.

Findings from the case studies make it clear that no single existing model is able to accurately predict mental health human resource needs in Canada. Each of these case studies addressed various parts of the Rubik's Cube. Some look at specific disease categories, others integrate services across sectors, whereas exemplars address the various planning levels of the health system.

To this end, IN4M is developing Phase II and III for proposed funding. This future work would involve putting a practical, predictive needs-based human resource planning model into practice and then disseminating and promoting up-take of a model across Canada as part of an overarching, integrated mental health strategy.

# Contents

## Introduction

In order to provide contextual qualitative information on the design and delivery of needs-based planning models, the Project IN4M team conducted four case studies of existing approaches to planning human resources. Case studies for the purpose of this project are a study of a unit, such as an organization, that stresses factors contributing to its success or improvement. These studies are highlighted as an exemplar, cautionary model or instructive/illustrative example. The Health Canada approved IN4M project plan provided for three case studies, but to provide additional insights, an additional case was added.

## Case Study Selection

Case studies were selected based on specific criteria aligned with the Rubik's cube referred to in the literature review and environmental scan. Criteria included:

- sector integration,
- condition generalizablity (Depression, Anxiety, ADHD, or more than one mental health condition),
- application of forecasting (macro, meso, micro, or more than one level with heavier weighting given to models that address more than one level),
- a needs-based planning approach,
- geographical distribution, and
- longevity.

Case studies could not be organizations involved in the request for proposal (RFP) process that also formed part of Project IN4M. Three modelling organizations had been identified through the literature review and online survey and were solicited in the RFP process as organizations that could help Project IN4M develop a predictive modelling tool.

Each case study was selected to illustrate some aspect of the cube whether it is planning at a macro level, for specific mental health disorders, cross sector collaboration, etc. One international case study was included as it was commonly cited in the online survey as a site worthy of investigation (Tolkien II). Overview none of the sites selected could address all aspects of the Rubik's cube.

## Methodology

Each case study used multiple methods to identify information on the planning tool employed. Case studies used a combination of document and literature review, and interviews with key stakeholders in the use of the planning tool. Interview guides provided consistency in questioning however given the significant variation among the case studies in terms of structure and process, different questions were selected from the guide (see Appendix A). The interviews covered five themes: interviewee profile; overview of human resource planning model; data sources and proxies; mental disorder categories; and general issues. During the months of October and November 2010, three IN4M project team members participated in each telephone interview that occurred with the leads of each of the selected organizations. Interview notes (in completed interview guides) are available for each case study upon request.

## Results

Each case study is presented with background information and key findings are highlighted. We would like to thank each of these sites for their time in informing this project especially Brian Jones, Gavin Andrews, Rico Iacoe, and Judy Bloom. Outlined below are the four case studies conducted in October and November 2010.

### Vancouver Coastal Health Authority

Vancouver Coastal Health Authority (VCHA) exemplifies the power of an uncomplicated, Excel based system to look at the human resource supply through payroll data. Its focus is the health sector across the continuum of care due to the regional health authorities' mandate. Data provided from this 10 year old meso/micro system can also be rolled up to the macro level (i.e. provincial government) although it loses its granularity when aggregated. VCHA is a large region currently serving twenty-five percent of British Columbia's population through 22,000 staff, 2,500 physicians and 5,000 volunteers with $2.8 billion in funding.

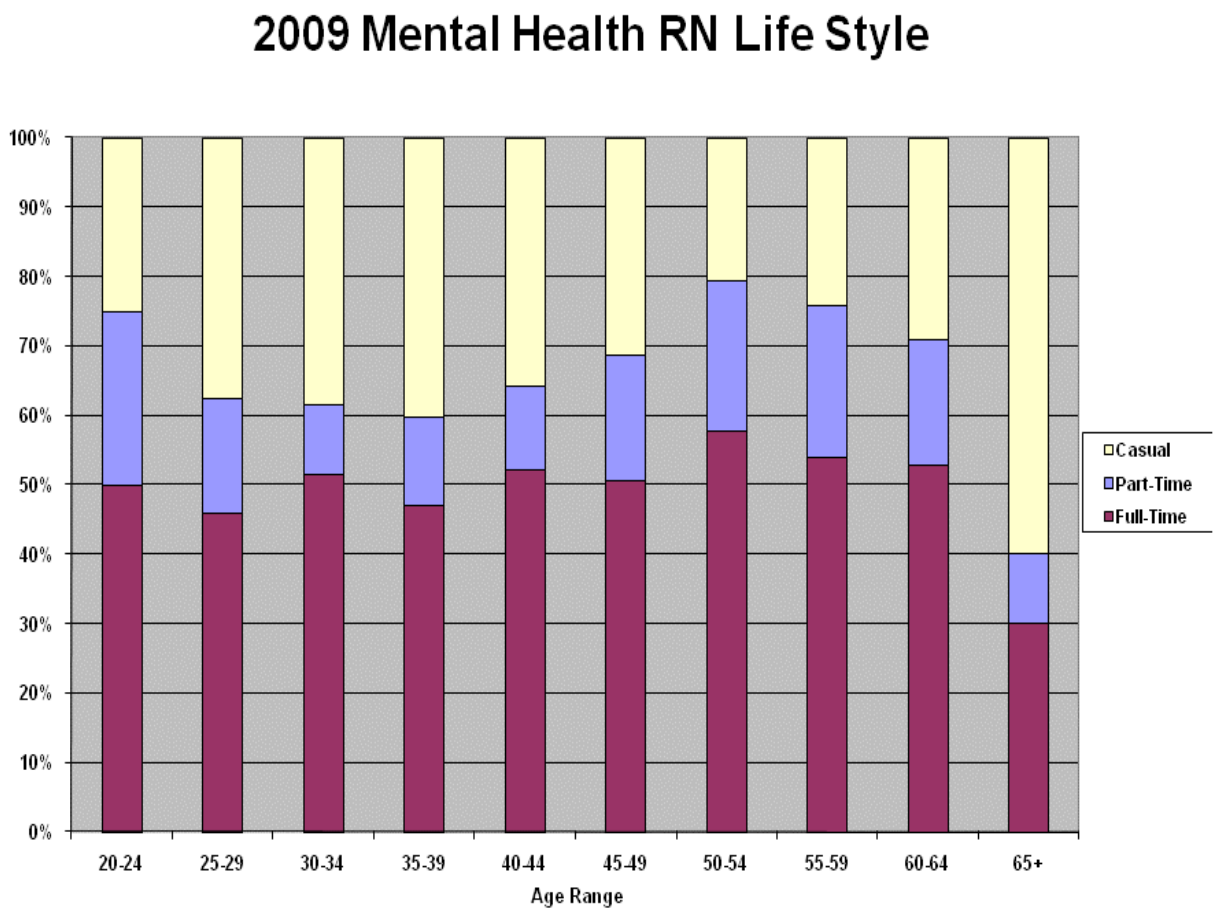
***Vancouver Coastal Health Authority*** *uses payroll data to examine human resource supply at the various levels of the health system.*

Their model consists of three distinct parts: service requirements, recruitment gains, and employee losses.[2] Service requirement is comprised of planned expansion (such as new beds or services) or a reduction in services plus their ability to pay for these expanded services (budget increases). Existing vacancies are considered. Recruitment gains are derived from management direction and policies such as setting hiring targets for new graduates, overseas hires & external hires; converting relief hours to regular hours; reducing lost time (e.g. sick leave and long term disability); encouraging casuals to take full-time and part-time jobs; careers and skills development (e.g. specialty nurse training); appropriate skill mixes such as collaborative practice; continuous workflow improvement such as Lean; and retaining older workers. Employee losses are a function of lifestyle choices and the age of the employee including: retirements; resignations (e.g. career changes, migration); conversion to casual status; and various leaves (long term disability, maternity/parental leave). This model does have applicability for mental health but it is not designed to do this.

Most of the regions in British Columbia now use consistent definitions for the data and variables being tracked by this system. The data allows them to see patterns that are helpful in human resource planning but also in bargaining with unions. For example: 25 per cent of registered nurses (RNs) are casual and yet work 8 per cent of VCHA's productive hours; less than 50 per cent of RNs between the ages of 40 and 50 years work full time (Figure 1); and for RNs delivering mental health services, there is a higher ratio of males to females than is the norm in other areas, these males tend to be full time, and that there are very few young RNs in this group compared to the overall RN group.

[2] Jones, Brian, Leader Strategic Workforce Planning. Vancouver Coastal Health Authority. *Telephone Interview*. October 13, 2010.

**Figure 1: VCHA Sample Data, Mental Health RN Life Style, 2009**




*Source: Vancouver Coastal Health Authority, 2010*

### *Key Finding*

- Inexpensive, Excel/Access based system that collects payroll data. It is a supply based model. The original use of the data was for collective bargaining purposes but now it is used for supply based HR planning (demand increases are factored in each year at between 0 to 2 per cent). This model does have applicability for mental health but it is not designed to do this.

- Very useful for short term planning at the organizational level but it also integrates at the departmental/program and provincial levels. VCHA did note that it loses some of its utility at the provincial 'policy' level.

- Data results in "what if" scenarios for planning that balance the quantitative aspects with the qualitative discussion. Outputs are used to discuss plans for future needs with departmental level leaders. Overall it is a fairly inexpensive system to run (e.g. software, human resources) but it does require leadership to keep it moving forward in development.

- A number of limitations to the model include a lack of integration across sectors and professional groups (especially physicians). This is not due to the model's limitations but rather to how the health system and other human service systems are organized in the province. Physician services for the most part are paid for outside of the RHA budget.
- In future, VCHA would like to move to an "hours worked" instead of a "head count" model (currently tracked via a unique employee identifier) and be more productivity focused.
- VCHA along with its other RHA partners are striving to use common definitions for payroll variables through a working committee which co-ordinates and supports the work.

## Algoma/Sault Ste. Marie

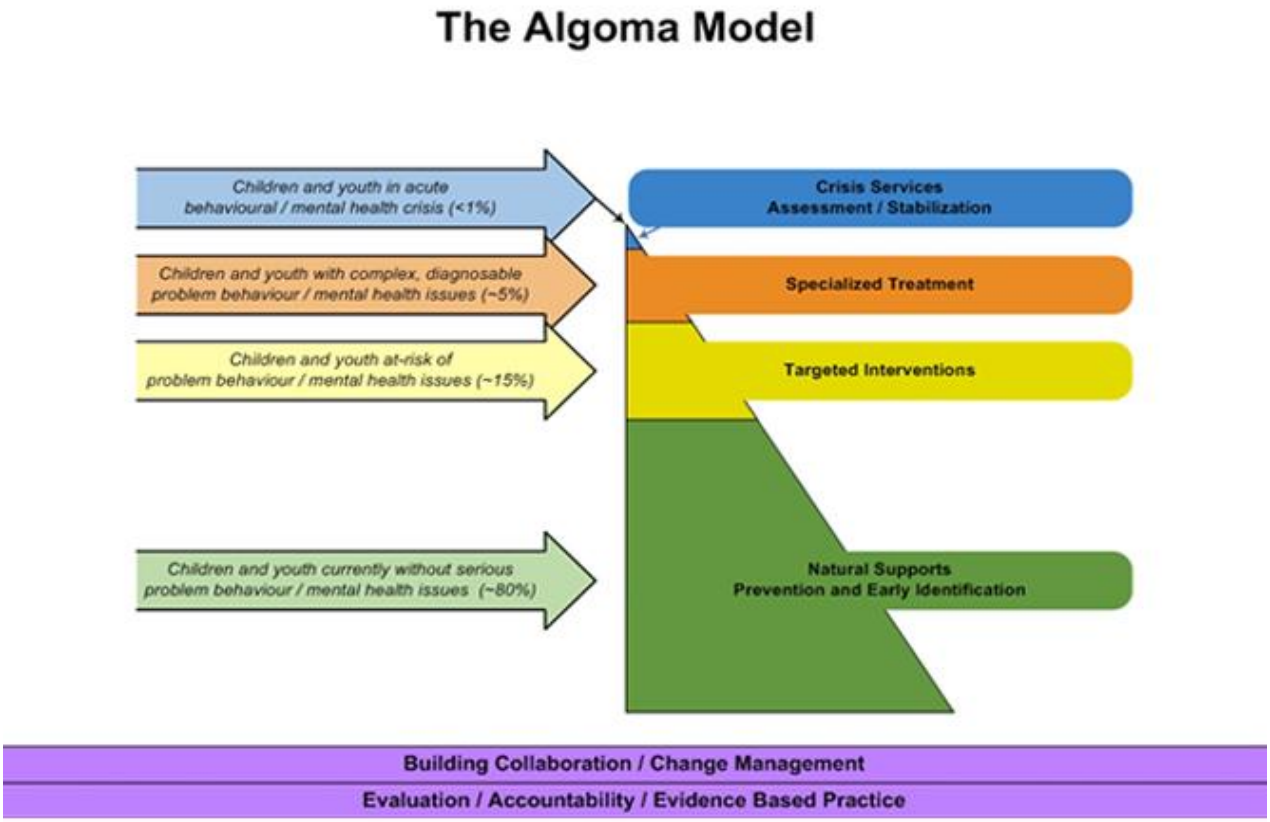
Algoma demonstrates the power of having schools as "hubs of opportunity" for children and youth mental health services through collaboration and partnership. The Algoma model, highlighted in the People for Education's Ontario annual report is a joint initiative to deliver comprehensive, integrated services for children and youth (www.algomamodel.ca). Its school based approach to mental health stems from work done in the United States (defined as any mental health service delivered in a school setting).[3] Algoma received funding from the province of Ontario through the Student Support Leadership Initiative (Cluster 13), to look at more collaborative planning for mental health. To date, there are over 40 community partners committed to the vision of the Algoma Model. The People for Education report had found a rise in mental health services in the last seven years with only 27 per cent of secondary schools and 37 per cent of elementary schools in the province having regularly scheduled access to psychologists.[4] They also found that the majority of time is taken up with assessment rather than treatment services.

> ***The Algoma Model*** *is a school based approach to mental health services with a focus on prevention and some targeted interventions.*

[3] Kutash, K., Duchnowski, A. J. & Lynn, N, (2006). *School-based mental health: An empirical guide for decision-makers.* Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies., Research and Training Center for Children's Mental Health. http://www.intercamhs.org/files/School-based%20Mental%20Health,%20An%20Empirical%20Guide%20for%20Decision-Makers.pdf

[4] People for Education. *Annual Report on Ontario's Publicly Funded Schools: A New Goal for Education with Schools at its Center.* 2010. Available at http://www.peopleforeducation.com/annualreport/ONpublicschools2010.

**Figure 2: Overview of Algoma Model**




*Source: Algoma Region Community Partners, Algoma Model, 2009*

Algoma's logic model outlines the inputs and outputs of their approach and they have now moved into the implementation stage. Children and youth at risk are identified early and evidence-informed, targeted intervention(s) are being delivered to support each at-risk population. For children requiring specialized treatments, mental health treatment and support services are being delivered directly in the schools (e.g. addiction workers), including day treatment. Referrals of children and youth with significant mental health issues are smoothly facilitated to the correct service providers. Student Action Plans connect children and youth who require specialized treatment with school-based supports during treatment and with transition plans and supports including expulsions. Transition plans are put in place to aid children who require crisis intervention for acute mental health services followed by a transition back to the school system. Algoma's website catalogues services available (segmented by prevention, support, treatment and crisis) and it allows the user to click on a type of service required and to identify the services available. Algoma has, and is developing, agreements with partner organizations from

across the community. One of their planning priorities is to engage in discussions with other school boards to change collective visions of mental health needs and services. [5]

### *Key Finding*

- The Algoma model focus at this stage is more on the integration of services rather than human resources planning. Services offered in the district have been catalogued and the team is now seeking evidence on the effectiveness of these services in improving education benchmarks – such as number of graduates and literacy testing results. It links the demand for mental health services with the existing supply with a more integrated service delivery approach.

- Algoma is developing a school-based approach to mental health services with a focus on prevention with some targeted interventions. Some co-location of mental health services has resulted (i.e. drug counsellors in high school). Algoma is very cautious in ensuring that mental health services do not overlap or interfere with the education sectors' primary mandate of instruction.

- This program started through provincial seed funding from Ontario's Student Support Leadership Initiative (for safe schools/bullying). The program has moved forward because of local leadership with a well defined vision and an inclusive community based process.

- Algoma has used some aggregate epidemiological data as a way to portray the issue of youth mental health. Examples include: although one in five children will experience a mental health disorder, only 17% of these children currently receive treatment in Ontario; Canada's youth suicide rate is the third highest in the industrialized world; and mental health disorders and difficulties are closely associated with declining academic performance. They have also relied on some of the provincial studies to educate their audiences on the status of the mental health of youth in the province of Ontario and the District of Algoma.

- The initiative involved cross jurisdictional collaboration between education (two school boards), children and youth services (Algoma Family Services), and some other community-based services such as the Children's Aid Society. Future plans include greater interaction with health services such as the Local Health Integration Network.

- In an ideal future, Algoma would like to have all the planners (health, public health, key mental health providers, school boards, aboriginal leaders, police, and child and youth services) around a common table to plan services for children and youth. In this, schools act as the hubs (e.g. to remove stigma and to attach kids to caring adults in a 'safe' school environment). It would reduce fragmentation. The central issue of funding shortfalls still remain a key barrier.

[5] Asima Vezina Superintendent of Education Algoma District School Board, John Bruno Superintendent of Education, Huron Superior Catholic District School Board and Rico Iacoe Student Support Leadership Lead. *Telephone Interview.* October 14, 2010.

## Tolkien II Australia/New Zealand

Tolkien II is an international needs-based model that uses a 'bottom-up' approach to the planning of mental health services. The path to development is highlighted in a 400 page book funded by the World Health Organization in 2007.[6] Fifteen mental health disorders were modeled (representing 95% of the workload), however the researchers' main focus was on the direct costs of ideal treatment for people with mental disorders rather than human resources.

> *Canada should consider using Australian epidemiological data to estimate need as the two countries are very comparable.*
>
> **Gavin Andrews, Tolkien II**

Tolkien II was derived from a 1991 Tolkien report that modeled mental health services in Australia.[7] Data sources for this undertaking included:

- The 1997 Australian Bureau of Statistics' National Surveys of Mental Health and Wellbeing that became the first survey about prevalence of mental illness in the country.[8] Data was also collected on the number of people who sought treatment, as well as the treatment they received. A second survey occurred in 2007; [9]
- A set of National Health and Medical Research Council funded cost effectiveness studies;
- Data from literature; and
- Advice from 40 or so expert clinicians.

The modelling process involved preparing a research based synopsis for each disorder, calculating the number of people with that disorder seeking treatment, controlling for co-morbidity, and taking a decision regarding an optimal level of service. An expert working group met to describe the steps for optimal treatment that was then converted into clinical pathways. For example for generalized anxiety disorder, four classifications were used: no disability, mild, moderate or severe disability. The resulting stepped clinical pathway included: which provider did what for each level of severity; the resources required; and the direct costs of providing those resources. Core data was placed on their website for review and comment.

The team also identified five priority recommendations for improving mental health services in Australia:

1. solve the present crisis in acute psychosis care;

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[6] Andrews G. And Tolkien II Team. (2007). Tolkien *II: A needs-based, costed stepped-care model for Mental Health Services.* Sydney: World Health Organization Collaborating Centre for Classification in Mental Health.
[7] Ibid.
[8] Ibid.
[9] Ibid.

2. increase coverage and thereby reduce the proportion of people going untreated;
3. educate the mental health workforce to deploy evidence based treatment;
4. educate patients, families and carers about proven self management strategies; and
5. prevent onset through school based programs.

Dr. Andrews has moved forward on many of these recommendations in separate initiatives – with the exception of the second recommendation which is a government responsibility. One of his most important findings, that "a 30 per cent increase in budget could treat 60 per cent more people and produce a 90 per cent increase in health gains"[10], remains one of the central conversation points in health policy in Australia. Some key findings from Tolkien II include:

### *Key Finding*

- Epidemiological data was used to establish need. A very pragmatic approach is employed using the data that is available at the time although no children's data was considered in their 15 diagnostic categories. Australia has a significant database for mental health prevalence and there is a potential to use this data in the Canadian context.
- Gold standards and best practices based on expert advice, like the United Kingdom's National Institute for Health and Clinical Excellence (NICE), allowed the Tolkien II team to decide what services were needed in their stepped approach to the clinical pathway development.
- This work did not incorporate peer support workers and family care givers or other domains/sectors outside of health into their model.
- Tolkien II shows that an expenditure/cost model to mental health services can be very useful in policy decisions. Tolkien II was not intended for planning human resources but rather is a stepped approach to service that uses the least expensive service first to do the job and estimates the direct costs involved in providing that service. In Canada, a general practitioner is most often used first as a gateway into the health system which is a more expensive approach. The stepped program allowed Australia to get into the discussion of "who should be doing what to whom and when." It would be an easy step to then go into human resource planning however this was not done as part of this project.

[10] Andrews, Gavin. University of New South Wales at St Vincent's Hospital *Telephone Interview*. October 20, 2010.

## Alberta Health Services

Alberta has developed a suite of planning tools to predict the demand for health human resources based on population need for health services, service delivery trends and workload changes which can be applied at the regional and provincial levels in Alberta.[11] A joint Alberta Health Services (AHS) and Alberta Health and Wellness model is a population health focused approach aimed at the macro level of policy. Family physicians (along with nurses and medical radiation technologists) were the first provider group examined in a demand simulation model through a systems dynamic approach across the continuum of care. The *Family Physician Demand Model* is composed of eight components:

***Alberta Health Services** has evolved two tools for human resource planning, one within the provincial health authority, and another through a partnership with Alberta Health and Wellness.*

1. historical utilization of family physician services;
2. population characteristic adjuster;
3. population health status adjuster;
4. unmet need adjuster;
5. health services needed per capita;
6. projected total health services needed;
7. service delivery adjuster; and
8. projected human resource requirements.

Pilot testing undertaken in January 2010 shows that the tool is very effective for high level policy planning; more so than as a tool for physician planners at the more local level.

The second tool developed by AHS is aimed more at the meso/micro level of analysis. [12] It looks at 90 per cent of nurses across the continuum of care delivered by AHS (with the exception of primary care). Human resources and payroll data determines where the greatest sensitivity of variables occurs and then levers established influence behaviours to achieve a supply and demand balance (e.g. an internal shift or a new supply from the education sector). The model examines utilization that is occurring over time and integrates it from a workforce perspective. For example, Alberta Health and Wellness made a policy decision to focus on continuing care and aging, with a corresponding change in funding policies to

[11] Mahabir, H and Bloom J. The Alberta Population Needs-Based HHR Demand Model: Family Physician Project. *Powerpoint Presentation to the Pan-Canadian Workshop on HHR Forecasting Models in Canada*. April 27, 2010.
[12] Judy Bloom, Director, Workforce Planning, Alberta Health Services. *Telephone Interview*. November 4, 2010.

support a reduction in the number of long term care living spaces and an increase in supportive care. The objective is to allow people to age at home. This major shift was analyzed across the continuum of care including the impact on the workforce.

### *Key Finding*

- Two models have evolved (one for AHS and another for Alberta Health and Wellness) that, if combined, can look at the meso, macro and micro levels. The needs and capacities for government and health service organizations are different in terms of planning, so each has developed a model that is specific to business planning needs. The integration of the two models requires further exploration.

- The tools are health sector specific, but they do not include the private sector or other publicly funded domains relating to mental health such as schools and correctional facilities. The Alberta Health and Wellness tool is designed for family physicians and regulated nurses working in both hospitals and long term care facilities; at this time, the tools are not specific to mental health care providers in the community setting.

- Alberta took a 'data first, modelling second' approach to human resource modelling that front end loaded resources around existing data sets and expert involvement (health service professionals, researchers, the public, educators of professionals, etc) to ensure agreement on, and confidence in, the existing datasets.

- Viewing the collective occupation 'grouping' is an approach (rather than individual occupations such as a nurse) that can work well when forecasting supply needs in general; such as mental health occupations, where managers often see workers as part of a collective cohort at the tertiary health service level. However, being able to disaggregate them into individual provider categories (such as 'Psychologists') is a more deliberate approach to forecasting that considers the provider competencies required to deliver appropriate care.

## Conclusion

The case studies make it clear that no single existing model is able to accurately predict mental health human resource needs in Canada. Each of these case studies addressed various parts of the Rubik's Cube. Some look at specific disease categories, others integrate services across sectors, whereas exemplars address the various planning levels of the health system. No example covered all aspects of the cube.

It is hoped that through future phases of the project, specifically through the request for proposal process that has formed part of Project IN4M and hopefully Phase II of the project, we will be able to populate most or all aspects of the Rubik's cube in addressing needs-based human resource planning for mental wellness services.

# Appendix A: Interview Guide

## *Integrating Needs for Mental Well-Being into Human Resource Planning*

### *Introduction*

*Thank you for agreeing to this interview. It will take no more than two hours of your time. We are part of a Canadian project team looking at needs-based planning models for mental wellness in Canada. The project (IN4M pronounced "Informed") is overseen by the Canadian Mental Health Association and has been funded by Health Canada and the Mental Health Commission of Canada. The project is designed to look at the human resource needs for mental wellness in three diagnostic categories (anxiety, depression, ADHD). The human resource planning tool for mental well-being must be able to cross jurisdictions (health, education, criminal justice, social and the workplace) and move between the national, provincial/territorial and sub-provincial/territorial levels of forecasting.*

*As part of this endeavour, we are undertaking three exemplar case study approaches to planning human resources for mental wellness services (one at the international level, one provincial and one local). Your work has been chosen. The case studies are an integral part of a report that will go to Health Canada in the early part of 2011. Other deliverables undertaken for this project that will feed into this report as well include: a literature review and environmental scan (completed draft March 2010); and an online survey of experts to further explore the issues around data and human resource planning models (completed September 2010).*

*In late November 2010, IN4M will bring together thought-leaders from a variety of sectors to discuss the data strategies and the potential modelling approaches from all these sources. At the end of its first phase, IN4M will outline options for implementing a needs-based planning framework to optimize mental health services. Future phases of the IN4M project will include implementation and evaluation of an analytical framework and modeling tool.*

### *Section 1: Profile (interviewer to complete prior to interview)*

*Name of interviewer (s):*

*Name of interviewee and title:*

*Date of interview*:

### *Section 2: Overview of Human Resource Planning Model (30 minutes)*

1. *Please provide an overview of your planning model for health human resources including the reasons for its creation, its conceptual framework, the process for development, and how it is currently being applied?*

2. *Which of the following best describe your planning model*

    a. *Needs-based (i.e. that it has a method of determining the "needs" of the population)?*
    b. *Supply-based*
    c. *Demand-based*
    d. *Utilization-based*
    e. *Benchmarking-based*

3. *If needs-based what is the method(s) used to determine need?*

4. *What are the strengths of your model and its potential application in the future (for mental wellness for example)?*

5. *What are its limitations (occupational categories, diagnostic categories, level of granularity, and robustness over time for examples)?*

6. *Does your model or could your model cross sectors (e.g. criminal justice, education, peer support, family/friend care giving, social services, and private)?*

7. *Can your model be applied (or is being applied) at the macro (national/provincial/territorial), meso (sub provincial/territorial) and micro (organization) levels of the system?*

8. *What are the three most important lessons you could share with us about the development of your model?*

9. *If you could recreate your model again, what would you do differently?*

### *Section 3: Data Sources and Proxies (30 minutes)*

10. *What variables or data does your planning model currently collect including an overview of modules or sub modules?*

11. *What data sources do you use for your planning model?*

12. *How complicated is it to update your model, when new data becomes available from these sources? Describe?*

13. *What variables or data do you hope to collect in the future?*

14. *What are some of the limitations in collecting this data?*

15. *What outputs/outcomes/scenarios are you able to produce from the data used and how have they been used in forecasting human resources?*

16. *When no data sets are available to support decision-making, have you been able to identify a proxy (substitute facts or figures) for human resources forecasting?*

17. *If yes, was this an effective approach and what did you use?*

18. *Describe where the model is located, who has access to it and how many copies of the model there is?*

### *Section 4: Mental Disorder Categories (20 minutes)*

19. *Does your planning model have a mental wellness focus i.e. looks at need across disorders such as anxiety and depression?*

20. *If yes, what mental wellness disorders does it consider?*

21. *Are they modeled differently and if so, how are each of the disorders modeled?*

22. *If not, could your planning model be developed to be mental wellness specific?*

23. *What would it take to make it mental wellness specific?*

### *Section 5: General (30 minutes)*

24. *What information technology platform does your model use (i.e. what type of software does your model use)?*

25. *What are its strengths and limitations?*

26. *Would you have a ballpark estimate of the costs (financial, human resources) for development, running and maintenance of the system?*

27. *How many people in your organization are capable of running or maintaining the model?*

28. *Do you have the capacity to train new people in the running or maintenance of the model and if so how?*

29. *What do you believe are some of the **barriers** in developing and implementing a needs-based planning framework to optimize the use of human resource in general and specifically in mental health services?*

30. *What are some of the **facilitators** in even further developing and implementing a needs-based planning framework to optimize the use of human resource in general and specifically in mental health services?*

31. *Are you aware of any other forecasting models provincially, nationally or internationally that would be applicable to mental well-being?*

32. *Do you have any further advice as this project moves forward in its further phases of development and implementation?*

# Rapport sur les études de cas

## Résumé

C'est au printemps de 2010 qu'a commencé la phase I d'un projet proposé en plusieurs étapes, appelé Projet IN4M, dont le but est d'améliorer la capacité de répondre aux besoins en matière de services de santé mentale. Le Projet IN4M consiste à trouver et à analyser des sources de données dans les secteurs de la santé, de l'éducation, des services sociaux et de la justice pénale relevant des domaines public, privé, sans but lucratif et du milieu de travail. L'équipe du projet se concentre sur trois états : la dépression, l'anxiété et le trouble d'hyperactivité avec déficit de l'attention (THADA). La phase I a été menée à bien par l'Association canadienne pour la santé mentale et financée par Santé Canada, avec le soutien de la Commission de la santé mentale du Canada.

Le plan de travail de la phase I comprenait quatre principales composantes : une analyse diagnostique/de situation (c.-à-d. une analyse documentaire et de l'environnement); un inventaire des pratiques existantes de planification des ressources humaines en santé, aussi bien celles qui sont fondées sur les besoins que sur d'autres paramètres (au moyen d'une enquête en ligne); une étude de faisabilité d'un modèle de prévision faisant fond sur une série d'études de cas (comprenant des études de cas et un processus de demande de propositions); et une table ronde de recherche active, ou de recherche-action, visant à créer des champions du changement et à établir une approche pour l'avenir. Le présent rapport sur les études de cas représente un livrable de la troisième composante du plan de travail.

Afin d'obtenir de l'information qualitative contextuelle sur la conception et l'application de modèles de planification fondée sur les besoins, quatre études de cas ont été effectuées sur : la Vancouver Coastal Health Authority, Algoma/Sault Ste. Marie, le modèle Tolkien II de l'Australie/la Nouvelle-Zélande et Alberta Health Services. Les sujets des études de cas ont été choisis en fonction de critères précis alignés sur le *Rubik's Cube* dont il est question dans l'analyse documentaire/de l'environnement[25]. Pour chaque étude de cas, on a eu recours à plusieurs méthodes pour trouver l'information sur l'outil de planification utilisé. Voici quelques-unes des constatations de ces études de cas:

- La Vancouver Coastal Health Authority (VCHA) illustre la puissance d'un système simple basé sur Excel pour examiner les ressources humaines disponibles au moyen des données de la liste de paye. Le système est axé sur la totalité du continuum de soins du secteur de la santé, étant donné le mandat régional de cette autorité sanitaire. On peut aussi cumuler les données obtenues au moyen de ce système méso/micro de dix ans au niveau macroéconomique (c'est-à-dire, au niveau du gouvernement provincial), bien qu'elles perdent leur granularité une fois agrégées.
- Algoma démontre la puissance de l'utilisation des écoles comme points centraux pour les services de santé mentale destinés aux enfants et aux jeunes, grâce à la collaboration et au

[25] Le *Rubik's Cube* utilise trois dimensions pour établir des prévisions des besoins de services de santé mentale : par secteur (santé, éducation, justice pénale, services sociaux et le milieu de travail du secteur privé), par état (dépression, anxiété et THADA) et par niveau de prestation de services (macro, méso et micro).

partenariat. À ce stade, le modèle est davantage axé sur l'intégration des services que sur la planification des ressources humaines. Les services offerts dans le district ont été catalogués et l'équipe cherche maintenant à obtenir des données probantes pour déterminer dans quelle mesure ces services sont efficaces pour améliorer certains points repères en éducation.

- Tolkien II est un modèle international fondé sur les besoins qui utilise une approche ascendante de la planification des services de santé mentale. Quinze troubles de santé mentale ont été modélisés (représentant 95 % de la charge de travail); toutefois, le modèle demeure principalement axé sur les coûts directs du traitement idéal des personnes ayant des troubles mentaux plutôt que sur les ressources humaines. La principale source de données pour ce projet a été la National Survey of Mental Health (Enquête nationale sur la santé mentale) menée en 1997 par l'Australian Bureau of Statistics (Bureau australien de la statistique), qui est devenue la première enquête concernant la fréquence des maladies mentales au pays (la deuxième enquête a eu lieu en 2007). Tolkien II a démontré qu'une hausse de 30 % du budget pouvait traiter 60 % de personnes de plus et produire une hausse de 90 % des gains pour la santé.
- L'Alberta a mis au point un ensemble d'outils de planification pour prédire la demande de ressources humaines en santé en se fondant sur le besoin de services de santé de la population, les tendances de la prestation des services et les changements de la charge de travail. Ces outils peuvent être appliqués aux niveaux régional et provincial. L'Alberta a adopté une approche de la modélisation des ressources humaines fondée sur « les données d'abord, la modélisation ensuite », c'est-à-dire que la province a commencé par investir des ressources considérables dans l'examen des ensembles existants de données et la consultation de spécialistes pour veiller à ce que tous s'entendent sur les ensembles de données existants et aient confiance en eux avant d'entreprendre la modélisation.

Les résultats des études de cas démontrent clairement qu'aucun modèle existant ne peut à lui seul prédire avec exactitude les besoins de ressources humaines en santé mentale au Canada. Chacune de ces études de cas a porté sur diverses parties du *Rubik's Cube*. Certains examinent des catégories de maladies précises, d'autres intègrent les services de tous les secteurs, alors que d'autres encore traitent des différents niveaux de planification du système de santé.

Par conséquent, l'équipe du Projet IN4M procède à la préparation d'une deuxième et d'une troisième phase en vue d'obtenir un financement. Ce futur travail consisterait à mettre en pratique un modèle de planification des ressources humaines fondée sur les besoins qui soit pratique et prédictif, puis à le diffuser partout au Canada et en encourager l'utilisation dans le cadre d'une stratégie globale intégrée en matière de santé mentale.

# Appendix D: Request for Proposal


# *Project IN4M*
# Integrating Needs for Mental Well-Being into Human Resource Planning

## Request for Proposal

**Issue Date: Friday September 24, 2010**
**Closing Date: Friday October 29, 2010**

## Contents

## Introduction

The Canadian Mental Health Association (CMHA) and Project IN4M invites consultants (working either independently or together with others) to submit a response to this Request for Proposals ("RFP") demonstrating their capacity and interest to deliver the following:

> A needs-based human resource planning tool for mental well-being that is robust over time, across jurisdictions (including health, education, criminal justice, social services and the workplace), between the national, provincial/territorial and sub-provincial/territorial levels of forecasting, and in three mental disorders (anxiety, depression and attention deficit/hyperactivity disorder). The model must be replicable to other mental disorders and possibly other parts of the health and health care system in the future.

It should be noted that the RFP is for proposals that will then be taken forward to the CMHA and Health Canada for potential funding.

## Background

The Canadian Mental Health Association is leading a multi-phased project to enhance the capacity to respond to the needs for mental health services. Mental health services are offered in a number of sectors and by governmental, non-governmental and private sources, as well as by consumer groups and family care-givers. Services and the service providers in one sector are not linked to those in another.

The CMHA project – IN4M - is a national effort to map the need to the array of services. It is funded by Health Canada and the Mental Health Commission of Canada. Ultimately, IN4M will provide governments, service providers, and the public with a picture of what is needed (at the macro, meso and micro levels) in terms of human resource capacity for both formal and informal care-giving to address the need, both now and in the future for mental health services.

IN4M involves identifying and analyzing data sources in the health, education, criminal justice, social services, and the workplace (both publicly and privately funded services). IN4M is focusing on three conditions: depression, anxiety and Attention-Deficit Hyperactivity Disorder (ADHD).[1]

Since March 2010, a literature review and environmental scan by IN4M staff determined that, among other things that there is no national database on prevalence of mental health problems and disorders, but that the data required to assess need is beginning to be collected although there are still significant gaps. This full literature review is available on request.

[1] These three conditions were chosen for a number of reasons: their potential economic impact; the number and ages of people affected; and the potential for applying the learning to other conditions.

During August and September 2010, IN4M staff surveyed experts to determine strategies to deal with the current lack of data; these strategies included a discussion of the use of data proxies – facts, figures or criteria. A summary of this survey is also available on request. To supplement this work, IN4M staff is soliciting proposals through this RFP recommending an approach to develop an analytical framework and model to forecast future needs for mental wellness services.

In late November 2010, IN4M will bring together thought-leaders from a variety of sectors to discuss the data strategies and the potential modelling approaches. The conclusions from this invitational meeting will form the backbone of the report to the funding organizations on implementation of the next phases of IN4M.

At the end of its first phase, IN4M will outline options for implementing a needs-based framework to optimize mental health services. Future phases of the IN4M project will include implementation and evaluation of an analytical framework and model.

## Project Scope and Objectives

This RFP solicits an outline of the elements and intricacies of a human resource planning tool that builds from knowledge and data quantifying the current and future needs for mental health and wellness services. The purpose of the tool – or model – is to equip stakeholders to address critical resourcing issues that influence the quality and availability of mental wellness services (and possibly serve as a template outside the arena of mental health services). IN4M staff assumes that the development of the model may require up to $10 million in funding.

Responses will describe the approach, timing and costs of developing such a tool or model. It is expected that the model once development will have the following attributes:

1. Enables the implementation of a world class mental wellness system for Canada and its provinces and territories.
2. Ensures the right numbers of providers, with the right mix of skills are available now and in the future to provide quality services to those Canadians facing mental health challenges.
3. Supports policy makers in governments in implementing health reforms that will improve mental wellness systems and health status in Canada and its provinces and territories.
4. Assists employers to be more effective in their recruitment and retention of well qualified mental health providers.
5. Informs post secondary education about the skills required and employment opportunities in delivering mental wellness services.
6. Identifies opportunities for improved coordination of recruitment and retention activities for mental wellness providers.
7. Identifies priority actions needed to attain an appropriate balance between need for and the supply of providers.
8. Supports effective planning and budgeting for Canada's future mental wellness needs.
9. Makes recommendations for improving data collection capacity.

## Specific Results of Model Implementation

The specific results expected from the forecasting tool include:

1. An estimation of current and future need for mental wellness human resources in Canada for key provider categories using a needs-based approach.
2. The identification of priority recommendations for the forecast of future supply for mental health human resources in Canada including: opportunities for increasing productivity, opportunities for preventing mental disorders, opportunities for developing more efficient facilities/institutions, optimizing provider roles and models of care, and policies and initiatives to more effectively manage competition for human resources.
3. The estimation of current and future supply for mental health human resources in Canada.
4. The identification of priority recommendations for increasing supply.
5. The estimation of current and future need-supply gaps.
6. The identification of priority recommendations for addressing gaps, including: production, recruitment, optimal use of workforce skills, integration across sectors, collaboration/teams, and the use of technology.
7. The identification of priority recommendations for improving data quality and planning capacity.

## No Guarantee of Volume of Work or Exclusivity of Agreement

IN4M staff makes no guarantee of the value or volume of work to be assigned to any consultant. Further, IN4M staff cannot guarantee an exclusive contract for the implementation of the proposed model. IN4M staff will be making recommendations to Health Canada and other funders for further investment in human resource planning/modelling related to the delivery of mental wellness services.

## Process for Submission

Consultants should structure their submissions in accordance with the instructions and expectations outlined in Appendix A of this RFP. It is the consultant's responsibility to avail itself of all the necessary information to prepare a submission in response to this RFP. However the literature review and preliminary results from the online survey will be made available to the consultants when requested.

Three consultants are being invited directly to respond to this RFP. Other consultants are also invited and welcome to respond. A presentation will need to be made to an IN4M Team on November 15, 2010 in Ottawa. The decision on the preferred consultant to be recommended will be made shortly after the IN4M Roundtable meetings on November 22 and 23, 2010.

Responses to this RFP must be submitted electronically to Glen Roberts, Director of Research, Project IN4M: groberts@cp-net.ca by **October 29, 2010, 23:59 EST.** Consultants will receive an

e-mail delivery receipt notification. Late or misdirected submissions will not be considered and will be returned unopened.

## Clarifications

It is the responsibility of the consultants to seek clarification from the IN4M RFP contact on any matter it considers to be unclear. IN4M shall not be responsible for any misunderstanding on the part of the consultants concerning this RFP or its process. Any requests for information (RFI) arising from this RFP must be submitted by the consultant no later than **October 22nd, 17:00 EST.** Requests must be submitted in writing via e-mail to: Glen Roberts: groberts@cp-net.ca. IN4M will endeavour to respond to all questions and will provide a summary of questions and answers to all consultants.

Consultants should note that any response provided by IN4M will be provided to all consultants, unless the consultant when submitting a RFI identifies it as commercially confidential. If IN4M agrees that the nature of the question is commercially confidential, it will return the response only to the originating consultant.

## Submission Requirements

Consultants should structure their submissions in accordance with the expectations outlined in Appendix A of this RFP. Outlined below are the mandatory requirements for consultant proposals with an estimation of the pages required for each. Proposals shall not exceed 15 pages in length.

- *Introduction* (half to one page)
- *Summary of Approach* (8 to 10 pages) - an overview is required of the approach, development process, and deliverables. This should comprise short descriptions of each of the following: the conceptual framework and model including sub-models or components to be simulated and how they inter-relate; the information technology platform; and limitations or constraints in the model and how they will be address. Specificity on the proposed parameters, inputs, outputs, types of data sources and key references is required. Canadian data should be used whenever possible.
- *Project Team Experience* (1 to 2 pages) – brief description of the relevant qualifications and experience of the team and references for three similar projects completed within the last three years.
- *Workplan* (1 to 2 pages) - overall length of time to develop the model and data sources. This should include timing of key deliverables.
- *Budget* (1 to 2 pages) – estimated budget for the entire scope of deliverables plus a general breakdown of costs and consultant daily rates for the various pieces proposed in the workplan.

The model should include a:

1. Supply-based, stock flow approach to mental wellness provider categories including:
    - Physicians (General Practitioners, Psychiatrists, Pediatrician)
    - Psychologists (clinical, industrial, school)
    - Social Workers
    - Nurses (Licensed Practical Nurses, Registered Nurses, Psychiatric Nurses, Nurse Practitioner)
    - Occupation Therapists
    - Councillors and Psychotherapists
    - Peer Support Workers
    - Family Caregivers
    - Support Workers
    - Social Welfare Case Workers
    - Teachers
    - Teachers Assistants
    - Special Educational Assistants
    - Behavioural Technologists
    - Institutional and Community Parole Officers
    - Correctional Officers
    - Employee Assistance Program Workers
    - Workplace Health Coordinators
    - Others in various settings and paid public or privately/non-publicly
2. Needs-based model built on demographics, disease burden (incidence, prevalence and mortality), risk factors, and base-line utilization.
3. Sub-model for productivity which considers the impact from information and communication technologies, funding (financing, compensation, funding models and incentives), system design (legislation, self-regulation, and wait times), and collaborative care.
4. Estimation of current and future need-supply gaps.
5. Back testing of the model, and robust development and use of scenarios.
6. Sector integration (including health, education, criminal justice, social services and the workplace, for both public and private services) and optimization of the best use of resources.
7. Covers the mental disorders of anxiety, depression and ADHD but must be significantly flexible to include other disorders in the future.
8. A methodology that can address issues such as co morbidities, healthy immigrant effects, wait times/access and stigma.

The consultants may propose the use of additional data elements, as well as the use of proxy's and estimates. The consultants are also expected to outline how data for the required elements will be secured. Therefore, the consultants should be familiar with current available data sources.

## Intellectual Property Rights

The terms of ownership will be dependent on the funders of the next phases of the project. At this time however it is assumed that joint ownership for the specific needs-based planning model will result. Any material produced by the consultants in relation to the development of the model in response to the RFP shall vest in and remain the property of the consultant, unless otherwise agreed. Consultants will advise IN4M staff what material, if any, has been produced in response to this RFP.

## Evaluation Criteria

The goal of this RFP is to obtain the best possible consultant (working individually or collectively) to develop a needs-based forecasting model for mental wellness in Canada. The successful consultant will have relevant experience, a track record for delivering results, and a clear understanding of the needs and challenges for the project. Consultants are also advised that the objective in evaluating proposals is to secure the most advantageous arrangement for the next phases of the project and not necessarily the lowest price. These factors to be taken into consideration in assessing proposals, which shall be evaluated based on 100 points, are as follows:

| **Evaluation Criteria** | **Weights** |
|---|---|
| Quality of the proposed needs-based planning approach. | 70 |
| Qualifications, experience, and expertise of the Consultants and the proposed team in forecasting. This includes project and track record with similar assignments | 10 |
| Workplan | 10 |
| Budget | 10 |
| **Total** | **100** |

A contract will be developed for services between the funders(s) and the consultant if phase II of the project funding is forthcoming. Governance, administration and execution of the project will be decided once the contract is awarded.

## Appendix A: Potential Contract for Services

The contract may contain the following expectations and clauses:

### Expectations

Consultants are expected to:

- Be familiar with various approaches to human resources forecasting.
- Propose the approach or combination of approaches to forecasting that they view as optimal for this mental wellness project.
- Propose a conceptual framework underpinning the proposed approach that identifies the components, the inter-relationships among components, and the assumptions associated with the recommended approach, for example, system variables, mental health workforce variables, production capacity variables, etc.
- Identify specific data requirements and data sources. This should include an assessment of current data availability and quality especially for need, the identification of strategies for overcoming any data limitations, and the development of recommendations for improving data quality and planning capacity at the national, provincial/territorial and sub-provincial/territorial levels.
- Propose a forecasting approach with functionality that includes, at a minimum: developing forecasts, simulating the impact of changes in factors and factor weightings, adding new factors, and developing and comparing various scenarios. The model should also be flexible enough to consider policy scenarios now under consideration or that might be considered in the future.
- Model need and supply for physicians, nurses and other mental health provider categories, based on further consultations between the consultants and the funder(s). Further breakdowns are to be across sectors, according to geographic requirements, and language requirements.
- Develop and back test the model (pilot testing of the model would be in further phases of the project).
- Use a variety of modelling techniques and develop a strategy to incorporate expert opinion where quantitative data is inadequate.
- Include an environmental scan of available hardware and software, recommend technical specifications, and recommend hardware and software.
- Develop a detailed report that overviews the needs-based planning approach including data sources and limitations.

Therefore a planning model should:

- Be robust, user friendly and provide a baseline scenario.
- Incorporate, at a minimum, population characteristics and trends related to age, gender, occupation and socio-economic status.
- Incorporate disease incidence and prevalence rates for important population segments for the three mental disorders listed but also be flexible so it can move into other mental health disorders in the future.
- Consider mental wellness needs across sectors.
- Consider, at a minimum, policy scenarios related to the parameters of the model including the impact of productivity from team-based care, increase technology, system redesign and funding models.
- Forecast by year for twenty years, by agreed upon mental health provider categories and subcategories, by number of FTEs, by employer, by sector (including public-private), and by geographic area.

- Provide a user-friendly, point and click information technology platform that can handle the complexity of the model but that has an easy upload, easy refresh, easy introduction of new variables, and no complicated programming. The platform should be web-based with at least one point of entry. It should be designed so that interested users can run various scenarios using web access but are not able to change the data, model or structure.

In 2009, the Mental Health Commission of Canada described some of the issues around data in the mental wellness system:

> "We do not have the data needed to obtain an adequate picture of the mental health status of Canadians. We lack a national information base on the prevalence of mental health problems and illnesses in all their diverse forms, as well as the information system required to monitor the mental health and well-being of Canadians…. This lack of information also limits the extent to which policy-makers and people throughout the mental health system can be held accountable."

Further, modeling and forecasting organizations estimate that 60 per cent of their efforts go to finding and collecting data. Therefore some of the required data elements the consultants are expected to use in a needs-based forecasting model include the following:

- Current number of mental health providers by professional category and sub-category, skill mix, and trends over time.
- Current population and trends (births, deaths, immigration, etc.) over time.
- Population projections by key social and demographic characteristics (age, sex, socio-economic status, etc.) including recommendations on age cohort categories.
- Current, past and projected utilization of mental health services across sectors (where available).
- Epidemiology (incidence and prevalence) of the population, including morbidity and mortality broken down by population segment.
- Risk factors and behaviours where applicable (socio demographics, stress, coping, social supports, genetics, etc.) broken down by population segment.
- Models of mental wellness scenarios and associated impacts on staffing requirements.
- Projections as to how quickly and over what period models of mental wellness service will shift.
- Current, past and projected provider capacity by provider category, including, for example, data on deaths, retirements, quits, immigration, emigration, time off for vacation and holidays, and data on productivity.
- System characteristics, for example, access points, referral patterns, funding, bed ratios, the basket of services, and the use of information technology.
- Projects underway and planned and the associated staffing requirements.
- Current, past and expected future provider turnover and retention rates by reason for separation and provider category and sub-category.
- Current and projected future domestic production capacity by category.

# Appendix E: Roundtable Report

CANADIAN MENTAL HEALTH ASSOCIATION

ASSOCIATION CANADIENNE POUR LA SANTÉ MENTALE

# PROJECT IN4M
# ROUNDTABLE REPORT

December 20, 2010

This Roundtable Report was adapted from the meeting report developed by the Roundtable facilitators, Susan Hollett and Joanne Hussey, of Hollett and Sons, St John's, Newfoundland.

Funding for Phase 1 of Project IN4M was provided by Health Canada.

# Table of Contents

# 1 Introduction

## 1.1 Project IN4M Overview

The Canadian Mental Health Association (CMHA) is leading a multi-phased project to enhance the capacity to better respond to the mental health needs of Canadians. Mental health services in Canada are offered in a number of sectors by government, non-government and private sources, as well as by consumer groups (peer support) and family caregivers across the "continuum of care." Services and service providers in one sector are all too often not formally linked to services within their sector or those in another sector. This fragmentation combined with stigma and discrimination towards people with mental health problems and disorders has resulted in incomplete data on the use of and demand for mental health services and the needs of Canadians.

The CMHA project- IN4M - is a national effort to map needs and the demand for mental health services to the array of available services and to those needing development. Funded by Health Canada and the Mental Health Commission of Canada, its premise is that if the need for services can be mapped, planning for the required human resources to deliver services more comprehensively, efficiently and effectively is improved. IN4M (pronounced *Inform*) involves identifying and analyzing data sources in the health, education, social services, and criminal justice sectors within the public domain as well as those in private, workplace and not-for-profit areas. IN4M includes a review of national and international experience and aims to project future needs for mental health services. The project focuses on three mental health conditions: depression, anxiety and attention-deficit hyperactivity disorder (ADHD). These three conditions were chosen for a number of reasons: their potential economic impact; the number and ages of people affected; and the potential for applying the learning to other conditions.

*This Roundtable will continue the momentum for change and bring us closer to a mental health system that meets the needs of people across the country.*

- Dr. Howard Chodos

## 1.2 Roundtable Fit into IN4M

On November 22/23, 2010, IN4M brought together thought-leaders (see Appendix 1) from a variety of sectors to discuss data strategies and potential modelling approaches. This Roundtable was intended to provide reflective thinking and feedback on the IN4M findings to date from the literature review, online survey, and case studies and what action is required to move IN4M forward into the future.

The conclusions from the roundtable will form an important part of a report to Health Canada and the Mental Health Commission on implementation for the next two phases of IN4M.

### *1.3 Roundtable Objectives*

The Roundtable objectives were:

- To develop the future approach to both IN4M and the mental health human resources issue;
- To validate Project IN4M findings on approaches and data (and gaps), including generalizability of results beyond mental health; and
- To create "champions of change" among the community of health policy makers, health planners and mental health stakeholders.

# 2 Roundtable Process Overview

The Project IN4M Roundtable was held at the Royal Ottawa Mental Health Centre on November 22nd and 23rd, 2010 and facilitated by Susan Hollett of Hollett & Sons (see Appendix 2 for agenda).

On day one, Keith Lowe, representing the Canadian Mental Health Association and Howard Chodos, from the Mental Health Commission of Canada and Chairperson of Project IN4M's Advisory Committee, welcomed everyone and indicated the Roundtable had been much anticipated by many audiences.

Jayne Barker, also from the Mental Health Commission brought greetings and read a letter from Commissioner Michael Kirby where he expressed his desire for a successful roundtable and looked forward to seeing the results of this endeavour. A letter was sent by Project IN4M Lead, Bill Tholl, to Commissioner Kirby summarising some of the key points (see Appendix 3).

Bill Tholl addressed the group and provided context. Bill challenged participants to individually be agents and champions of change and together be the nucleus of a community of change in this area.

John Service, a member of the IN4M team, facilitated the fireside chat. To begin this informal discussion, Ian Manion, Lisa Zigler and Wayne Helgason (see Appendix 4 for bios) each gave an overview of their experiences in mental health and how these intersect with needs-based human resource planning in the mental health field. Roundtable participants then broke into smaller groups to reflect on what they had heard and each table reported back on one unique and important theme at their table.

Day two began with opening remarks and welcome from Cal Crocker, Senior Vice President and Chief Financial Officer of Royal Ottawa Health Care Group.

Susan Hollett presented the findings of the roundtable pre-engagement survey completed by Roundtable participants (see Appendix 5).

This was followed by a presentation on the findings to date of Project IN4M. Glen Roberts and Kelly Grimes, members of the Project IN4M team, described the research framework, and

presented project results to date from the literature review, online survey, case studies and the request for proposal process.

Joan Edwards Karmazyn provided a consumer's perspective on mental health services including the importance of peer support, relationship building, storytelling, and listening to consumers.

The remainder of day two was focused on small group and plenary discussions around data challenges, barriers and enablers, creating champions of change and actions for the future. Key themes from these discussions are presented below.

# 3 Key Themes

## *3.1 The Mental Health Experience*

In a fireside chat format, Dr. Ian Manion a clinical psychologist and Executive Director for the Provincial (Ontario) Centre of Excellence for Child and Youth Mental Health who works with children, youth and families presenting with a variety of social, emotional, and behavioural problems began discussions. A number of key issues and considerations in the area of child and youth mental health were raised and included:

- a lack of recent, useful data;
- the number of sectors involved in child and youth mental health including child welfare and justice, none of which share a common language;
- the wide-spread belief that mental illness does not affect children and youth;
- systemic resistance to change; and
- the need to move from a demand-based system to a rights-based system of mental health services.

***From the Fireside Chat…***

*Systems [that provide mental health services] are historically based and changing some of those service systems is hugely political. The resistance to change is massive.*

- Ian Manion

*The silos exist because people want to maintain them but we can overcome that. I have seen people embrace something new. We need to have a larger vision and move towards it.*

- Lisa Zigler

*Service providers can be agents of change if we do it right. If you believe a family is a write off - you won't be wrong. If you believe a family has the capacity for growth and healing – you won't be wrong.*

- Wayne Helgason

Wayne Helgason, as Chief Executive Officer of the Social Planning Council of Winnipeg and an active member of the Winnipeg Aboriginal community for more than three decades, spoke about First Nations communities often being characterized as having needs that never seem to be addressed. He emphasized that in defining needs, particularly within the aboriginal community, it is important to be sensitive to who owns those needs and who describes them. Mr. Helgason believes that cultural revitalization that is occurring within first nation communities will have a profound effect on defining need.

Lisa Zigler, a social worker with 20 years of experience in a variety of practice settings in Toronto and St. John's is currently the Project Coordinator of the Navigators and Networks (NAVNET) Initiative where she is overseeing a government/community collaboration to improve system response to individuals with complex needs in St. John's. Ms. Zigler spoke about her experience with NAVNET and the creation of a new service model that includes a several agencies and government departments. She emphasized the importance of cost analysis and data collection. The Fireside Chats were followed by a plenary discussion during which some key themes emerged:

- discussions of need must be sensitive to who defines it - whether it is the system, the individual, the family, and/or the community;
- a broad and holistic vision of mental health services and service providers is required
- stigma around mental health is defined differently by cultural groups;
- multiple initiatives led by the most appropriate party for that initiative are required – these could be community, business, government-led, etc.;
- champions at all levels must be in place – leadership must come both from the top as well as from the front line; and
- collaboration and partnerships are critical.

Smaller groups then reflected on what they heard from the fireside chat, with the following key themes resulting:

- the difficulty in defining needs;
- the importance of strategic messages to address cynicism about the role of evidence in decision making;
- a sense of optimism and willingness to work together;
- the importance of involving community in identifying needs;
- the opportunity to use the crisis within the health system generally as a platform to look at health human resources;
- the complexity of the issues;
- the absence of data; and
- the need to transform existing mental health services into a recovery-oriented system.

## *3.2 A Consumer's Perspective*

Joan Edwards Karmazyn is a mental health champion and social justice activist who lives with a mental illness. Since 2007, she has been a member of the Board of Directors of the Mental Health Commission of Canada and is currently the National Executive Director of the National Network for Mental Health.

*Story telling is powerful. Relationship building happens when stories are told – from family member to family member, educator to educator, employee to employer. We have to put value in that. That is where things will change.*

- Joan Edwards Karmazyn

Ms. Edwards Karmazyn provided a consumer's perspective on why work was necessary in developing needs-based mental health resources across the continuum of care. She emphasized the importance of ensuring front line workers, people with mental health problems and disorders, the general public and service managers all have the knowledge necessary to take action on mental health. This can happen through relationship building, and listening to the stories, ideas and experiences of those with mental health problems and disorders and their families.

Ms. Edwards Karmazyn pointed to work currently underway in New Zealand and Australia around peer support. She described a transformed system that:

- is cross-sectoral;
- uses primary services as the most common point of access;
- has other structures aligned with mental health services to promote overall well-being;
- is accountable;
- has funding that is planned and responsive;
- provides effective, coordinated service; and
- includes training in effective advocacy and decision making.

During a plenary question and answer period the following key themes emerged:

- the of value listening to the stories, experiences and ideas of those with mental health problems and disorders and their families;
- peer support is ready to move from an informal to a formal system;
- a community perspective is required at the centre of this work; and
- a lens of the lived experience needs to be constantly applied.

## *3.3 The Data Challenge*

To provide context to the themes, IN4M staff members Glen Roberts and Kelly Grimes presented an overview of the project findings to date as outlined in the Roundtable Summary of Findings Report distributed prior to the meeting (see Appendix 6 for slides). Overall, work is beginning on the development of health human resource needs-based models in Canada but a significant amount of effort must be undertaken still to develop a human resource model that: crosses the private and public sectors; links sectors; can move between the micro, meso and macros levels of forecasting; and can aggregate/disaggregate data into disorder categories. Dr. Roberts provided a schematic diagram that highlighted the complexity of the mental health system. The literature review, online survey and case studies uncovered interesting and relevant work from across Canada and internationally that can be built on for this project. However to date, most planning models focus on the supply side of the equation (specifically physicians and nurses) based on utilization patterns rather than demand based on need.

> *We're intimidated by the complexity of the issue. This is really a data-free zone -which makes it challenging- but it is also absolutely vital to make the transformation to a recovery-oriented system.*
>
> - Roundtable Participant

Findings show that there is no comprehensive national or provincial/territorial database on the prevalence of mental health problems and disorders. The most broad data source in Canada outside of epidemiological data found in the scientific literature on prevalence for depression and anxiety is the Canadian Community Health Survey that has significant limitations. It does not include attention deficit-hyperactivity disorder. Some data to assess need is beginning to be developed and collected although there are still significant gaps especially across sectors outside of health care such as education, social services and criminal justice. To this end, in developing a needs-based planning model for human resources in mental health, it is estimated that 90 per cent of the time will have to be spent on data creation and another 10 per cent on the actual model. This work can be effectively based upon and guided by decades of epidemiological studies that have been shown to be robust over time and across countries. As data is a significant challenge for this project, participants were asked to discuss the implications of the data challenge and possible solutions. Each table then reported on the key points from their discussion.

Participants challenged the premise that needs-based planning is appropriate to address human resources issues in mental health in Canada. They suggested that it is currently not possible to match needs to services because of the lack of data that exists. This lack of data contributes to the reality of the community being 'left in the shadows', and government planning based on instinct and opportunity rather than evidence. Participants suggested it was important to remove the walls that exist between consumers and professionals, and between communities of practice, and to emphasize the importance of collaboration.

Specific data challenges identified were:

- a lack of reliable, current data on available mental health services within and across sectors and mental health needs in Canada;
- inconsistency across data sources;
- a lack of longitudinal data;
- the absence of evaluation data that speaks to the effectiveness of mental health services currently available; and
- existing data that is largely limited to hospital utilization rates and physician visits.

Solutions to address these data challenges were:

- looking to the scientific literature and other countries for available, applicable data such as Australia;
- developing and implementing a national survey of mental health service needs in Canada;

- building the technological infrastructure required for future data collection and use;
- expanding knowledge around the type of mental health services required and what competencies are required to deliver those services;
- mandating quality reporting across mental health services;
- developing agreements to allow researchers to access data;
- establishing a national health human resource observatory that includes mental health;
- undertaking a collaborative approach to data collection and use; and
- taking a broad epidemiological approach based on scientific research similar to Tolkien II's work in Australia.

## *3.4 Barriers and Enablers to Needs-Based Human Resource Planning*

The IN4M literature review and online survey also identified several barriers and enablers to needs-based human resource planning for mental health in Canada. In small groups, participants were asked to discuss the barriers and enablers encountered in their experiences and to suggest strategies to capitalize on the enablers and move beyond the barriers. Each group then reported on the key points from their discussion.

Participants all spoke about the need for dialogue across silos and broadening the constituency of those involved with addressing these issues. Suggestions included formalizing existing partnerships, getting the general public more involved, and engaging the private sector. It was noted that the data itself will not bring about change but the people whose stories are represented by the data will.

Specific barriers identified were:

- privacy issues related to data collection and use;
- the high cost of collecting and accessing data;
- a decline in the inclination within government to develop and use research;
- the stigma around mental health which compounds barriers to conducting research;
- the fragmentation of mental health services and the impact this has on consistency across data and the ability to access data;
- a lack of capacity within community organizations providing mental health services to contribute to data collection;
- a current emphasis on process rather than outcome data;
- a lack of sufficient funding across mental health services; and
- a lack of leadership to help move issues around mental health forward.

Enablers identified were:

- organizations such as the Mental Health Commission of Canada and the Canadian Institute for Health Information; and
- the ability to capitalize on current interest in a collaborative approach to addressing issues around mental health.

Participants suggested these barriers and enablers could be addressed by:

- developing partnerships between researchers and government to develop and implement research activities;
- building the infrastructure (including technology) for a common repository of data;
- identifying ways to use existing data sources to fill data gaps;
- developing standardized data definitions;
- engaging the public in dialogue on privacy, consent and data use; and
- providing funding for data collection.

> *Right now we can't match needs to services because of a lack of data. We need to take a broad-based epidemiological approach; not just look at volumes and skill sets but how they're deployed.*
>
> - Roundtable Participant

## *3.5 Champions of Change*

In plenary, participants discussed how the Roundtable could be leveraged to create a Community of Change, what challenges would be faced and what supports would be needed.

Key themes that emerged were:

- engage all stakeholder groups including families, communities, advocates, policy makers, research agencies and front line service providers;
- establish a culture of change that values innovation;
- create a concise, clear and compelling message to leverage broad-based support; and
- develop a plan to create systematic change.

Participants all agreed that the message and the process for moving the project forward must be broadly accessible to a range of constituents including service providers, advocates, researchers, and policy makers. It was suggested that walls that exist between consumers, professionals, cultures, and traditional and alternative ways of doing things need to be addressed. Time must be spent on relationship-building to understand the constraints and motivators of all groups involved. At the level of the workplace, participants suggested innovation needs to be more highly valued and that there needs to be an attitude where change is seen as good in order to stop letting fear prevent positive change.

It was suggested that a briefing note include the following:

- there is work currently underway as part of the national mental health strategy;
- based on current trends in mental health service need will be increasing;
- there is a requirement to better understand the mental health workforce and develop a planning model for the future; and
- that this process must be iterative so workforce issues are addressed along with the service issues.

### *3.6 Key Messages*

The final plenary session focused on building consensus around key messages and how to move forward collaboratively. Bill Tholl thanked the group for providing such a strong challenge for the project. He presented five core messages arising from the Roundtable discussions that could be presented to Commissioner Kirby that evening. These five messages were:

1) Roundtable participants were supportive of Project IN4M moving from Phase 1 (feasibility) to Phase 2 (proof of concept);

2) there is a window of opportunity for Project IN4M as a number of provincial/territorial governments have expressed interest in moving forward, in a tangible way, on mental health issues;

3) in order to leverage support, Project IN4M requires a document which outlines a clear, compelling, concise business case positioning the project as part of an overarching strategy to address mental health issues in Canada;

4) a plan is required to develop a repository for all data that currently exists, to make the best use of that data by systems planners, researchers and practitioners, and to begin the collection of data to fill existing data gaps; and

5) Roundtable participants are willing to act as 'Champions of Change' to mobilize a broad-based coalition to support future action.

Throughout the Roundtable, participants identified a number of actions and principles to guide these actions. The table below organizes the actions and principles under the five key messages identified above.

| **Roundtable participants were supportive of Project IN4M moving from Phase 1 (feasibility) to Phase 2 (proof of concept).** |
|---|
| Feedback from Participants in plenary session. |
| **There is a window of opportunity for Project IN4M as a number of provincial/territorial governments have expressed interest in moving on mental health issues.** |
| Feedback from representatives of various jurisdictions at the Roundtable. |

**Project IN4M requires a document which outlines a clear, compelling, concise business case positioning the project as part of an overarching strategy to address mental health issues in Canada.**

*From Group Discussion:*

**We need to create the message:**

- clearly define 'needs-based planning' and how it relates to services, demand, and human resource planning;
- explain that identifying need does not create a crisis (i.e. more services would be required), rather it illustrates it;
- there are costs associated with both action and inaction towards needs-based HR modeling in mental health in Canada; and
- shine the light on why this should be done to improve mental health services in Canada.

**A plan is required to develop a repository for all data that currently exists, to make the best use of that data and to begin the collection of data to fill existing data gaps.**

*From Group Discussion:*

**We need better data, so we must:**

- develop agreement on data elements;
- develop consistency and standards across data sets;
- need a new survey of needs now;
- longitudinal study;
- develop data sets based on known empirical epidemiological evidence that includes both governments, the private sector, workplace, and the community/informal sector; and
- use the technology we have.

**Defining what services are required and who needs to deliver them (continuum of competencies) is critical. So we must:**

- take a broad-based epidemiological approach (Tolkien II);
- look at applicability of data available from other countries and the use of proxies; and
- balance the development of a model with development of data sets.

**Roundtable participants are willing to act as 'Champions of Change' to mobilize a broad based coalition to support future action.**

**Feedback from Participants in plenary session:**

- create a community of change;

- identify a champion/ombudsperson to oversee the initiative;
- stay consumer focused;
- break down the wall between consumers and professionals;
- recruit people into leadership roles at the front line level;
- develop formalized partnerships, build coalitions, engage all sectors (public, private, not-for-profit) and remove divisions among sectors (including looking at legislation and jurisdictional issues); and
- promote informed decision-making within government.

# 4 Building the Future

Future phases of the IN4M project will include implementation and evaluation of an analytical framework, data sources, and a modeling tool. This all depends on stakeholders championing the need for change and funding for this initiative to create and plan for mental wellness services.

At the end of the Roundtable it was determined a briefing note should be created to make the case for this project. It should include:

- a definition of 'needs-based' planning;
- an explanation of expected contributions and outcomes;
- a description of how needs-based human resource planning fits within the broader landscape of mental health in Canada; and
- a description of what we know and don't know about the existing mental health workforce.

Roundtable participants were asked to volunteer to act as reviewers for the briefing note. It was suggested the document be shared with:

- The Canadian Mental Health Association;
- Research funders including the Canadian Health Services Research Foundation and Canadian Institutes for Health Research;
- The Mental Health Commission of Canada;
- The Canadian Alliance on Mental Illness and Mental Health;
- The National Network for Mental Health;
- The National Aboriginal Health Organization; and
- The Health Action Lobby.

Roundtable participants suggested that they receive a copy of this briefing note to share with their networks along with the Project IN4M Phase 1 Report that will be available in January 2011.

# 5 Appendices

## *Appendix 1: Participants*

Ian Arnold
Mental Health Commission of Canada
Ottawa, Ontario

Jayne Barker
Mental Health Commission of Canada
Victoria, British Columbia

Chantal Bouchard
Health Canada
Ottawa, Ontario

Mike Carter
University of Toronto
Toronto, Ontario

Tara Chauhan
Canadian Medical Association
Ottawa, Ontario

Krista Connell
Nova Scotia Health Research Foundation
Halifax, Nova Scotia

Kelly Connor
Health Canada
Ottawa, Ontario

Cal Crocker
Royal Ottawa Health Care Group
Ottawa, Ontario

Carolyn Dewa
University of Toronto and Centre for Addiction and Mental Health
Toronto, Ontario

Bruce Ferguson
Hospital for Sick Children
Toronto, Ontario

Marie-Anik Gagne
Health Canada
Ottawa, Ontario

Anil Gupta
Health Canada
Ottawa, Ontario

Wayne Helgason
Social Planning Council of Winnipeg
Winnipeg, Manitoba

Brian Jones
Vancouver Coastal Health
Vancouver, British Columbia

Donna MacIntyre
Community Mental Health-West Prince
Charlottetown, Prince Edward Island

Ian Manion
The Provincial Centre of Excellence for Child and Youth Mental Health
Ottawa, Ontario

Linda Mattern
Alberta Health and Wellness
Edmonton, Alberta

Ann Morgan
Working for Health
Pickering, Ontario

Patricia A. Murray
Nova Scotia Department of Health
Halifax, Nova Scotia

Johanne Plante
Statistics Canada
Montreal, Quebec

Mike Schwartz
Great-West Life Assurance Company
Winnipeg, Manitoba

Mark Smith
University of Manitoba
Winnipeg, Manitoba

Nérée St-Amand
University of Ottawa
Ottawa, Ontario

Lisa Zigler
Eastern Health
St. John's, Newfoundland

Ivan Zinger
Office of the Correctional Investigator
Ottawa, Ontario

***Regrets:***

Ivy Bourgeault
University of Ottawa
Ottawa, Ontario

Myles Ellis
Canadian Teachers' Federation
Ottawa, Ontario

Charlotte Fraser
Department of Justice, Government of Canada
Ottawa, Ontario

Bentley Hicks
Health Canada
Ottawa, Ontario

Lisa Little
Consultant
Ottawa, Ontario

Lorne Zon
Canadian Mental Health Association
Toronto, Ontario

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## Project IN4M Advisory Committee

Howard Chodos (Project IN4M Chair)
Mental Health Commission of Canada
Ottawa, Ontario

Keith Lowe (Project IN4M Vice-Chair)
Manitoba Education
Winnipeg, Manitoba

Karen Cohen
Canadian Psychology Association
Ottawa, Ontario

Pamela Fralick
Canadian Healthcare Association
Ottawa, Ontario

Paule Giguère
Health Canada
Ottawa, Ontario

John Higenbottam
Canadian Alliance on Mental Illness and Mental Health
Vancouver, British Columbia

Judy Hills
Psychology Foundation of Canada
Toronto, Ontario

Kahá:wi Jacobs
Canadian Institute for Health
Ottawa, Ontario

Joan Edwards Karmazyn
National Network for Mental Health
St. Catharines, Ontario

***Regrets:***

Carol Brulé
Canadian Institute for Health
Ottawa, Ontario

Rodney Ghali
Health Canada
Ottawa, Ontario

Irene Klatt
Canadian Life and Health Insurance Assoc.
Toronto, Ontario

Glenn Monteith
Government of Alberta
Edmonton, Alberta

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## Project IN4M Staff

Lynda Becker
Project Coordinator

Kelly Grimes
Senior Researcher

Eddy Nason
Evaluation Consultant

Glen Roberts
Research Lead

John Service
Process Lead

Bill Tholl
Project Lead

***Regrets:***

Janet Davies
Communications Lead

## *Appendix 2: Agenda*

**Monday, November 22**

5:30pm – 8:30pm **Working Supper: Getting to Know One Another**

- **Welcome and Introductions: Dr. Howard Chodos (Chair); Dr. Jayne Barker (VP, MHCC).**
- **Project IN4M in context: Bill Tholl (Project Lead)**
- **Fireside Chat: Susan Hollett (Facilitator) and Dr. John Service**

  Looking at experiences across the country (*followed by small group discussion and feedback*). Fireside Chat Participants:

  - Ian Manion (Children's Hospital of Eastern Ontario)
  - Wayne Helgason (Social Planning Council of Winnipeg)
  - Lisa Zigler (Navigating Networks, NL)

- **The Leadership Challenge that is Mental Health: Leading Self and Engaging Others** (Susan Hollett)

**Tuesday, November 23**

**8:00am** **Opening Remarks and Welcome** (Cal Crocker, Senior Vice President and Chief Financial Officer, Royal Ottawa Health Care Group) **Networking Breakfast**

**Plan of the Day: Susan Hollett (Facilitator)**

**8:15** **Needs-based HR Planning:** A Synopsis of Project In4M Research Results (Dr. Glen Roberts and Kelly Grimes) *Followed by Q & A.*

8:40am **Why Do We Need to Work in This Area? A Consumer's Perspective** (Joan Edwards Karmazyn, Executive Director, National Network for Mental Health and Project IN4M Advisory Committee Member) *Followed by Q & A.*

9:00am **What are the shared/individual leadership challenges around mutual trust and the principle of 'reciprocity'?** Please share at tables the results of your "homework" in terms of the nature and extent of the leadership challenge that is mental health.

W**hat Strategies Can Address the Data Challenges?** The *Summary of Findings* from the IN4M project identify gaps in data as a challenge. Have data gaps had an impact on you, on your work, on your organization? *Small group discussion and feedback.*

10:15am Nutrition/Networking Break

| | |
|---|---|
| 10:30am | **What are the barriers and enablers?** The literature review and the survey done by Project IN4M identify several policy barriers and enablers to needs-based planning. What policy barriers have been most significant in your work? What approaches have you used to move beyond them? What enablers have you and your organization been able to capitalize on? *Small group discussion and feedback.* |
| 12:00pm | Lunch (provided on site) |
| 12:45pm | **What are challenges to creating 'Champions of Change'?** *Small group discussion and feedback about championing actions on needs-based planning in mental health.* |
| 2:00pm | Stretch Break |
| 2:15pm | **What are the next steps to moving the agenda forward in terms of creating a better future for HR planning and mental health?** *Full group discussion to develop an Action Plan to move us forward.* |
| 3:15pm | **Key messages for MHCC (Bill Tholl, Project Lead)** |
| | **Evaluation of Roundtable/Closing comments (Susan Hollett)** |
| 3:30pm | **Next Steps and Adjourn (Dr. Howard Chodos, Chair).** |

## *Appendix 3: Letter from Commissioner Kirby*

[*The following letter was read to the Roundtable participants by Commission Member Jayne Barker, as Commissioner Kirby was unable to attend.]*

Welcome to the Action Research Roundtable of Project IN4M.

In 2006 the Senate Committee on Social Affairs, Science and Technology published a ground-breaking report on the challenges confronting Canadians coping with mental health problems and illnesses. The report described the stark reality of gaps in services and supports and concluded that the status quo is not an option. It recognized the importance of supporting and augmenting the efforts of care providers – not only professionals but also families and peers. That report provided the foundation for the creation of the Mental Health Commission of Canada. The goal of the Commission, an organization which I am proud to lead, is to promote the mental health and well-being of all Canadians and bring into being a comprehensive and integrated mental health system that places people living with mental illness at its centre. Achieving this goal will require actions on many fronts, including the design and implementation of human resource planning across the mental health sector.

I salute the work of Project In4M in bringing together individuals from governments, mental health service providers, employers, the scientific and research communities, as well as Canadians living with mental illness. Your deliberations are important to the next stage of development of the Canadian Mental Health Strategy. Over the next 24 hours you will have an opportunity to bring your various perspectives to bear on how to address the 'care gap'; to identify evidence and models that will allow planners and policy makers to predict the numbers of professionals and other care providers needed to identify, treat and manage mental illnesses as well as to reduce the incidence of mental health problems. One of the key challenges is to quantify the needs for mental health services.

I regret I cannot be in Ottawa with you over the next 24 hours; however, it is important to me to hear about your conclusions. Therefore, I have asked Bill Tholl, the leader of Project IN4M, to contact me tomorrow evening with a report on the meeting. I hope to hear from Bill that the Roundtable participants, collectively, were able to identify and prioritize actions that will enhance the capacity to implement human resource planning in an integrated mental health system in Canada.

Best wishes for productive deliberations.

## *Appendix 4: Bios of Fireside Chat Presenters*

**Wayne Helgason**

Wayne Helgason is the Chief Executive Officer of the Social Planning Council of Winnipeg. He currently serves as the Chairperson of the Center for Aboriginal Human Resource Development (CAHRD) and an Executive member of the Board of the Aboriginal Center of Winnipeg. On a National level Wayne is currently the Chairperson of the Board of the Canadian Council on Social Development (CCSD).

Mr. Helgason has been an active member of the Winnipeg Aboriginal community for more than three decades. He is a winner of the Queen's Jubilee Award, and the Millennium Social Justice Research Award. In addition to lecturing on such varied topics as children at risk, poverty, employment and training, Aboriginal self-government, human rights and social security reform, Mr. Helgason has been a contract lecturer at the University of Toronto - Faculty of Preventative Medicine, Banff School of Management and the Canadian Centre for Management Development in Ottawa. He has also served on the advisory committee to the Masters of Nation Building program at Harvard University where he studied following his undergraduate Bachelors degree from Carleton University.

Mr. Helgason is a band member of Sandy Bay First Nation, Manitoba and he and his family live in Winnipeg, Manitoba.

**Ian Manion**

Dr. Manion is a clinical psychologist and scientist-practitioner who has worked with children, youth and families presenting with a variety of social, emotional, and behavioural problems. He is a clinical professor in the School of Psychology at the University of Ottawa, and a Visiting Professor at the University of Northumbria (UK).

He is the Executive Director for the Provincial (Ontario) Centre of Excellence for Child and Youth Mental Health at the Children's Hospital of Eastern Ontario (CHEO). He is the Inaugural Chair of the National Infant, Child and Youth Mental Health Consortium, Co-Chair of the Canadian Child and Youth Health Coalition (CCYHC), and the Principal Lead for the National School-Based Mental Health and Substance Use Consortium.

He is actively involved in research in the areas of parent/child interactions, community mental health promotion, youth depression and youth suicide. He is a committed advocate for child and youth mental health sitting on a number of local, provincial, national and international boards and committees. Dr. Manion is co-founder of Youth Net/ Réseau Ado, a bilingual community-based mental health promotion program with satellites across Canada and in Europe. This program strives to understand the mental health issues facing youth, and to better address these issues with sensitivity to gender, age, culture, and geography.

**Lisa Zigler**

Lisa Zigler is a social worker with 20 years of experience in a variety of practice settings in Toronto and St. John's.

Lisa is an Instructor at Memorial University and has taught in the School of Social Work, the Department of Women's Studies, and the Law and Society program. She is the Chairperson of the Allied Health Social Work Council and sits on the Discipline Committee of the Newfoundland and Labrador Association of Social Workers.

Since moving to St. John's eight years ago, Lisa has been the Executive Director of the St. John's Status of Women Council and she is currently employed as a Manager in the Mental Health and Addictions Program of Eastern Health.

Lisa is currently the Project Coordinator of the Navigators and Networks (NAVNET) Initiative where she is overseeing a government/community collaboration that is working on improving our systems response to individuals with complex needs in St. John's.

**Joan Edwards Karmazyn**

As a psychiatric survivor/thriver, family member, professional and active volunteer in the mental health field for 31 years, Joan Edwards Karmazyn states "Please do not tell me there is no evidence of recovery for I am the evidence!" Joan is a mental health champion, social justice activist, leader and equally important, a Canadian citizen who lives with a mental illness. In August 2007, Prime Minister Stephen Harper appointed Joan and sixteen other colleagues to the Mental Health Commission of Canada Board of Directors.

Along with her current role as the National Executive Director with the National Network for Mental Health (NNMH) since March 2010, Joan works and volunteers her time extensively in the community hoping to make a difference for those who live with mental illness.

## *Appendix 5: Report from Pre-session Engagement Survey*

**Introduction**

The purpose of this report is to provide input to the upcoming Roundtable on how to Integrate Needs for Mental Well-Being into Human Resource Planning (November 22 and 23, 2010). This report is not intended for use outside of this context.

The Roundtable is one part of Project IN4M that also includes a snowball cross-sector survey, a literature review and several case studies. The objectives of the Roundtable are to:

- Develop the future approach to both Project IN4M and needs-based mental health human resource planning in Canada
- Validate Project IN4M's findings on approaches, data and information gaps
- Promote community building and champions of change to participants as well as the broader community

This report is a synthesis of 32 questionnaire responses (out of a possible 48 respondents, a response rate of 67%) competed by roundtable participants, Project Advisory Committee members and Project Team members.

Preparing this report involved:

- interpreting quantitative responses
- entering qualitative responses into a word processing program
- removing references to individuals and organizations while retaining central points
- interpreting and grouping qualitative responses into similar categories based on how respondents presented their ideas

Wherever possible, **respondents' original words and phrases** are used to represent what a number of responses indicated. When "e.g.," appears after a statement, the points that follow are examples expanding the main point and represent the range of responses provided in the area. Unless noted otherwise, themes are presented starting with those with the most support from respondents; sub-points are arranged in alphabetical order.

In some cases, conflicting statements may appear; these represent differences of opinion among respondents. In other cases, respondents may represent as factual items that may not be entirely correct. In these cases, respondents' understandings are included as they were initially recorded.

The organization of the report follows the flow of the survey questions.

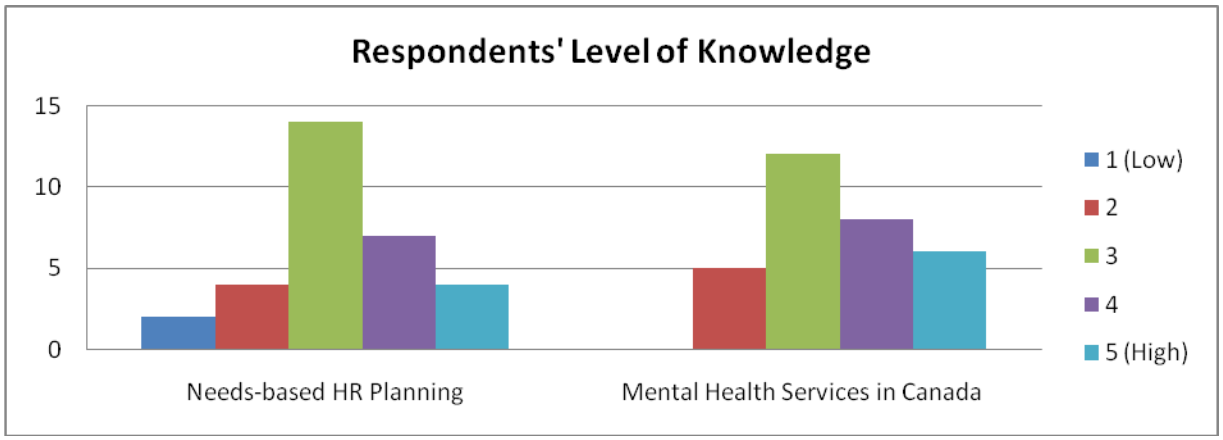
**Survey Responses**

***How would you rate your current level of knowledge about the following topics?***

Respondents were asked to rate their current level of knowledge on a scale of 1-5; 1 being Low and 5 being High. 31 individuals responded to this question.

| Answer Options | 1 (Low) | 2 | 3 | 4 | 5 (High) | Response Count |
|---|---|---|---|---|---|---|
| Needs-Based Human Resource Planning | 2 | 4 | 14 | 7 | 4 | 31 |
| Mental Health Services in Canada | 0 | 5 | 12 | 8 | 6 | 31 |

Many respondents rated their level of knowledge in the mid-range of the scale.

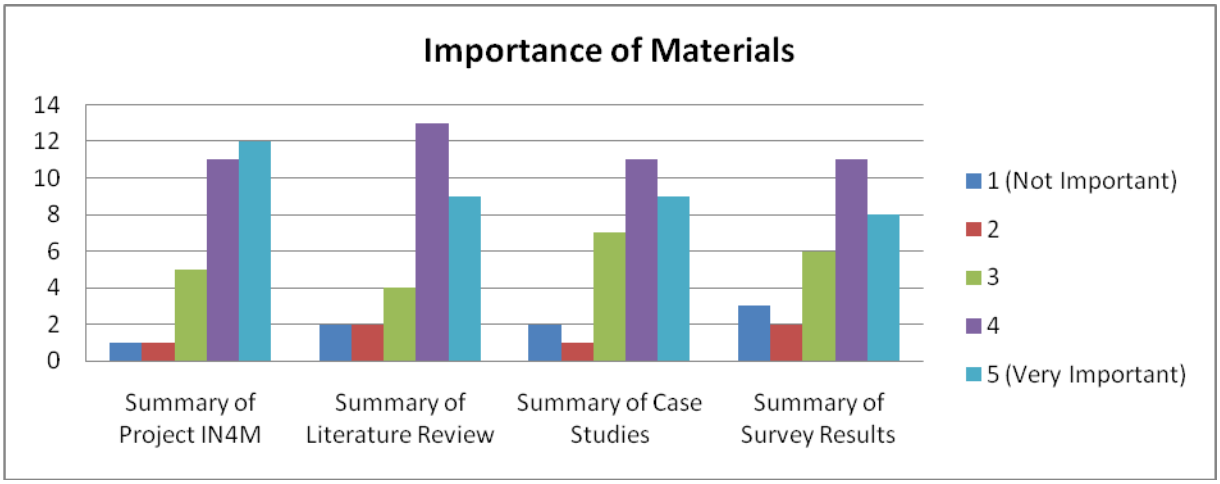



***How important is it for you to receive the following information in advance of the Roundtable?***

Respondents were asked to rate the importance of pre-materials on a scale of 1-5; 1 being Not Important and 5 being Very Important. 30 individuals responded to this question.

| Answer Options | 1 (Not Important) | 2 | 3 | 4 | 5 (Very Important) |
|---|---|---|---|---|---|
| Summary of Project IN4M | 1 | 1 | 5 | 11 | 12 |
| Summary of the literature review | 2 | 2 | 4 | 13 | 9 |
| Summary of case studies | 2 | 1 | 7 | 11 | 9 |
| Summary of snowball survey results | 3 | 2 | 6 | 11 | 8 |

All materials were considered important or very important by the majority of respondents.



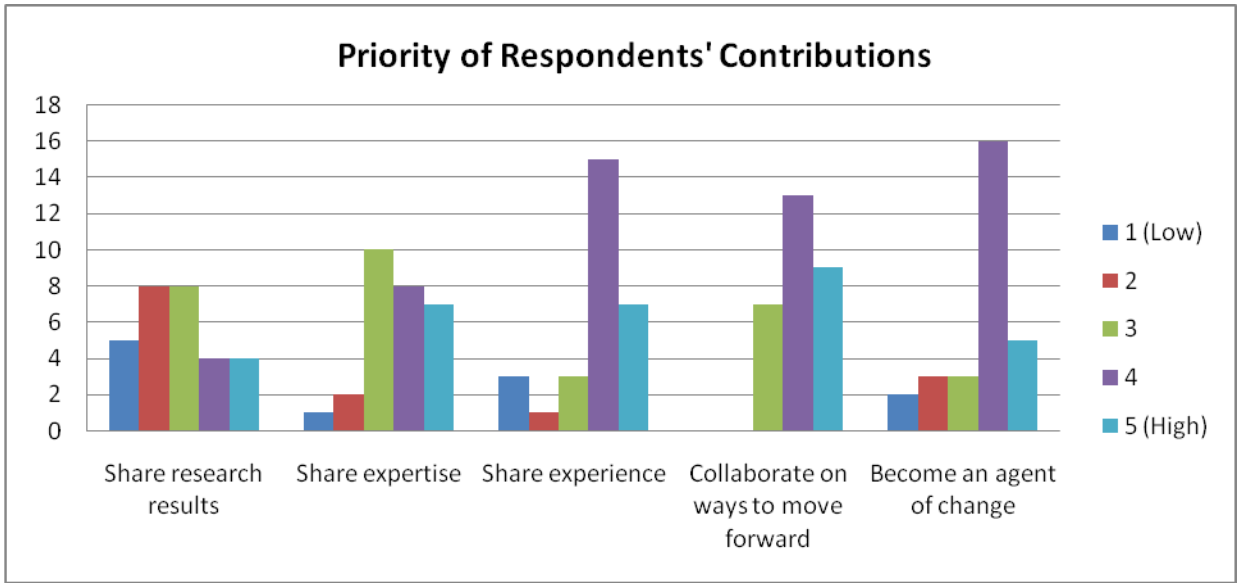

Other comments included requests for more detailed information on Project IN4M and information on the format of the Roundtable itself.

***What do you hope to contribute to this Roundtable?***

Respondents were asked to rank the importance of various options rank in order of importance; 1 being Low and 5 being High. 30 individuals responded to this question.

| Answer Options | 1 (Low) | 2 | 3 | 4 | 5 (High) |
|---|---|---|---|---|---|
| Share research results in the field | 5 | 8 | 8 | 4 | 4 |
| Share my expertise in the field | 1 | 2 | 10 | 8 | 7 |
| Share my experience in the field | 3 | 1 | 3 | 15 | 7 |
| Collaborate on ways to move forward | 0 | 0 | 7 | 13 | 9 |
| Become an agent of change on this topic | 2 | 3 | 3 | 16 | 5 |

Sharing experience and expertise, collaborating on ways to move forward and becoming agents of change were the most important contributions for the majority of respondents.




Other comments included encouraging people to think outside their own sectors and exploring alternatives to existing systems.

***If the Roundtable agenda focused on the resolution of only ONE issue that is holding up progress on needs-based human resource planning in mental health in Canada, what issue should it be?***

Respondents were asked to identify one issue that is a barrier to progress on needs-based human resource planning in mental health. 27 individuals responded to this question. The three themes identified were the need to raise awareness of issues and develop a common understanding, the need for greater collaboration, and the need for accurate and appropriate data.

*Need to raise awareness of issues and develop a common understanding (n=7) e.g.:*

- A common understanding of needs-based HR planning
- Clarify what kind of solution and approach we support as feasible and achievable and what critical actions are involved in moving this forward
- Greater recognition of mental health issues in HHR policy and planning
- Understanding of the workforce supporting Mental Health in Canada.
- Understanding the effects of exclusion

*Need for greater collaboration (n=5) e.g.:*

- Ideas for collaborations that can be used across sectors and in different settings
- Integration of mental health HHR needs with HHR needs generally
- Need for the development of a national framework for collaborative mental health human resources planning
- Need to address professional silos
- Recommendations for Phase 2 of the project including the policy aspects of achieving interprovincial-territorial and federal-provincial/territorial commitment to moving forward

*Need for accurate and appropriate data (n=4) e.g.:*

- Quantifying the need for mental health services and by whom
- The lack of accurate, recent, population level data on the prevalence and extent of mental health need across the age span
- Understanding what information resources exist and what gaps still exist

*Other e.g.:*

- Lack of funding and staff resources
- Lack of advocacy and creativity
- Moving toward establishing integrated and comprehensive models of both access to mental health care and mental health care delivery
- Supply of well paid workers who are available to provide home care and other services to individuals in ways that will promote independence and empowerment
- Workforce planning for a transformed system

***When the Roundtable is finished, how will you know we have been successful?***

Respondents were asked for their definition of success for the Roundtable. 27 individuals responded to this question.

Most respondents defined success as having developed an action plan or actionable recommendations to guide next steps.

*Having developed an action plan to guide next steps (n=17) e.g.:*

- An action plan is established with stakeholder input and buy-in for moving forward
- Concrete plans for "next steps" with people taking the responsibility to carry out the plans
- Consensus on bringing together the empirical (analysis and planning) aspects of the project with the policy aspects, in clear direction for phase 2
- Focused recommendations with a clear action plan and the commitment (leadership, moral, financial, in-kind, political) to carry this through with proper evaluation of impact
- Participants leave with contact information, resources and a plan to address issues

*Greater awareness and a common understanding of the research and issues (n=6) e.g.:*

- Have credible statistics on which to base a decision
- I leave armed with more information and understanding than when I arrived
- If folks learn from one another and have an opportunity to network and if I learn more about the subject area.
- If we have agreed on the basic definitions and identification of some data sources or a plan to collect relevant data

*Other e.g.:*

- If a model or metric is developed that takes account of what mental health needs are rather than of what our traditional systems make available
- Make sure we talk about Mental Health and not Mental Illness

***What advice do you have for the facilitator to ensure this workshop is successful and has substantive outcomes?***

Respondents were asked to provide advice to the Roundtable Facilitator. 25 individuals responded to this question.

Suggestions included:

- Allow the group to lead, and be interactive
- Be flexible to the needs of the group
- Be focused, on schedule and on task
- Be well-informed - ready and able to assist in moving the dialogue forward
- Decide if this is to be a building block approach moving forward or if it is to be a vision session and moving backwards to develop the pathway
- Don't focus only on barriers; move to solutions and have these operationalized
- Encourage open dialogue
- Ensure active participation from everyone
- Ensure statistics and costs are agreed upon by everyone
- Get people to commit ideas in writing
- Have a solid understanding of the group's desired outcome(s) for the Roundtable
- Have regular "check-ins" during the workshop and debrief at end of event to ensure information is accurately captured.
- If you plan any group work, charge each with a different task and structure how their feedback is to be delivered
- It is critical to have all participants leave with clear accountabilities
- Keep the group focused and don't try to do too much
- Objective and supportive facilitation
- Prepare attendees as well as possible in advance
- Put the person needing help at the centre of the discussion
- Recognize both the 'easy' and the challenging aspects of the project. Deal strategically and positively with the challenges (both data and policy) and include them in the overall work plan.
- Set out objectives and evaluate whether they were met during the session
- Stay away from jargon
- Take a balanced approach and be open to any/all suggestions
- Take a pragmatic approach to painting a vision and ownership for moving forward

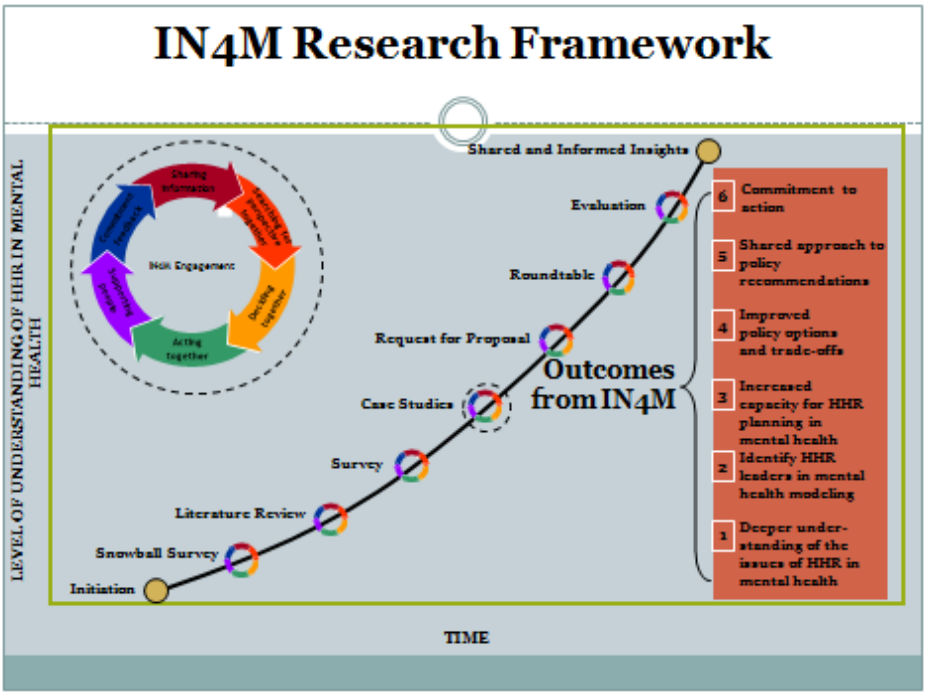
***Please provide any additional comments that you may have regarding the Roundtable***

Additional comments (n=12) included:

- I am concerned about what happens to Francophones and other minority groups in this whole exercise. Are they present? What is different, in Quebec and outside of Quebec for Francophone and other minorities?
- I am hoping to learn a lot from my colleagues
- I am looking forward to participating and learning about the issues, challenges and lessons learned
- I think this will be a great opportunity and I am very interested to hear if others are having experiences similar to mine and how others are planning for the future.

- Particularly interested in what quantitative modeling other jurisdictions are doing; and their willingness to share.
- This is a great opportunity for both mental health human resource planning and as a model. This roundtable will be a critical stage in the success of the project.
- Well planned materials beforehand can help make the Roundtable successful!

## *Appendix 6: Presentation - An Overview of Project IN4M*


## Needs-Based Planning Defined

- Looks at the need for services based on estimated health status of the population (using incidence, prevalence, self-reported health, mortality, etc.) and then factors in utilization of services data.
- Unmet need is considered in this planning approach as total need for services as compared with total supply of services.

## Literature Review/Environmental Scan

- Draft July 2010
- Data, data, data
- Health versus other sectors
- Supply and utilization focus
- Applicable needs-based models in Canada

## Online Survey

- Eight questions Summer 2010
- 150 responses
- Mostly health, little from social and peer support
- Most cited: Tolkien II
- Burden of disease approach
- List of data sources
- Next conditions: thought disorders and substance abuse/gambling

## Case Studies

- Fall 2010
- Vancouver Coastal Health Authority (payroll data at various levels of the health system)
- Algoma/Sault Ste. Marie (school based approach to mental health services)
- Tolkien II Australia (bottoms up approach based on epidemiological data)
- Alberta Health Services (two models that look at various levels of planning)

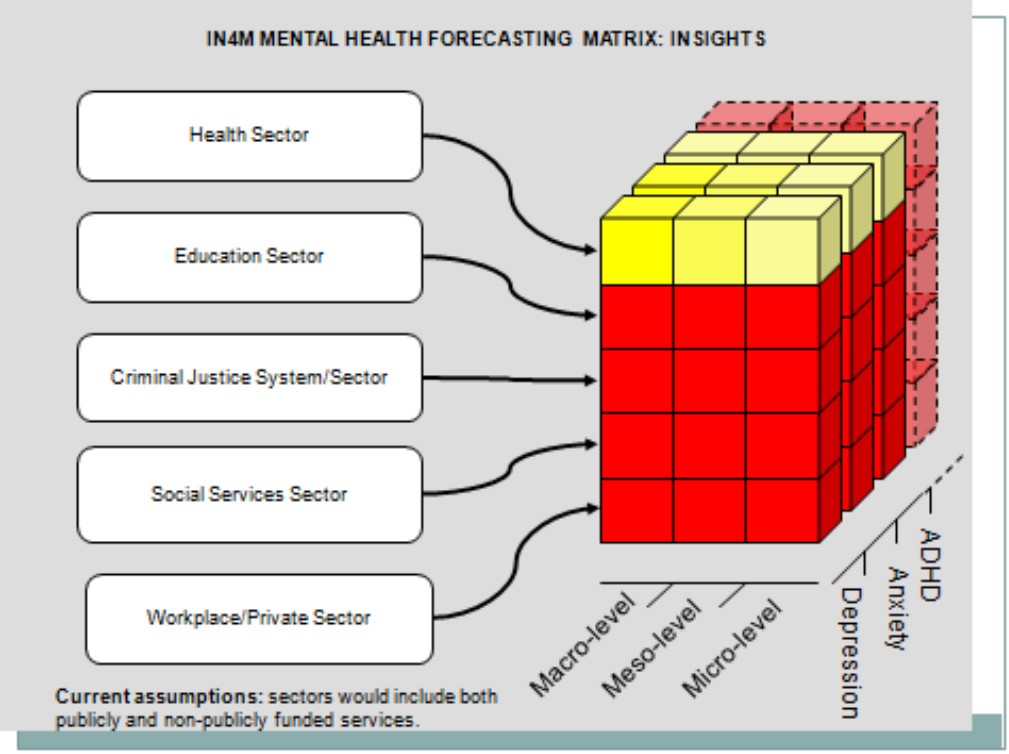
## Request for Proposals

"A needs-based planning tool for mental well-being that is robust over time, across jurisdictions (including health, education, justice, social services and the workplace), between the national, P/T and sub-P/T levels of forecasting, and in three mental disorders."

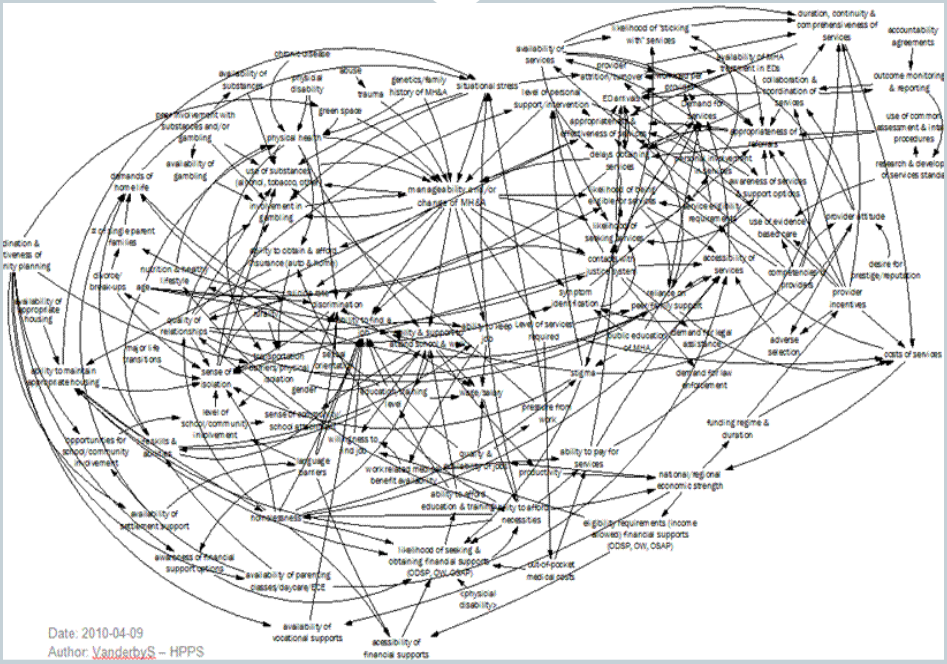
- 3 proposals
- Presentations Nov 15
- Evaluation criteria
- Follow up questions
- Delphi model

## Conclusions

- Don't stand on what you are trying to lift
- Inconsistent definitions
- Insufficient/low quality data
- Joined up approach/collaboration
- 2014 Accord and leadership
- Efficiency and cost effectiveness
- A model is a tool (if all you have is a hammer everything looks like a nail)



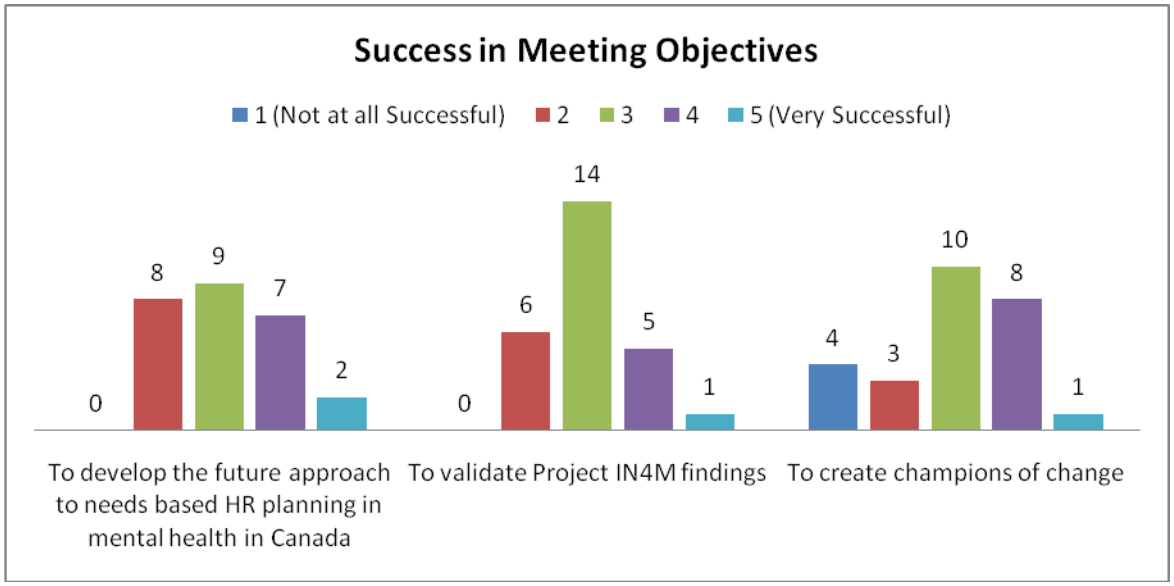
# System Complexity



## *Appendix 7: Summary of Roundtable Evaluation*

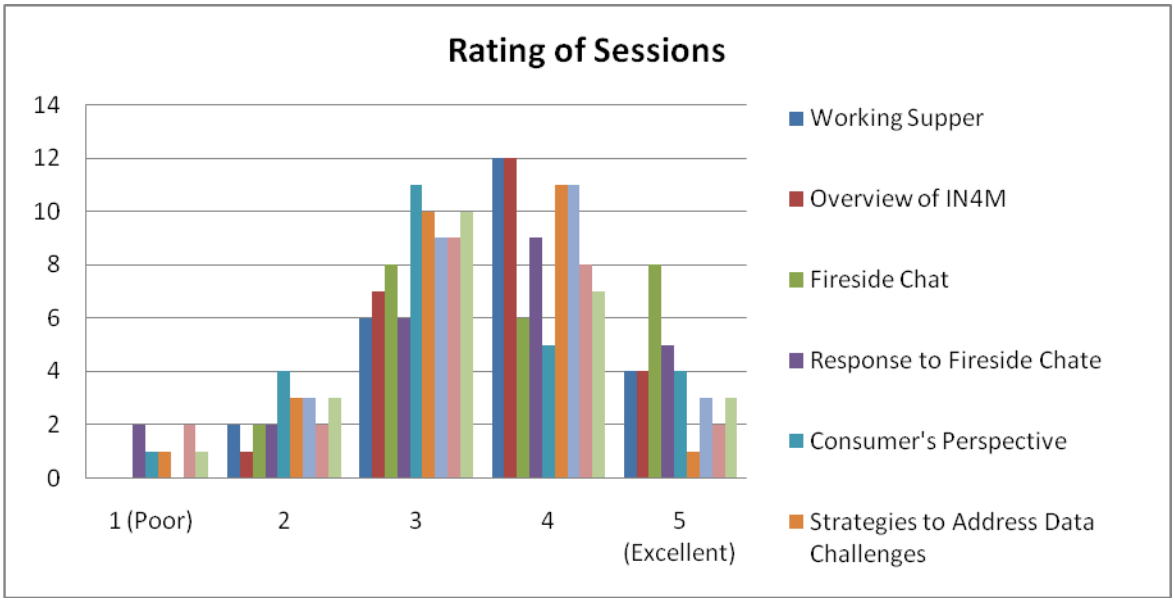
At the end of the Roundtable, participants were asked to complete an evaluation questionnaire. A total of 27 completed questionnaires were received. Overall, the rankings given to the various aspects of the Roundtable fell in the mid-range of the scales provided.

When asked to rate the success of the Roundtable in meeting the objectives the majority of participants rated the level of success in the mid-range for all objectives.




Creating champions of changes was the only objective some participants thought the Roundtable was not at all successful at meeting (n=4).

The majority of participants rated the Roundtable sessions in the mid-range of the scale with the vast majority of ratings in the 3 and 4 categories. The Fireside Chat had the highest number of excellent ratings (n=8).




Participants were asked to agree or disagree if they clearly understood the purpose of the Roundtable. Many participants rated their understanding in the middle of the scale.

The majority of participants agreed the timing of advance materials was sufficient.

The majority of participants also agreed the facilitator was effective, there were ample opportunities to participate and the length of time was sufficient.

Most participants agreed the location was comfortable and accessible, adequate breaks were provided and the presentations were clear.

Participants were asked to identify three things they had learned through participation in the Roundtable. 15 participants responded to this question. Key themes were a greater understanding of the complexity of the issues, a greater awareness of the diversity of stakeholder groups, and the importance of partnership and collaboration.

***Greater understanding of the complexity of issues in the field including data gaps (n=13) e.g.:***

- Greater awareness of the barriers to success
- The complexity of the issues – it is hard to separate the focus from other issues in mental health
- The struggle to define what is being asked re: the need
- We need better data and more usable data

***Greater awareness of the diversity of stakeholder groups and the work that is happening in the field (n=10) e.g.:***

- Barriers to multi-cultural, multi-language issues
- Diversity of interested parties
- I have a better understanding of who is currently doing what in this area
- Lots of commitment across sectors to get involved

- Lots of good work and committed Champions of Change people at the Roundtable
- Mental Health Commission and Project IN4M are doing a lot of important work

***The importance of partnerships and collaboration (n=6) e.g.:***

- Collaboration is possible!
- The need to communicate to the networks and front line workers
- The opportunity to network is endless

***Other e.g.:***

- Commitment to move ahead
- Importance of HR Planning in service development
- Peer Support is a priority
- The difference between need and demand
- The level of engagement is high

16 participants indicated they would be interested in participating in other mental health related projects in the future.

# Appendix F: Communication Plan*

### *Communications Goal:*

Facilitate common understanding of the data requirements of needs-based planning and methodologies for mental health sector.

### *Primary Audiences:*

Mental health stakeholders; governments (ministries of criminal justice, education, health, and social services); data management agencies; research agencies; professional associations and regulatory colleges.

### *Assumptions:*

Advisory Committee members will provide a two-way communication bridge to their constituencies.

### *Communications Tactics:*

- Share learnings and research results with Advisory Committee members to support their 'championing' the project within their various networks;
- Develop articles for inclusion in trade journals, web-sites, and periodicals (including magazines and newsletters distributed to health and social service professionals, and mangers/administrators) as well as for web-sites of mental health NGOs;
- Disseminate to funders and Advisory Committee members reports and updates on the project;
- Post on CMHA web-site the reports of the IN4M Project.

### *Communications Messages*

- Improving access to mental health services means quantifying the need for those services and understanding the impact(s) of those services.
- Decision-tools like human resource planning frameworks are vital to the effectiveness of a mental health strategy.
- The knowledge and expertise of various sectors, professions and informal providers are necessary to supporting mental wellness.

* A detailed communications strategy has been provided to the CMHA under separate cover.

## Appendix G: Budget

| Budget | Contribution from Health Canada (Federal Fiscal Year = April 1 to March 31) | | Total Budget |
|---|---|---|---|
| | 2009/2010 | 2010/2011 | |
| **Revenues** | | | |
| Health Canada (anticipated) | $10,000 | $240,020 | $250,020 |
| Income from other sources or in-kind, (if applicable) | 0 | $64,550 | $64,550 |
| **Total Revenues** | **$10,000** | **$304,570** | **$314,570** |
| **Expenditures** | | | |
| Personnel salaries and benefits | $10,000 | $114,245 | $124,245 |
| Goods and services of contractual personnel | 0 | $60,802 | $60,802 |
| Travel and accommodations | 0 | $38,104 | $38,104 |
| Goods and services for meetings/ conferences/workshops/ seminars/training and consultations | 0 | $12,767 | $12,767 |
| Audit and evaluation | 0 | $3,500 | $3,500 |
| Communication and dissemination | 0 | $10,602 | $10,602 |
| Other (Please specify) * | | | |
| **Total Expenditures** | **$ 10,000** | **$240,020** | **$250,020** |

# Appendix H: Evaluation Report

CANADIAN MENTAL HEALTH ASSOCIATION
ASSOCIATION CANADIENNE POUR LA SANTÉ MENTALE

MENTAL HEALTH COMMISSION OF CANADA
COMMISSION DE LA SANTÉ MENTALE DU CANADA

# PROJECT IN4M
# EVALUATION REPORT

March 31, 2011

## Table of Contents

# Summary

Project IN4M has completed Phase I of its work, delivering multiple streams of activities – document/literature review; survey of key stakeholders; case studies of mental health and other needs based planning tools; and a roundtable to bring together key stakeholders in mental health human resources. As a Health Canada funded project, under the Health Canada Policy Contribution Program (HCPCP), IN4M is subject to evaluation against its own stated goals and those HCPCP objectives identified as relevant in the IN4M funding proposal.

IN4M has been evaluated using the logic model framework shown below. These processes and outcomes have then been linked to the original stated objectives of the project (including those of HCPCP). These are tabulated below the logic model.


| Inputs to process | Activities | Outputs of project | Expected outcomes (longer term) |
|---|---|---|---|
| HCPCP funding<br><br>MHCC and CMHA support in kind<br><br>IN4M Team expertise | Literature review of MH and HHR models<br><br>Survey of stakeholders to identify models for case studies<br><br>Case studies of HHR/ MH models in action<br><br>Roundtable of stakeholders<br><br>RFP process to develop one model for Canada | Detailed review of existing modeling approaches and data sources – verified by numerous stakeholders<br><br>4 case studies of Canadian and international approaches to needs-based planning for MHHR modeling<br><br>Roundtable report and briefing note for needs-based planning in MHHR<br><br>Combined proposal on developing needs based planning model (bringing together the 3 groups with experience in Canada | Shared understanding of the need for needs-based planning for MHHR<br><br>Modeling tool for need- based planning for MHHR – generalizable to other HHR issues<br><br>Champions of change across MH stakeholders<br><br>Political support across Canada for investing in MHHR needs-based planning |

The processes that formed part of project IN4M were completed within the budget lines allocated for them, and on time. Specifically, the case studies of needs-based planning approaches to HHR increased in number from three to four, and covered international approaches as well as those in Canada.

The outputs from IN4M all related to the originally stated outputs for the project. Outputs also aimed to bring together key stakeholders in the mental health HR planning process in order to facilitate outcomes from the project.

Outcomes from IN4M are in general expected ones, although some are already in evidence. The roundtable evaluation suggests that there is a shared understanding being developed around the need for needs based planning for mental health HR, and has identified some "champions of change" across stakeholder groups for mental health HR. There is also political support for investing in needs-based planning beginning to develop, with Senator Michael Kirby voicing his support for the work of IN4M after the roundtable. There is development under way for a modeling tool for mental health HR planning as a result of the IN4M RFP process.

**Table 1. Table of achievement against stated objectives for Project IN4M**

| **IN4M stated objective** | **Delivered upon?** | **Details** | **Evidence** |
|---|---|---|---|
| To evaluate common elements of needs-based models for human resources planning. | Yes | Conducted literature review, survey and case studies designed to identify and evaluate the importance of elements of needs-based planning models. | Findings from literature review, survey and case studies in IN4M report. |
| To disseminate to planners and policy-makers, knowledge on needs-based planning and data related to the needs and services available. | Yes (and ongoing) | Roundtable with planners and policy-makers has already developed a shared understanding of the data for needs-based planning.<br>Materials for disseminating more widely are being developed. | Evaluation report from Roundtable (see Appendix A).<br>Communications plan for IN4M and existing drafts of briefing notes for policy-makers and planners. |
| **HCPCP stated objective** | **Delivered upon?** | **Details** | **Evidence** |
| Foster the development and implementation of health care system policies and strategies to address identified health care system priorities (access to mental health services, needs based service development, needs based health human resources). | Yes | Developed an evidence base to address mental health service access, needs based service development and HHR issues.<br>Brought together leading Canadian experts in HHR planning to build needs-based model for mental health HR planning. | IN4M final report with literature review of evidence for needs-based planning in mental health HR.<br>Development of consortium of leading Canadian HHR planning organizations through RFP process. |
| Contribute to improvements in the accessibility, responsiveness, quality, sustainability and accountability of the health care system. | Ongoing | This is a long-term outcome for the project and will arise if/when recommendations on the way to plan for a needs-based mental health HR strategy is implemented. | Buy in from policy-makers and planners in the roundtables (attendance and roundtable evaluation feedback). |
| Increase knowledge of factors determining the performance and responsiveness of the health care system and its responsiveness to users' needs (service gaps and resources needed to fill them). | Yes | Literature review of international as well as Canadian approaches to mental health human resource planning, specifically needs-based planning, has identified where needs-based planning approaches can improve the responsiveness of the mental health system. | Literature review document and case studies of existing mental health needs-based planning approaches. |
| Increase knowledge and application of evidence and best practices, leading to improved health care system planning and performance. | Yes (and ongoing) | Knowledge of best-practices around needs-based planning and mental health HR planning has been collated and analysed. It was presented to a diverse stakeholder group including planners and policy-makers who have agreed to support the development of policy briefing note. | IN4M report collating and analyzing evidence on needs-based planning for mental health HR.<br>Briefing note development for (and with) policy-makers. |

| | | | |
|---|---|---|---|
| Knowledge tools, products and innovations (planning tool) and modifying knowledge products, dissemination of knowledge, health system renewal. | Yes – Ongoing | The Project IN4M team are in discussions with the three expert groups in developing HHR planning tools in Canada. The aim is to work with the three groups as a meta-consortium, to produce the highest quality, fit-for-purpose needs-based mental health HR planning tool. | RFP process and developing partnership on phase II of project IN4M. |
| Evaluation or trial adoption (pilot) of knowledge, approaches, models, strategies or promising practices on a limited scale. | To be developed | Phase II of project IN4M will be the time when the pilot version of a new needs-based planning tool for mental health HR is put in place and evaluated. This will build on the knowledge developed in phase one, and the relationship built through the RFP process. | Strategy for phase II of IN4M.<br>Partnership of HHR modelling groups. |
| Increased awareness and understanding of knowledge, tools/products, approaches, models, innovations and health system reform issues. | Yes | The roundtable of diverse stakeholders provided the opportunity for increasing the awareness around mental health HR planning, and for needs-based planning in general. | Evaluation of the roundtable (see Appendix A) |
| Decreased barriers to knowledge development, translation, use and health system renewal. | Ongoing | The barriers to needs-based planning in mental health HR were identified for multiple stakeholder groups through the roundtable. Individuals with greater knowledge of systemic barriers and barriers affecting other stakeholders have the opportunity to address the barriers based on firm evidence. | Evaluation of the roundtable shows a greater understanding of the barriers facing needs-based planning for mental health HR.<br>The survey of stakeholders suggested some of the major barriers to be addressed. |
| Broadened adoption of knowledge/innovations resulting in changes to policy, practice and/or organizational structure. | Ongoing | Policy-makers and planners have been made aware of the issues around needs-based planning for mental health HR, and will be targeted in the communications strategy from phase I of project IN4M (including with a briefing note on the project). | Briefing note for policy-makers and planners.<br>Interest confirmed in taking forward the ideas from the roundtable. |
| The long-term outcome of improvements in the health care system. | Ongoing | There is great potential for improvements to the health system through needs-based planning for mental health HR. | Evidence from the literature review and case studies suggests positive outcomes for the health system from needs-based planning approaches to HHR. |

Overall, the objectives stated in the proposal for project IN4M have all either been achieved (where the timescale for evaluation is appropriate to measure achievement), or are moving towards being achieved (where the timescale is longer, but the intermediate steps toward achievement are being taken). These objectives have been achieved within the budget and timeline set aside for Project IN4M, but for the longer-term achievements to arise there must be a combination of: a) funding for the development of a needs-based planning tool; b) a stable consortium for developing the planning tool; c) a commitment to communicating the findings from IN4M and the desirability of needs-based planning to the full breadth of stakeholders in mental health HR planning.

# 1. Introduction

## *1.1 Project IN4M Overview*

The Canadian Mental Health Association (CMHA) is leading a multi-phased project to enhance the capacity to better respond to the mental health needs of Canadians. Mental health services in Canada are offered in a number of sectors by government, non-government and private sources, as well as by consumer groups (peer support) and family caregivers across the "continuum of care." Services and service providers in one sector are all too often not formally linked to services within their sector or those in another sector. This fragmentation combined with stigma and discrimination towards people with mental health problems and disorders has resulted in incomplete data on the use of and demand for mental health services and the needs of Canadians.

The CMHA project- IN4M - is a national effort to map needs and the demand for mental health services to the array of available services and to those needing development. Funded by Health Canada and the Mental Health Commission of Canada, its premise is that if the need for services can be mapped, planning for the required human resources to deliver services more comprehensively, efficiently and effectively is improved. IN4M (pronounced *Inform*) involves identifying and analyzing data sources in the health, education, social services, and criminal justice sectors within the public domain as well as those in private, workplace and not-for-profit areas. IN4M includes a review of national and international experience and aims to project future needs for mental health services. The project focuses on three mental health conditions: depression, anxiety and attention-deficit hyperactivity disorder (ADHD). These three conditions were chosen for a number of reasons: their potential economic impact; the number and ages of people affected; and the potential for applying the learning to other conditions.

## *1.2 IN4M stated objectives*

Phase 1 of Project IN4M is an action research initiative that will bring best practices to bear on the implementation of mental health services. It has two specific objectives:

A. To evaluate common elements of needs-based models for human resources planning.

B. To disseminate to planners and policy-makers, knowledge on needs-based planning and data related to the needs and services available.

## *1.3 HCPCP evaluation requirements*

*Project IN4M* objectives were linked in the proposal to specific objectives, outputs and outcomes of the Health Care Policy Contribution Program - these are outlined below.

*Project IN4M* addresses the following Health Care Policy Contribution Program Objectives:

A. foster the development and implementation of health care system policies and strategies to address identified health care system priorities (access to mental health services, needs based service development, needs based health human resources);

B. contribute to improvements in the accessibility, responsiveness, quality , sustainability and accountability of the health care system;

C. increase knowledge of factors determining the performance and responsiveness of the health care system and its responsiveness to users' needs (service gaps and resources needed to fill them);

D. increase knowledge and application of evidence and best practices, leading to improved health care system planning and performance;

E. knowledge tools, products and innovations (planning tool) and modifying knowledge products, dissemination of knowledge, health system renewal;

F. evaluation or trial adoption (pilot) of knowledge, approaches, models, strategies or promising practices on a limited scale;

G. increased awareness and understanding of knowledge, tools/products, approaches, models, innovations and health system reform issues; and

H. decreased barriers to knowledge development, translation, use and health system renewal;

I. broadened adoption of knowledge/innovations resulting in changes to policy, practice and/or organizational structure; and

J. the long-term outcome of improvements in the health care system.

## 2. Evaluation framework

In order to assess the success of Project IN4M at this stage of Phase I completion, we have developed the logic model of the project shown below. It relates the inputs received from numerous sources to the processes undertaken in Phase I and then on to the outputs and outcomes identified from the project.

**Figure 1. IN4M Evaluation framework**


| Inputs to process | Activities | Outputs of project | Expected outcomes (longer term) |
|---|---|---|---|
| HCPCP funding<br><br>MHCC and CMHA support in kind<br><br>IN4M Team expertise | Literature review of MH and HHR models<br><br>Survey of stakeholders to identify models for case studies<br><br>Case studies of HHR/ MH models in action<br><br>Roundtable of stakeholders<br><br>RFP process to develop one model for Canada | Detailed review of existing modeling approaches and data sources – verified by numerous stakeholders<br><br>4 case studies of Canadian and international approaches to needs-based planning for MHHR modeling<br><br>Roundtable report and briefing note for needs-based planning in MHHR<br><br>Combined proposal on developing needs based planning model (bringing together the 3 groups with experience in Canada | Shared understanding of the need for needs-based planning for MHHR<br><br>Modeling tool for need- based planning for MHHR – generalizable to other HHR issues<br><br>Champions of change across MH stakeholders<br><br>Political support across Canada for investing in MHHR needs-based planning |

This framework serves as a guide to the evaluation of the project and in section 3-5 we link the processes, outputs and outcomes to the HCPCP and Project IN4M stated objectives

# 3. Processes

The processes of Project IN4M are important aspects of showing good stewardship of public funds. Below we provide details on the processes undertaken in IN4M and how they relate to the stated IN4M and HCPCP objectives.

## *3.1 Literature Review*

The literature review used a combination of key-word searching and snowballing from initial references. It searched the databases from MEDLINE, the Cochrane Library, Human Resources for Health Global Resource Centre, ERIC, and PsycINFO; as well as additional grey literature sources. Key words for the search, with synonyms and variations in spelling considered, were a combination of: health care needs, needs-based planning, forecasting, modelling/models, mental health, mental health needs, mental disorders, mental illness, health human resources, policy options, policy trade-offs, caregivers, family, informal help (peer support), education, schools, social welfare, criminal justice, incidence and prevalence. Inclusion and exclusion criteria are listed in Table 2. Hundreds of abstracts arose of which 85 articles and publications were found to be of most relevance for this endeavour.

**Table 2. Inclusion and Exclusion Criteria**

| Inclusion Criteria | Exclusion Criteria* |
|---|---|
| • reputable journal and/or source<br>• extensive list of references<br>• education sector (limited)<br>• criminal justice (limited)<br>• social welfare (limited)<br>• international sources (limited)<br>• social science literature (limited to psychology) | • business sources<br>• private sector sources<br>• supply only or utilization only models |

*Note: These exclusion criteria were used due to the scope of the work.

The Literature review also built in new literature identified through interviews, the survey, slightly over the budget allocated to it by the project team, but the review accessed additional gray literature that added significantly more value to the end product of project IN4M through multiple stakeholder literature from outside of the health sector.

*Objectives linked to literature review: IN4M – A; HCPCP – C,D,G,I*

## *3.2 Survey*

To help identify existing approaches to needs-based planning for mental health HR, Project IN4M also conducted a survey of stakeholders. This survey was answered by 80 people, the majority of whom worked in health and/or education. 90% of those responding did not know of any needs-based planning approaches to mental health HR, other than the three identified in the survey questions (the main three from the literature). The survey also provided an opportunity to engage with a wide variety of stakeholders from outside of health, and the responses from education, criminal justice and social services suggest that those stakeholders were actively engaged in IN4M. The survey process was completed within the budget allocated to it by the project team.

*Objectives linked to the survey: IN4M – A; HCPCP – C,D,G,I*

### 3.3 Case Studies

The case studies were conducted using a combination of document review and key informant interviews. Case studies were selected based on set criteria outlined in the analysis framework developed for project IN4M. While the case studies were not representative studies, they are descriptive of specific examples of needs-based planning for mental health HR. Originally, Project IN4M had budgeted for 3 case studies that included site visits, but the importance of one international case altered the approach to assess 4 case studies, each with telephone interviews rather than site visits. This allowed the international study that was identified through the survey to be included as a case while working within the same budget. In total, the case studies were completed with additional studies, slightly under the budget allocated. This allowed for the slight over-run in the literature review stage of the project.

*Objectives linked to the case studies: IN4M – A; HCPCP – C,D,E,G*

### 3.4 RFP process

To turn the findings from the research streams identified above, into a potential tool for needs-based planning for mental health HR in Canada, the Project IN4M team developed an RFP to identify the best proposals for creating a needs-based planning tool in Canada. This RFP was developed based on the findings of the research, and advertized on the government funding website, MERX. The RFP was also targeted specifically at the three Canadian groups with most experiences of modelling for needs-based mental health HR planning in Canada. These groups were identified through the literature review and confirmed through the survey. They did not form part of the case studies since they are modelling groups, rather than those implementing models. Each of the targeted modelling firms were offered $5,000 to submit a proposal in response to the RFP. All proposals were asked to outline how the provider would develop a needs-based planning tool for mental health HR in Canada and the cost of such a project.

There were three responses to RFP, only from the identified modelling organizations. Each of these proposals was evaluated by a sub-section of the advisory committee (AC) and project team members (based on their knowledge of the evidence from the preceding research). Proposals were assessed on a variety of criteria (Table 3) and the results brought to the full advisory committee.

**Table 3. Evaluation criteria for proposals**

| **Evaluation Criteria** | **Weights** |
|---|---|
| Qualifications, experience, and expertise of the Consultants and the proposed team in forecasting. This includes project and track record with similar assignments | 10 |
| Quality of the proposed methodology and approach | 60 |
| Price | 30 |
| **Total** | **100** |

The process for developing the RFP and for assessing proposals was created along a set of conflict of interest criteria created for Project IN4M. This aligns with best-practice for an RFP process.[1] The RFP process was completed within the budget allocated by the project team.

*Objectives linked to the RFP process: IN4M – A,B; HCPCP – C,D,E,G*

### 3.5 Advisory Committee

As part of Project IN4M, the project team convened an expert advisory committee (AC) made up of stakeholders from the main groups involved in mental health human resources. The AC members, their affiliation and stakeholder group are identified below.

| AC member | Affiliation | Stakeholder group |
|---|---|---|
| Taylor Alexander (co-chair) | Canadian Mental Health Association | Mental health generally |
| Howard Chodos (co-chair) | Mental Health Commission of Canada | Mental health system in Canada |
| Carole Brulé | Canadian Institute for Health Information | Data holders |
| Karen Cohen | Canadian Psychological Association | Service providers |
| Pamela Fralick | Canadian Healthcare Association / Health Action Lobby | System providers / organizations |
| Rodney Ghali | House of Commons | Political/Decision makers |
| Joan Edwards Karmazyn | National Network for Mental Health | Patients and the public |
| Paule Giguère | Health Canada | Health system |
| John Higenbottam | Psychosocial Rehabilitation Canada | Community groups |
| Judy Hills | Canadian Psychiatric Research Foundation | MH research |
| Kahá:wi Jacobs | Health Canada | Aboriginal peoples |
| Irene Klatt | Canadian Life and Health Insurance Association | Health insurers |
| Keith Lowe | Canadian Mental Health Association | Mental health generally |

The AC met 5 times through the life of the project, provided valuable feedback on project documents, strategy and communications, as well as providing an invaluable link to the multiple stakeholder groups affected by mental health HR planning.

*Objectives linked to AC group: IN4M – A,B; HCPCP – A,C,D,G,H,I*

[1] See: CHSRF (no date), *Conflict of Interest Guidelines*. Available at: http://www.chsrf.ca/migrated/pdf/POLICY_conflictofinterest_ENG02.pdf; and: CIHR (2009), Conflict of interest and confidentiality agreement for members of peer review committees. Available at: http://www.cihr-irsc.gc.ca/e/28654.html

### *3.6 Action Roundtable*

The action roundtable provided an opportunity to bring together multiple stakeholders from diverse groups in Canada. This included from health, education, justice, social, research, policy, caregiver, and patient sectors. This two day meeting provided stakeholders the opportunity to learn from IN4Ms findings, and to feedback on them with additional knowledge, clarifications or challenges. The action roundtable was delivered under budget, allowing the communication of findings from IN4M to have additional resources.

### *3.7 Financials*

The total funding available for this project was $250,020. The project was performed, evaluated and communicated within this budget and in the allotted time-frame. Full details of the budget for this project are shown in the final report to Health Canada.

## 4. Outputs

In the proposal for Phase 1 of Project IN4M, a series of stand-alone deliverables were identified as outputs. These deliverables were:

- The literature review of existing approaches to needs-based planning for mental health
- The case studies of existing needs-based planning tools in action
- The RFP process to develop a needs-based planning tool for mental health HR in Canada
- The roundtable of stakeholders in Canadian mental health HR

Each of these deliverables was delivered within the budget allocated by the Health Canada HCPCP, with an additional case study and an additional survey of international stakeholders around the concepts of needs based planning.

The communication of these outputs has been through a combination of methods. First, through the delivery of the literature review and case study reports to participants at the roundtable. This provided the key stakeholders in mental health HR from across Canada with an increased understanding of needs-based HR planning for mental health. Second, through the delivery of the final report to Health Canada – which will link the federal government into findings and next steps for needs-based HR planning for mental health. Third, through the activities of the AC, acting as a bridge between the different stakeholders and the IN4M project team. Fourth, through posting on the CMHA website of the final report; and fifth, through providing a summary briefing note to stakeholders (through the roundtable participants and AC).

## 5. Outcomes

The outcomes from Project IN4M are:

Immediate outcomes – increased awareness of the need for, data required to support, and methods of delivering needs-based planning for mental health. This is supported by the roundtable evaluations which highlighted the increased levels of understanding and awareness of participants. The increased awareness of the roles that stakeholders play in mental health HR is also a key immediate outcome from IN4M, with roundtable participants showing a greater understanding of the different groups who have a role in mental health HR. This should lead to greater collaboration over this issue.

Intermediate outcomes – One of the main aims of project IN4M was to change decision making processes around mental health HR. The support of policy makers at the roundtable, and their willingness to be involved in developing a briefing note for government, suggests that this aim is on the way to being fulfilled. The briefing note will be distributed through the roundtable participants, and also through the AC and Health Canada.

Long term outcomes – It is anticipated that a new needs-based planning approach to mental health HR will allow greater access for Canadians to mental health resources, improve continuity of care and focus care where it is required. While the current phase of Project IN4M cannot provide data on that outcome, the existing data on the costs of mental health to Canada suggests that a needs-based approach to mental wellness will have significant impacts on individuals, communities and Canada as a whole.

# 6. Evaluating relevance, efficiency and effectiveness

Identifying the outputs and outcomes from IN4M is important to the evaluation, but the links between the different parts of the evaluation framework also represent important evaluation goals.

## *6.1 Process (inputs → outputs)*

**Indicator:** Advisory Committee (AC) will review project with networks to confirm clarity and identify issues.

> The AC provided excellent feedback to Project IN4M in terms of the individual member's understanding of the issues, but also in terms of the stakeholder groups that they represented. This information was captured in the minutes from AC meetings, where individuals reported back on the issues around mental health human resource planning as seen by their stakeholder group.

**Indicator:** Advisory Committee evaluation forms + Advisory Committee meeting decision notes will provide insight on appropriateness of implementation.

> The AC members were asked to provide feedback on their experience of AC meetings and how they perceived their role in the IN4M project. This feedback was generally very positive, with AC members keen to stress their ongoing commitment to the work of IN4M. The meeting notes from AC meetings also support the idea that the AC considered IN4M an appropriate response to the needs of mental health HR in Canada. In these notes, the AC members commit to sharing findings from IN4M as well as taking forward discussions with key stakeholder groups that the represent.

## *6.2 Relevance (process → outputs)*

**Indicator:** Roundtable discussions will provide feedback on the relevance of findings to challenges existing.

> The roundtable evaluation suggested that although the different aspects of the roundtable were generally appreciated (majority of scores placed sections in the 'average' or 'good' categories), the issue of relevance of the subject matter to the existing challenges as seen by participants was difficult to gauge. Many of those involved in the roundtable reported that they had a fair understanding of the purpose of the roundtable rather than a good understanding. This suggests that either the roundtable did not fit with their preconceived ideas of the meeting or that it did not fit with their understanding of the challenges.

### *6.3 Efficiency (inputs → outputs)*

**Indicator:** Project management data will assess efficiency of implementation

### *6.4 Effectiveness (outputs → outcomes)*

**Indicator:** Roundtable evaluation forms will gauge momentum created by project.

The full evaluation of the roundtable is shown in Appendix A. In short, participants saw the roundtable as being moderately successful in achieving it's stated aims of:

- To develop the future approach to needs-based planning for mental health HR in Canada;
- To validate the findings of Project IN4M; and
- To create 'champions of change' for needs-based mental health HR planning.

Of these, the champions of change was the one with most dissent in terms of the participants feeling that the roundtable was successfully (with 4 people saying it was unsuccessful in creating champions).

When participants were asked to identify three things they had learnt from the roundtable, the results suggested that some momentum around project IN4M was being developed. The main themes identified were:

- Greater understanding of the complexity of issues in the field including data gaps (n=13);
- Greater awareness of the diversity of stakeholder groups and the work that is happening in the field (n=10); and
- The importance of partnerships and collaboration (n=6).

In addition to these learnings, 16 of the participants suggested that they would be interested in participating in related mental health projects in the future. This is a promising number of key stakeholders to have involved in building momentum around needs-based planning for mental health HR in Canada.

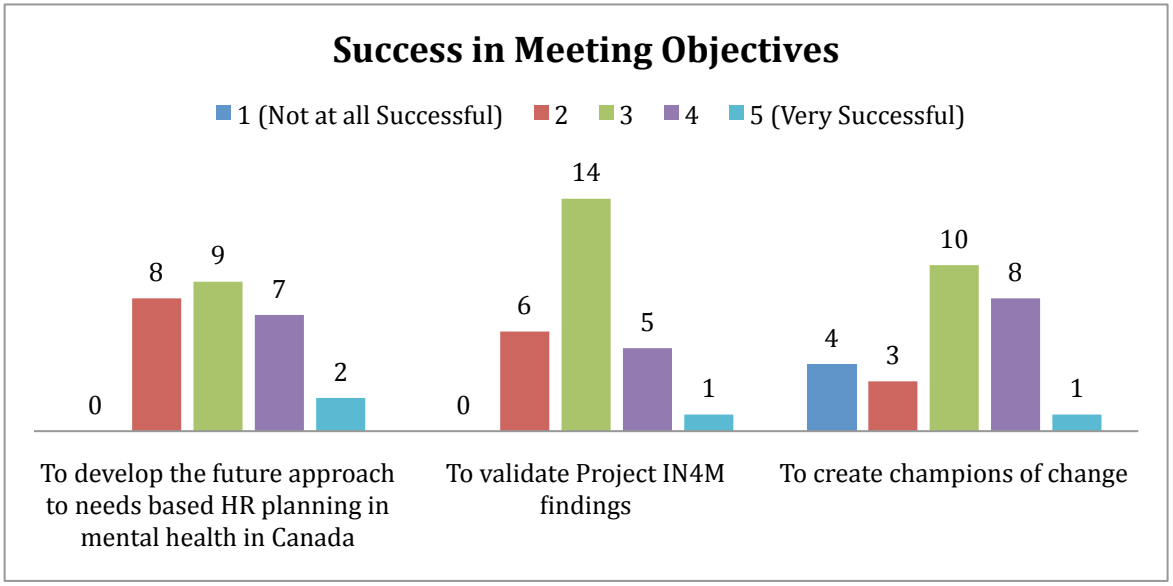
## 7. Conclusions

**Overall, Project IN4M has been successful in delivering upon its stated objectives. The deliverables were all provided within the time frame and budget allocated, and a wide variety of stakeholders were engaged in the process of delivering the first phase of the project. The RFP process has led to an exciting collaboration of Canada's three pre-eminent groups on needs-based planning modelling, in order to address this issue for mental health in Canada. Whether this collaboration will be able to deliver such a planning tool is dependent on the next phase of Project IN4M and its ability to: a) engage decision makers and funders in the project's second phase; and b) manage a collaboration of three organizations with modelling expertise within a single project.**

### *Appendix 1: Summary of Roundtable Evaluation*

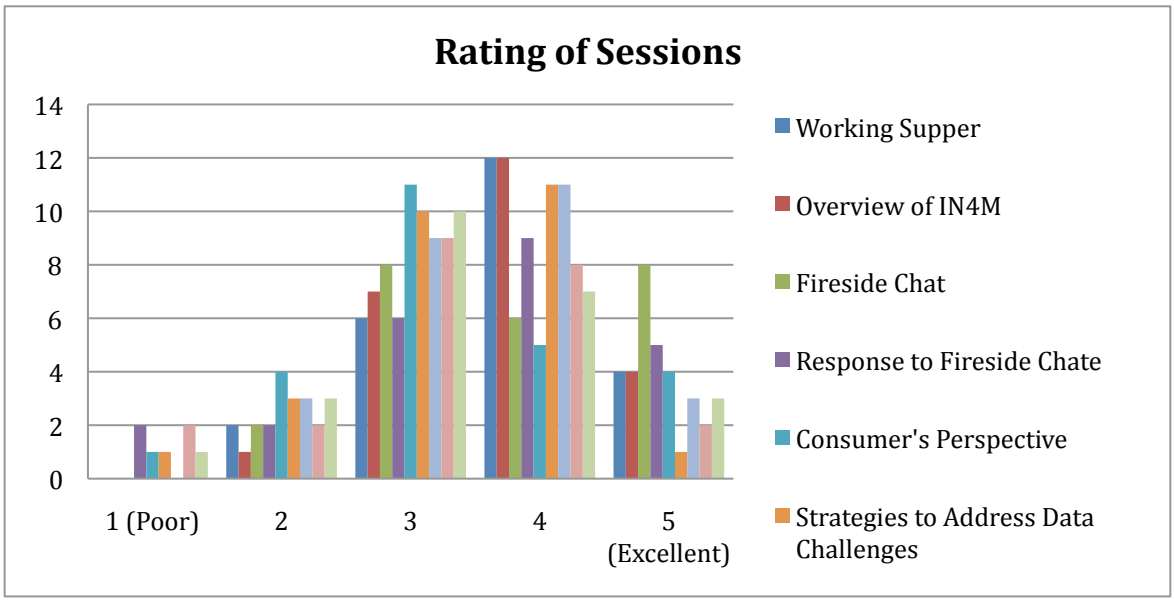
At the end of the Roundtable, participants were asked to complete an evaluation questionnaire. A total of 27 completed questionnaires were received. Overall, the rankings given to the various aspects of the Roundtable fell in the mid-range of the scales provided.

When asked to rate the success of the Roundtable in meeting the objectives the majority of participants rated the level of success in the mid-range for all objectives.




Creating champions of changes was the only objective some participants thought the Roundtable was not at all successful at meeting (n=4).

The majority of participants rated the Roundtable sessions in the mid-range of the scale with the vast majority of ratings in the 3 and 4 categories. The Fireside Chat had the highest number of excellent ratings (n=8).




Participants were asked to agree or disagree if they clearly understood the purpose of the Roundtable. Many participants rated their understanding in the middle of the scale.

The majority of participants agreed the timing of advance materials was sufficient.

The majority of participants also agreed the facilitator was effective, there were ample opportunities to participate and the length of time was sufficient.

Most participants agreed the location was comfortable and accessible, adequate breaks were provided and the presentations were clear.

Participants were asked to identify three things they had learned through participation in the Roundtable. 15 participants responded to this question. Key themes were a greater understanding of the complexity of the issues, a greater awareness of the diversity of stakeholder groups, and the importance of partnership and collaboration.

***Greater understanding of the complexity of issues in the field including data gaps (n=13) e.g.:***

- Greater awareness of the barriers to success
- The complexity of the issues – it is hard to separate the focus from other issues in mental health
- The struggle to define what is being asked re: the need
- We need better data and more usable data

***Greater awareness of the diversity of stakeholder groups and the work that is happening in the field (n=10) e.g.:***

- Barriers to multi-cultural, multi-language issues
- Diversity of interested parties
- I have a better understanding of who is currently doing what in this area
- Lots of commitment across sectors to get involved

- Lots of good work and committed Champions of Change people at the Roundtable
- Mental Health Commission and Project IN4M are doing a lot of important work

***The importance of partnerships and collaboration (n=6) e.g.:***

- Collaboration is possible!
- The need to communicate to the networks and front line workers
- The opportunity to network is endless

***Other e.g.:***

- Commitment to move ahead
- Importance of HR Planning in service development
- Peer Support is a priority
- The difference between need and demand
- The level of engagement is high

16 participants indicated they would be interested in participating in other mental health related projects in the future.