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.

Project IN4M Team Members

Bill Tholl, John Service, Janet Davies, Glen Roberts, Kelly Grimes, Eddy Nason and Lynda Becker.

Project IN4M Advisory Committee Members:

Howard Chodos (chair)

Keith Lowe (vice-chair)

Taylor Alexander

Carole Brulé

Karen Cohen

Pamela Fralick

Rodney Ghali

Joan Edwards Karmazyn

Paule Giguère

John Higenbottam

Judy Hills

Kahá:wi Jacobs

Irene Klatt

Glenn Monteith

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* The complete reports are available at www.cmha.ca.

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

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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.

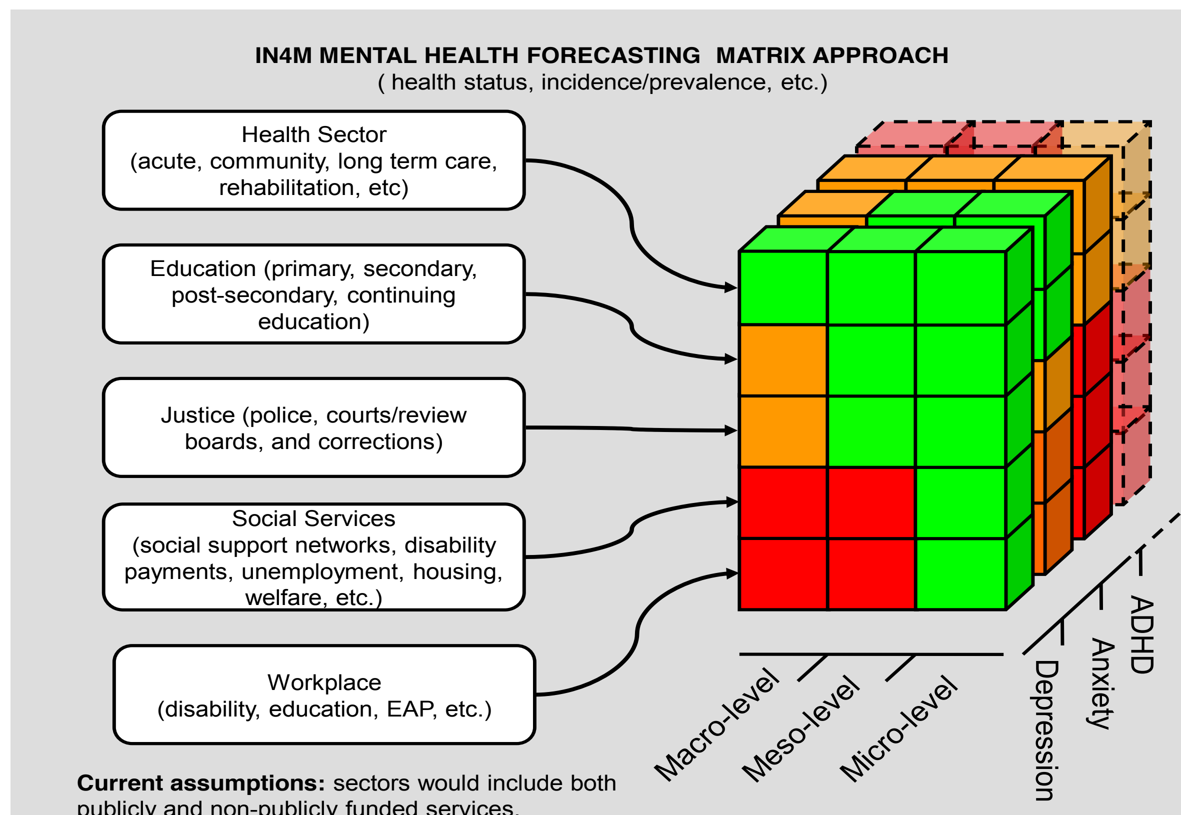
The seven person project team, which is comprised of individuals with expertise in mental health, needs-based modelling and health system policy planning, ensured deliverables were of high quality, produced on time and accomplished within budget. An advisory committee provided additional guidance from 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.

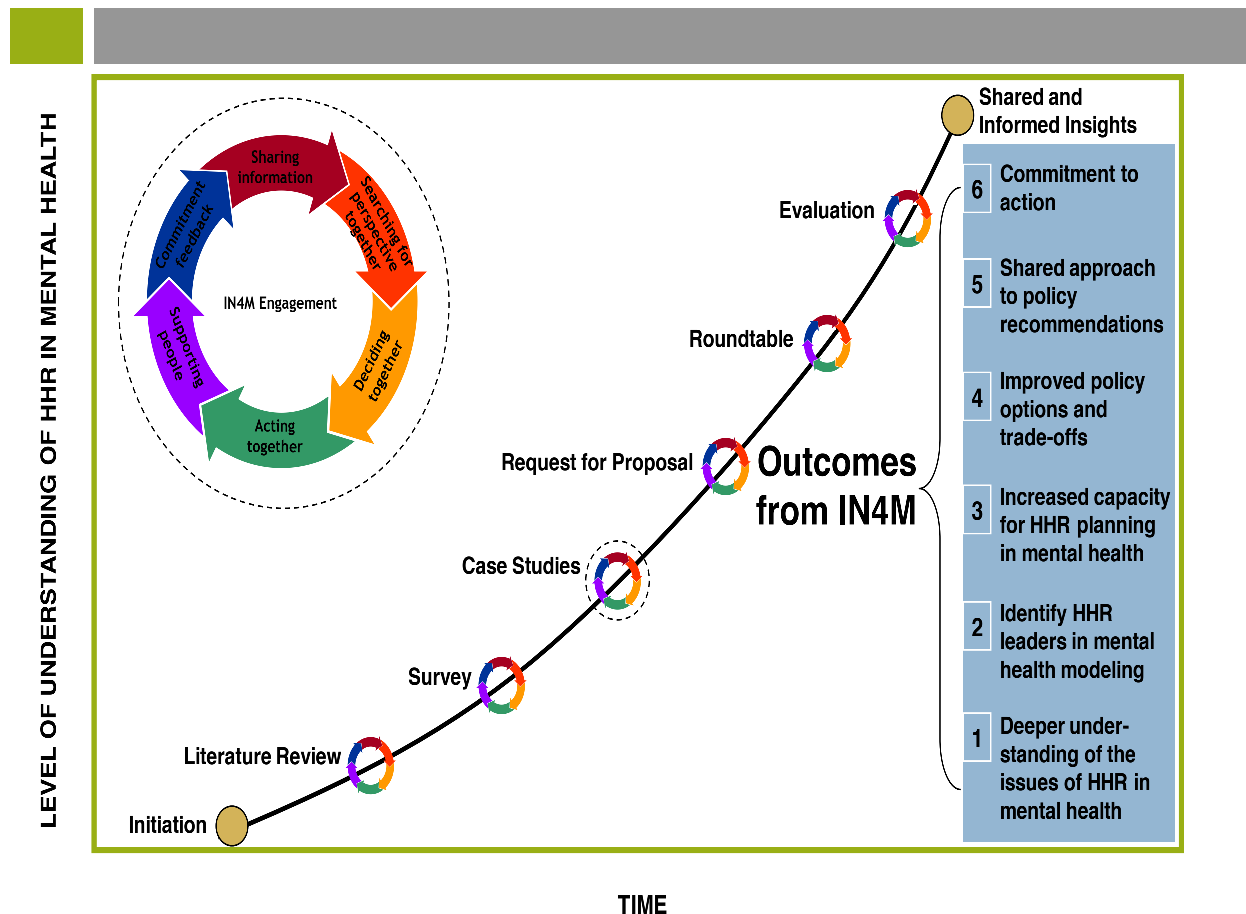
Figure 1: Matrix Approach to Mental Wellness Forecasting



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.

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)

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.

[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.

Depression is the fastest growing disability cost to Canadian employers .

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.

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.*

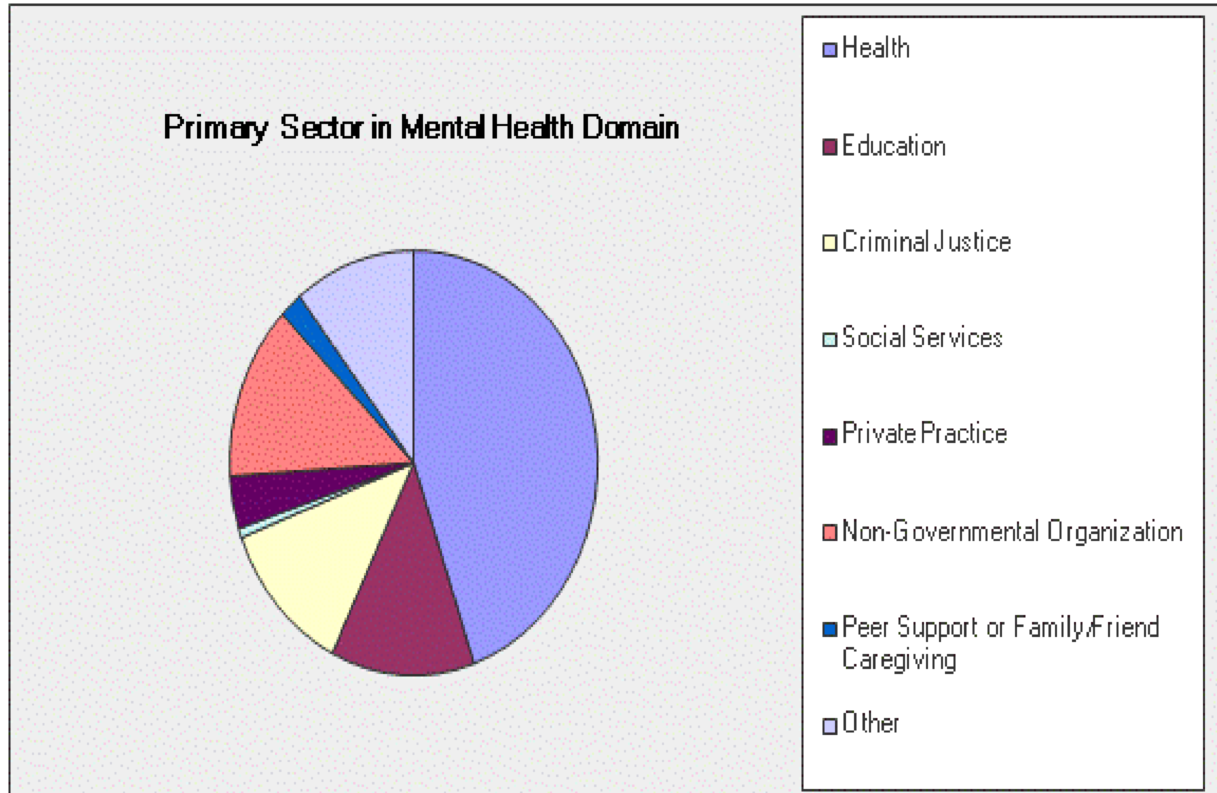
Online Survey

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:

- 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.

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

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.

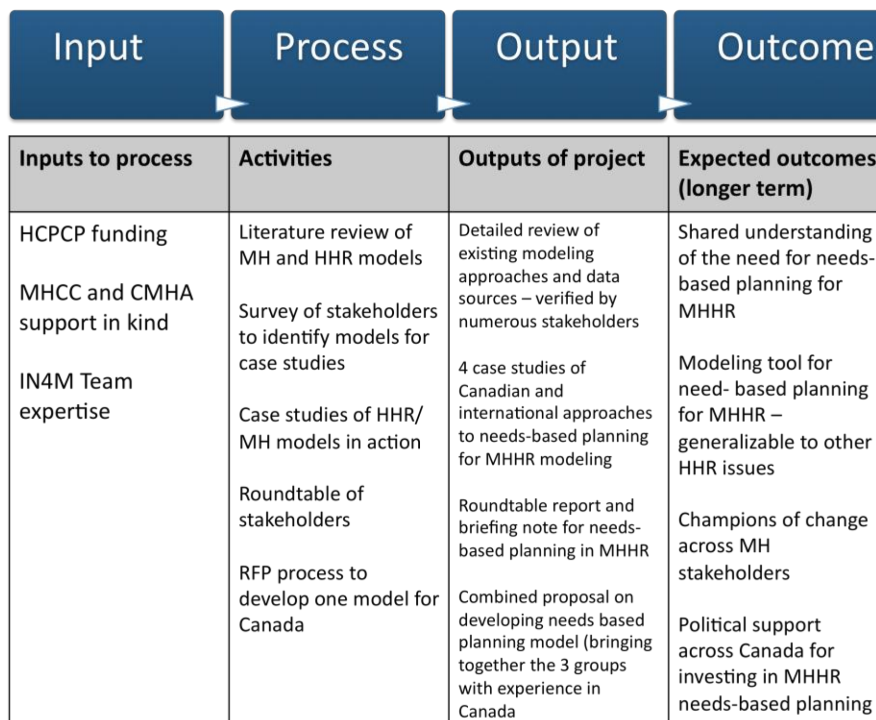
Tactic	Output/Action
Network with mental health stakeholders	• Four meeting of Advisory Committee • Meetings with MHCC, CIHR • Snowball survey (Spring 2010) • Key informant interviews (summer 2010)
Support members of Advisory Committee to 'champions' learnings and status of *Project IN4M*	• Results of snowball survey (April 2010) and key informant interviews (September 2010) shared with Advisory Committee for discussion and comment. • Learnings form literature review summarized and distributed (June 2010) to Advisory Committee for their use in communicating to networks • 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) • Advisory Committee members briefed to participate in discussions at Action Research Roundtable (November 2010) • 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 • Text summarizing results of literature review and key informant survey supplied to Advisory Committee members (September 2010) for their use in communicating to networks • Text describing four case studies supplied to Advisory Committee members (November 2010) for their use in communicating to networks • 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 • Via membership on Advisory Committee, Health Canada, CIHI staff inform (pre) and advised of (post) learnings and directions of project • Meetings with DM HC (Summer 2010) and other senior HC officials (Fall'10 and Spring '11) • Meetings with MHCC senior staff (throughout the project)
• Interviews with professional associations and support advocacy associations on barriers and enablers; • 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 • 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.



Input	Process	Output	Outcome
Inputs to process	**Activities**	**Outputs of project**	**Expected outcomes (longer term)**
HCPCP funding MHCC and CMHA support in kind IN4M Team expertise	Literature review of MH and HHR models Survey of stakeholders to identify models for case studies Case studies of HHR/ MH models in action Roundtable of stakeholders RFP process to develop one model for Canada	Detailed review of existing modeling approaches and data sources – verified by numerous stakeholders 4 case studies of Canadian and international approaches to needs-based planning for MHHR modeling Roundtable report and briefing note for needs-based planning in MHHR 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 Modeling tool for need- based planning for MHHR – generalizable to other HHR issues Champions of change across MH stakeholders 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. Materials for disseminating more widely are being developed.	Evaluation report from Roundtable (see Appendix A). 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. 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. 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. 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. 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. 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. 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.

Appendices (Executive Summaries)*

Literature Review and Environmental Scan

Online Survey Results

Case Study Report

***The complete reports are available at www.cmha.ca.**

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

Executive Summary

December 24, 2010

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]

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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.

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

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[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

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, nº 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.

Project IN4M

Integrating Needs for Mental Well-Being into Human Resource Planning

Online Survey Results

Executive Summary

October 5, 2010

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.

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.

Project IN4M

Integrating Needs for Mental Well-Being into Human Resource Planning

Case Study Report

Executive Summary

December 23, 2010

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.

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.