



Canadian Interprofessional Health Collaborative
Consortium pancanadien pour l'interprofessionnalisme en santé

*learning to work together, working to learn together
apprendre à collaborer, collaborer pour apprendre*

Program Evaluation for Interprofessional Education

A mapping of Evaluation Strategies of the 20 IECPCP Projects

SEPTEMBER 2008



The *Canadian Interprofessional Health Collaborative (CIHC)* is made up of health organizations, health educators, researchers, health professionals, and students from across Canada. We believe interprofessional education and collaborative patient-centred practice are key to building effective health care teams and improving the experience and outcomes of patients. The CIHC identifies and shares best practices and its extensive and growing knowledge in interprofessional education and collaborative practice.

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CIP data will be made available

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Main Messages

- ◆ Two frameworks were used to help to organize the evaluation activities of the 20 IECPCP Health Canada-funded learning projects: the **IECPCP Framework** (D'Amour & Oandasan, 2005), and a modification of the **Kirkpatrick model for educational outcomes** (Freeth et al., 2002).
- ◆ An overarching framework is essential to mapping out the evaluation activities that have been completed by researchers and evaluators, noting where emphasis and deficiencies in evaluation exist. The **IECPCP Framework** (D'Amour & Oandasan, 2005) was an effective visual for this process. We developed a web-based, interactive version of this framework (cihc.ca/evaluation/framework), so that people may use the visual to learn more about the evaluation tools and activities of the 20 IECPCP learning projects. This web-based tool provides guidance to individuals who will be undertaking research and evaluation activities.
- ◆ Open access to updating the web-based, interactive version of the IECPCP framework (D'Amour & Oandasan, 2005) is one recommended approach to ensuring that the data are kept current, and that we are able to monitor emerging themes in our understanding and gaps in knowledge. The evaluations of the IECPCP learning projects tended to focus on the educational system as opposed to the professional system, and in determining participants' reactions, immediate knowledge and attitudes. There was less emphasis on impact of the project activities on organizational change and patient/client outcomes. Evaluations to assess outcomes related to the practice setting are required.
- ◆ The **modified Kirkpatrick model** for educational outcomes (Freeth et al., 2002) is valuable for depicting the outcomes measured by the IECPCP learning project evaluations, noting areas of greater and lesser emphasis. However, it is noted that the Kirkpatrick's model has limitations, as it does not include evaluation of context, processes, and causal relationships.
- ◆ A range of evaluation tools were used across the country to assess a variety of outcomes across the levels in the modified Kirkpatrick model (Freeth et al., 2002). There is a need to validate newly created or adapted tools so they can be more widely used. A summary of the tools that were reportedly used by each of the 20 IECPCP learning projects can be found in the following report: *Program Evaluation for Interprofessional Education: Evaluation Instruments of the 20 IECPCP Projects* (CIHC, 2008).

Executive Summary

The *Program Evaluation for Interprofessional Education: A Mapping of Evaluation Strategies of the 20 IECPCP Projects* summarizes selected activities of the Canadian Interprofessional Health Collaborative (CIHC) Evaluation subcommittee for 2006-08. The subcommittee's goal is to provide leadership in the implementation of an overall strategy to support and promote collaboration and knowledge exchange concerning evaluation across the 20 Health Canada-funded Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP) learning projects. This report provides a summary and synthesis of activities related to **Phase III** which addresses three of the committee's four objectives:

1. Create a rubric/matrix of the evaluation plans/activities for the IECPCP projects
2. Identify "good" practices and gaps to inform future evaluation of IECPCP and research
3. Develop strategies to facilitate collaboration/knowledge exchange among internal and external stakeholders and NaHSSA.

APPROACH

This report builds upon the foundational work of two previous CIHC commissioned activities:

PHASE I: a research template circulated to the 20 IECPCP learning projects to gather information about their proposed evaluation activities in November, 2006 (*Working together on research: Summary of CIHC-EBRI Workshop*) (CIHC, 2007a) and

PHASE II: a review of the 20 IECPCP learning project proposals to gather further information about evaluation activities as well as an operationalization and mapping of the IECPCP framework variables onto a web-based version of the framework. This review was published as the CIHC Evaluation Subcommittee Interim Report (CIHC, 2008).

Two frameworks guided the PHASE III activities. The first was used to determine which aspects of interprofessional education and/or practice were being evaluated (IECPCP Framework: D'Amour and Oandasan, 2005). The second was used to determine the types of evaluation questions being asked (modification of the Kirkpatrick model of education outcomes: Kirkpatrick 1996, Freeth et al., 2002). Surveys were used to collect data from the 20 IECPCP learning projects about their evaluation activities. This allowed the subcommittee to map and compare evaluation strategies across the projects

RESULTS

The 19 responding IECPCP learning projects reported using 115 instruments to evaluate their interprofessional education efforts.

- ◆ Of the 115 instruments reported, 17 were validated. Most of the remaining evaluation instruments were newly developed and not validated,

- ◆ The subcommittee was able to map out the evaluation strategies across the full spectrum of interprofessional education and collaborative practice aspects using the IECPCP Framework (D'Amour & Oandasan, 2005).

SYNTHESIS

- ◆ The **modified Kirkpatrick's educational outcomes model** (Freeth et al., 2002) worked well to classify the types of data collected in the projects' evaluations. Most of the data collected by the 20 IECPCP learning projects evaluated learners' reactions, attitudes/beliefs, and knowledge/skills. There was less data on client/patient benefit and organizational changes.
- ◆ Most of the projects' activities targeted the educational systems and learner outcomes elements of the **IECPCP Framework** (D'Amour & Oandasan, 2005). These findings are expected, as most learning projects concentrated on changing curricula in the university and college settings. Few projects evaluated patient/provider outcomes and government policies. It is premature to expect impact on patients and at high level policy-making.
- ◆ Further investigation is necessary to analyze the evaluation strategies for best practices.

IMPLICATIONS

The results from the subcommittee's activities provide an essential foundation for establishing evaluation best practices for IECPCP, and are relevant to evaluators, educators and other stakeholders.

An area for consideration by evaluators and educators is which frameworks are optimal for helping to focus the interpretation and implementation of evaluation efforts related to interprofessional education (both at the pre- and post-licensure levels). We note that the **modified Kirkpatrick's model** has limitations in this regard; it does not provide for the examination of the context (such as facilitators and barriers to success), content (such as relevance and comprehensiveness of the content), and causal relationships (such as the effect of education on patient outcomes).

The CIHC Evaluation Subcommittee developed a web-based, interactive version of this framework www.cihc.ca/evaluation/framework to allow anyone using the visual version to learn more about the evaluation tools and activities of the 20 IECPCP learning projects. This web-based tool provides guidance to individuals who will be undertaking research and evaluation activities.

NEXT STEPS

Continuous analysis of updated web-based IECPCP framework

The IECPCP learning projects (or individuals that carry on the various activities that are sustained from these initial efforts) should update the evaluation activities on the web-based interactive IECPCP framework.

Validation of Measurement Tools

A logical next step would be to gauge the effectiveness of the evaluation tools in measuring interprofessional education. Validation of the many newly developed instruments is recommended.

Secondary Data Analysis

It would be a useful exercise to compare and contrast findings across those projects that used the same evaluation instruments. Also, since many of the projects used qualitative interviews and focus groups, it would be of interest to examine the questions used in these qualitative interviews and focus groups to compile themes and categories of emergent information.

Evaluating the Professional System

The subcommittee identified a gap in the evaluation of the effects of interprofessional education on the health system and patients. It would be beneficial to further develop and evaluate interprofessional education initiatives within the professional system to further our understanding of patient benefit and organizational change.

Evaluation Theory

Continued exploration of the Kirkpatrick, D'Amour & Oandasan and other models would be valuable to advancing interprofessional education and practice evaluation efforts. The IECPCP community should look forward to further development of other models.

Sommaire exécutif

Le rapport intitulé « Program Evaluation for Interprofessional Education: A Mapping of Evaluation Strategies of the 20 IECPCP Projects » [Évaluation de programmes de formation interprofessionnelle : inventaire des stratégies d'évaluation des 20 projets de l'initiative FIPCCP] résume une sélection d'activités menées par le sous-comité d'évaluation du Consortium pancanadien pour l'interprofessionnalisme en santé (CPIS) de 2006 à 2008. Le sous-comité a pour but d'offrir un leadership dans la mise en œuvre, pour les 20 projets exploratoires financés par Santé Canada dans le cadre de l'initiative sur la formation interprofessionnelle pour une pratique en collaboration centrée sur le patient (FIPCCP), d'une stratégie d'ensemble visant à appuyer et à promouvoir la collaboration et l'échange de savoir au niveau de l'évaluation des résultats obtenus. Ce rapport présente un résumé et une synthèse des activités reliées à la phase III qui porte sur trois des quatre objectifs du comité :

1. Établir une grille/matrice des plans/activités d'évaluation des projets FIPCCP
2. Identifier les « bonnes » manières de faire et les lacunes afin d'éclairer les évaluations futures de projets FIPCCP ainsi que la recherche
3. Élaborer des stratégies visant à faciliter la collaboration et l'échange de savoir entre intervenants à l'interne et à l'externe ainsi qu'avec l'AÉSSC/NaHSSA.

APPROCHE SUIVIE

Ce rapport s'appuie sur les travaux menés lors de deux activités antérieures patronnées par le CPIS :

PHASE I : En novembre 2006, un canevas fut d'abord communiqué aux 20 projets exploratoires de l'initiative FIPCCP afin de recueillir des données concernant les activités d'évaluation qu'ils se proposaient de mener (Working together on research: Summary of CIHC-EBRI Workshop [La recherche concertée : Résumé de l'atelier CPIS/IRÉB »]) (CPIS, 2007a);

PHASE II : Examen des 20 soumissions de projets FIPCCP afin de recueillir davantage de données concernant les activités d'évaluation et d'établir une opérationnalisation et une cartographie conceptuelle des variables du cadre de référence FIPCCP en se servant d'une version en ligne de ce cadre de référence. Les résultats de cet examen ont été publiés sous forme de rapport intérimaire du comité d'évaluation du CPIS (CPIS, 2008).

Les activités de la phase III ont été menées à partir de deux cadres de référence. Le premier a servi à déterminer quels aspects de la formation interprofessionnelle et/ou de la pratique en collaboration faisaient l'objet d'une évaluation (Cadre de référence de l'initiative FIPCCP : D'Amour et Oandasan, 2005). Le second a servi à déterminer quel type de questions était posé à des fins d'évaluation (variante du modèle de Kirkpatrick pour l'évaluation des programmes de formation : Kirkpatrick 1996, Freeth et al., 2002). Les données furent recueillies au moyen d'enquêtes portant sur les activités d'évaluation des 20 projets de l'initiative FIPCCP, ce qui a permis au comité d'établir une cartographie conceptuelle de ces données et de comparer les stratégies utilisées dans l'ensemble des projets.

RÉSULTATS

Les 19 projets FIPCCP qui ont répondu au sondage ont mentionné 115 outils d'évaluation de leurs travaux sur la formation interprofessionnelle.

- ◆ De ces 115 instruments d'évaluation, 17 étaient des méthodes bien établies, la plupart des autres utilisaient des méthodes novatrices non encore validées,
- ◆ Le sous-comité est parvenu à établir une cartographie conceptuelle des stratégies d'évaluation couvrant toutes les facettes de la formation interprofessionnelle et de la pratique en collaboration en se servant du cadre de référence de l'initiative FIPCCP (D'Amour & Oandasan, 2005).

SYNTHÈSE

- ◆ Le modèle modifié d'évaluation des programmes de formation de Kirkpatrick (Freeth et al., 2002) s'est avéré adéquat pour classer les divers types de données recueillis lors des évaluations de projets. La plupart des données recueillies pour les 20 projets évalués portaient sur les réactions des étudiants, leurs attitudes, leurs croyances, leur savoir et leurs aptitudes. Les données concernant les retombées au niveau du patient/client et les changements au niveau de l'organisation étaient moins étoffées.
- ◆ La majorité des activités [d'évaluation] de projets portaient sur les éléments du cadre de référence (D'Amour & Oandasan, 2005) associés au système éducatif et aux résultats obtenus du point de vue des étudiants. On ne saurait s'en étonner dans la mesure où la plupart des projets avaient pour objet de modifier les programmes de formation en milieu universitaire ou collégial. Quelques projets seulement ont fait porter leur évaluation sur les résultats obtenus au niveau des patients et des prestataires ainsi que des politiques gouvernementales. Il est prématuré de s'attendre à observer un impact au niveau des patients et des échelons supérieurs de l'élaboration des politiques.
- ◆ Il faudra approfondir pour faire l'analyse des stratégies d'évaluation.

CONSÉQUENCES

Les résultats des travaux du sous-comité constituent une base essentielle pour établir les meilleures pratiques d'évaluation dans le cadre de l'initiative FIPCCP et seront utiles aux évaluateurs, aux éducateurs et à d'autres catégories d'intervenants.

Une question d'intérêt pour les évaluateurs et les éducateurs est celle de l'optimisation du cadre de référence permettant de mieux cibler l'interprétation et le travail d'évaluation dans le contexte de la formation interprofessionnelle (tant avant l'obtention du diplôme qu'après). Le modèle de Kirkpatrick modifié présente quelques faiblesses à cet égard dans la mesure où il ne permet d'examiner ni le contexte (les facteurs favorables et les inhibiteurs), ni le contenu (par exemple sa pertinence et son envergure), ni les relations causales (comme l'impact de la formation sur les résultats au niveau du patient).

Le sous-comité d'évaluation du CPIS a mis au point une version interactive et en ligne de ce cadre de référence (www.cihc.ca/evaluation/framework) qui permet à chacun de se familiariser

avec les outils et activités d'évaluation des 20 projets de l'initiative FIPCCP. Cet outil en ligne servira de référence à ceux qui auront à évaluer des activités de recherche.

I Context

The Canadian health care system is facing a growing shortage of health care providers and an increase in the number of people who suffer from complex, chronic, and acute conditions. These increased demands on our health care system require innovative strategies that can be sustained and they must be implemented system-wide to ensure changes in the way services are delivered.

One answer to this crisis is to strengthen collaborative patient-centred practice (CPCP). CPCP is defined as health care that is “designed to promote the active participation of several health care disciplines and professions. It enhances patient-, family- and community-centred goals and values, provides mechanisms for continuous communication among health care providers, optimizes staff participation in clinical decision making (within and across disciplines), and fosters respect for the contributions of all providers” (Health Canada, 2007¹). CPCP can contribute to improved access to care, improved patient safety and communication among health care providers, more effective utilization of health resources, and improved satisfaction with care by patients and care providers. (Health Canada, 2007)

The importance of collaborative practice was recognized by the federal government as early as 2000. In his report *Building on Values: The Future of Health Care in Canada*, Roy Romanow (2002)² acknowledged the need for interprofessional education to prepare health care providers to work effectively in collaborative teams:

“If health care providers are expected to work together and share expertise in a team environment, it makes sense that their education and training should prepare them for this type of working arrangement.” (Romanow, 2002, p. 109)

In addition, Romanow stated that “...the direction of our health care system must be shaped around health needs of individual patients, their families and communities.” (Romanow, 2002, p. 50)

These two recommendations were embodied in the 2003 First Ministers Health Accord which identified interprofessional education as a critical piece to improving access to quality health care for Canadians. That same year, Health Canada’s Health and Human Resources Strategy made available approximately \$21 million specifically for IECPCP in the form of research grants for Canadian university and health care provider alliances.³ The objectives of the Health Canada IECPCP initiative include:

- ◆ Innovation and evaluation:
- ◆ promote and demonstrate the benefits of interprofessional education for collaborative patient-centred practice;
- ◆ Build capacity:

¹ <http://www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/index-eng.php>

² http://www.hc-sc.gc.ca/hcs-sss/alt_formats/hpb-dgps/pdf/hhr/romanow-eng.pdf

³ http://www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/index_e.html

- increase the number of educators prepared to teach from an interprofessional collaborative patient-centred perspective;
- increase the number of health professionals trained for collaborative patient-centred practice before, and after, entry-to-practice;
- ◆ Knowledge translation and culture change:
 - stimulate networking and sharing of best educational approaches for collaborative patient-centred practice; and
 - facilitate interprofessional collaborative care in both the education and practice settings.

In 2005, 20 learning projects across Canada were funded under the IECPCP initiative to be completed by mid-2008. Each grant developed their own community-specific plan to introduce interprofessional education into health sciences curricula and/or to develop strategies to strengthen teamwork in various health care practice settings.

To coordinate the innovations emerging from the 20 IECPCP learning projects, the Canadian Interprofessional Health Collaborative (CIHC) was established, funded again by Health Canada for the duration of the initiatives.⁴ The objectives of the CIHC are:

- ◆ To promote and demonstrate the benefits of interprofessional education for collaborative patient-centred practice.
- ◆ To stimulate networking and the sharing of the best approaches to interprofessional education for collaborative patient-centred practice.
- ◆ To facilitate interprofessional collaboration in both education and practice.

The organizational structure of the CIHC comprises a steering committee and five subcommittees, with representation from across the country. The subcommittees focus on areas pertinent to the growth and expansion of IECPCP: curriculum, research, partnership, knowledge translation, and evaluation.

The purpose of this report is to summarize the activities of the evaluation subcommittee since its inauguration in October 2006 until it was disbanded in June 2008. The members of this subcommittee represent the broad IECPCP community, including researchers, evaluators, practitioners, educators, administrators and students. The subcommittee's goal was to provide leadership in the implementation of an overall strategy to support and promote collaboration and knowledge exchange concerning evaluation across the 20 HC funded IECPCP learning projects. There are four objectives:

1. Catalogue evaluation frameworks, methodologies, and tools used by the IECPCP learning projects.
2. Create a matrix of the evaluation plans/activities for the IECPCP learning projects.
3. Identify 'good' practices and gaps to inform future evaluation of IECPCP and research

⁴ See cihc.ca for more information.

4. Develop strategies to facilitate collaboration/knowledge exchange among internal and external stakeholders and NaHSSA.

Evaluation was an important component of each of the IECPCP learning projects, as mandated by Health Canada. Having 20 learning projects focused on interprofessional education and practice provided an exciting opportunity to examine the evaluation strategies used by all the projects. In this report, we present the data from surveys that we distributed to the IECPCP projects to amass information to meet our objectives. The data are important building blocks for establishing evaluation good practices for the burgeoning field of IECPCP. The findings of our study have a number of implications for evaluators, educators and other stakeholders.

2 *Implications*

In this report, we used two frameworks to guide our work. The first was used to determine which aspects of interprofessional education were being evaluated (IECPCP Framework, D'Amour & Oandasan, 2005) and the second to determine what evaluation questions were being asked (modified Kirkpatrick model of educational outcomes, Freeth et al., 2002). There are a number of implications that arose from our results.

2.1 IECPCP FRAMEWORK (D'AMOUR & OANDASAN, 2005)

An area for consideration by evaluators and educators is which frameworks are optimal for helping to focus the interpretation and implementation of evaluation efforts related to interprofessional education (both at the pre- and post-licensure levels). The IECPCP framework helped us to map out the evaluation strategies across the full spectrum of interprofessional education and collaborative practice aspects. By classifying the various evaluation foci on the IECPCP framework, we were able to determine what evaluation efforts are being applied and where there are gaps in our research and evaluation activities. For example, since most of the 20 IECPCP learning projects' activities targeted educational curricula, it appears that there will be a plethora of data and lessons learned related to the educational system and learner outcomes. On the other hand, there will be little data forthcoming from the projects on patient and provider outcomes and government policies. As the learning projects undertake their data analyses & knowledge translation activities with their potential impact on the education and health care systems, we will have to address the challenge of how to evaluate the effects of interprofessional education and practice on patients and the broader healthcare system.

2.2 KIRKPATRICK FRAMEWORK (FREETH ET AL., 2002)

While the IECPCP framework provided the content and context of the educational efforts, the modified version of Kirkpatrick's educational outcomes model worked well to classify the type of data collected in the projects' evaluations. The modified Kirkpatrick model that we used (Freeth et al, 2002 - see description below in Approach Section) fits nicely with evaluation of interprofessional education as it covers most evaluation users' needs. Since it first appeared in 1959, the Kirkpatrick model remains a viable model to foster the broad inclusion of education evaluation plans. Kirkpatrick believes that it is widely used because "It's simple and practical.... Its chief purpose is to clarify the meaning of evaluation and offer guidelines on how to get started and proceed" (Kirkpatrick, 1996, p. 55).

Our survey results showed that most of the data collected by the projects were aimed at educational outcome levels related to reactions, attitudes/beliefs, and knowledge/skills. There were less data on client/patient benefits and organizational changes. This is consistent with the IECPCP Framework findings in that most of the 20 IECPCP learning projects were concerned with changes to educational curricula and fewer were concerned with changes occurring in practice settings.

Our survey results did expose a few anomalies in terms of classifying instruments under the appropriate categories; different projects classified the same instrument in different levels of the Kirkpatrick model. The implication is that each level of the modified Kirkpatrick's model needs to be more fully understood by individuals applying the model to ensure the activities and results of evaluation activities are as robust and accurate as possible. Overall, the classification of instruments using the Kirkpatrick model of educational outcome levels shows preliminary face validity.

2.3 FUTURE DEVELOPMENT OF EVALUATION THEORIES, MODELS AND FRAMEWORKS

To support evidence-based decision-, and policy-making efforts, policy and decision makers need evidence of the benefits of interprofessional education and/or collaborative practice as it relates specifically to health human resources or client/patient health outcomes. However, linking educational interventions to such health care quality measures is not linear, straightforward or immediate as the interventions often require changes in structures and processes to achieve the desired outcomes (Donabedian, 1968). As nicely illustrated by the IECPCP framework (D'Amour & Oandasan 2005), interprofessional education and collaborative practice are nested within complex interactions and interdependencies among micro- (individual), meso- (organizations), and macro- (system) levels of health care systems. To be meaningful, evaluations must be sufficiently comprehensive to measure the potential impact of contextual factors (e.g., social, political, historical, environmental, cultural) that exist within a practice setting or academic environment. We note that the modified Kirkpatrick's model has limitations in this regard; it does not provide for the examination of the context (such as facilitators and barriers to success), content (such as relevance and comprehensiveness of the content), and causal relationships (such as the effect of education on patient outcomes).

When planning a program evaluation, the use of one or more frameworks to guide the evaluation is essential, given that each model will have inherent limitations and will not be exhaustive for each context within which it is being used. The model chosen will depend on a number of factors including the philosophies underpinning the evaluation, the time and resources, as well as the researcher's/evaluator's understanding and previous experience using it (expertise).

2.4 LIMITATIONS OF RESULTS

The results of our study have several limitations:

- ◆ Our surveys tabulated only the types of methods used by the IECPCP learning projects, not the quality of those methods.
- ◆ We specifically asked projects to indicate if they used focus groups, interviews and "instruments," but other methods such as audits or observations were not explicitly explored.

- ◆ To allow for comparisons across projects, we limited our interpretation of the results, using only the modified Kirkpatrick model and the IECPCP Framework. It is probable that other frameworks were being used by the 20 IECPCP learning projects.
- ◆ Educational theories, interventions, methodologies, data analysis, or project evaluation results were not included in this report. However, other CIHC subcommittees have examined some of these areas. For example, the CIHC research subcommittee completed an overview of educational theories to inform interprofessional education (Reeves et al., 2007) and prepared a report entitled “*Proposed Research Approaches in the Twenty Funded IECPCP Projects*” (CIHC, 2007b).
- ◆ We present only the data as reported by the projects. The accuracy of the data has not been confirmed. During data entry and mapping onto the IECPCP Framework, we discovered variances in the way respondents classified and interpreted their evaluation activities (including application of evaluation tools). For example some survey respondents did not know the validation status of the instrument they were using.

3 Approach

3.1 BUILDING FROM PHASE I AND PHASE II

This report builds upon the foundational work of two previous CIHC commissioned activities.

- ◆ PHASE I: In preparation for the Working Together for Research workshop (2006), a research template was circulated to the 20 IECPCP learning projects to gather information about their proposed evaluation activities (including the design and instruments/tools). The findings of the survey used for Phase I are summarized in the CIHC document entitled “*Working together on research: Summary of CIHC-EBRI Workshop*” (CIHC, 2007a).
- ◆ PHASE II: The data from Phase I informed Phase II, which included a further review of the 20 IECPCP learning project proposals. Phase II augmented the data previously collected and provided comparative summaries of the various evaluation elements in the proposals (i.e., overall evaluation plan summary, proposed instruments/tools, references and resources). This phase operationalized the IECPCP framework variables and mapped them onto a web-based version of the framework. This review was published as the CIHC Evaluation subcommittee Interim report (CIHC, 2008).

3.2 PHASE III SURVEY

We wanted to capture the most up-to-date and accurate data from the actual evaluation strategies used by the 20 IECPCP learning projects, since Phase I was an early survey conducted on proposed project activities and Phase II relied only on data collected from project proposals to Health Canada. In May 2007, we undertook yet another two-part survey (refer to Appendix I for cover letter). Phase III sought to obtain further data that would allow mapping and comparisons of evaluation instruments across the projects. The results of Phase III are reported here.

Facilitating comparisons across the 20 IECPCP learning projects: Common matrices

Three systematic reviews (Freeth et al, 2002, Barr et al, 2005, Hammick et al, 2007) authored by the Centre for the Advancement of Interprofessional Education (CAIPE) Joint Evaluation Team (hereafter referred to as JET) informed the design of our Phase III survey and allowed us to make comparisons across the IECPCP learning projects and also against these reviews.

The JET team wanted common matrices or categories to allow for synthesis, analysis and comparisons across studies in their reviews. Of the available classification of educational outcomes, the JET team concluded that the Kirkpatrick’s model (Kirkpatrick, 1967) best met their needs. Kirkpatrick’s model measures four levels of outcomes of learning that should result from effective education. Freeth et al. (2002) modified the original four levels to six categories (see Table I)

Table 1: Modified Kirkpatrick's Model of Learning Outcomes*

Outcome Level	Type of Outcome	Description
1	Reaction	Learners' views on the learning experience and its interprofessional nature.
2a	Modification of Attitudes/ Perceptions	Changes in learners' reciprocal attitudes or perceptions between participant groups. Changes in perception or attitudes towards the value and/or use of team approaches to caring for a specific client group.
2b	Acquisition of Knowledge/ Skills	Including learners' knowledge and skills linked to interprofessional collaboration
3	Behavioural Change	Identifies learners' transfer of interprofessional learning to their practice setting and changed professional practice.
4a	Change in organizational practice	Wider changes in the organization and delivery of care.
4b	Benefits to patients / clients	Improvements in health or well being of patients/clients.

**As modified by Freeth et al. (2002)*

Survey development, data analysis & design of web-based interactive IECPCP Framework

OVERVIEW: Twenty individualized surveys were created for each project by listing the evaluation instruments they had proposed to use (from the Phase II Interim Report). The survey was piloted with three projects and further revised. The final, three-question survey (see Appendix II) was then sent by email in May 2007 to the 20 IECPCP learning project managers along with the Phase II update request. Survey responses were tabulated and analyzed using simple descriptive statistics. We mapped survey responses onto a web-based version of the IECPCP framework, which can be accessed at cihc.ca/evaluation/framework/.

QUESTION DEVELOPMENT: We framed one of our survey questions using the modified Kirkpatrick model (Freeth et al. 2002) to allow for a synthesis, analysis and comparisons of what was happening in Canada and comparisons against the JET critical reviews. We used this approach even if the Kirkpatrick model was not used in the original proposal of the responding IECPCP learning project. For those respondents who might not have been familiar with the framework, a .pdf version of the Freeth et al (2002) paper was provided as part of the survey.

The IECPCP framework also informed our survey, as it was a foundational component of the IECPCP call for proposals from Health Canada. This model was developed from existing knowledge about interprofessional education and collaborative patient-centred practice in an attempt to bridge the gap between the two activities (D'Amour & Oandasan, 2005). The IECPCP framework illustrates the interdependency between interprofessional education and collaborative patient-centred practice. It links the factors that affect interprofessional learning (such as learner characteristics or teaching factors) with learner outcomes and factors that affect collaborative patient care (such as organizational structure, team dynamics, patient characteristics) with patient & provider outcomes. The framework, which is intended to evolve as new linkages are demonstrated and new interprofessional initiatives are implemented, provides a frame of reference for evaluation of interprofessional education for collaborative, patient-centred practice. Survey respondents were asked to represent their evaluation foci on this framework. See Appendix III for a further description of the IECPCP Framework.

3.3 PHASE III VERIFICATION

Although the research technician collecting data from the Phase III survey mapped respondents' data exactly as reported by projects, we felt that if the projects reviewed their responses, now visually represented on the IECPCP framework and available in a web-based and public forum, they would want to have one final opportunity to confirm their responses. Furthermore, during data entry it appeared that some information might have been misclassified or misinterpreted by some survey respondents. We therefore undertook one final verification step. Appendix IV outlines the letter that was sent to all 20 projects in March 2008. Survey responses received by August 25, 2008 were included in this data analysis. Of note, for this verification phase, several respondents updated the instruments that they used in their projects, without indicating which educational outcome or D'Amour framework variable the instrument was measuring. Due to missing data, the frequencies/percentages reported on these latter aspects are estimates only.

4 Results

4.1 PHASE III SURVEY RESULTS

Nineteen of the 20 IECPCP learning projects responded to the Phase III survey. The 19 projects reported using 115 instruments; 13 projects reported using focus groups as an evaluation method, and 14 projects reported using interviews. Of the 19 projects, 14 (70%) reported using more than 1 method; 5 projects reported using only 1 evaluation method.

Figure 1 illustrates the reported validation status of the 115 instruments. The majority, 49 (43%) of the 115 instruments reported by the 19 respondents were new; 17 (15%) were validated; 10 (9%) were not validated; 9 (8%) were not validated and adapted; and 7 (6%) were validated and adapted. For 23 (20%) of the 115 instruments, respondents left the question blank (n=18), or they reported 'do not know' (n=1) or their responses fell within an 'other' category (n=4).

Figure 1: Reported validation status of 115 instruments

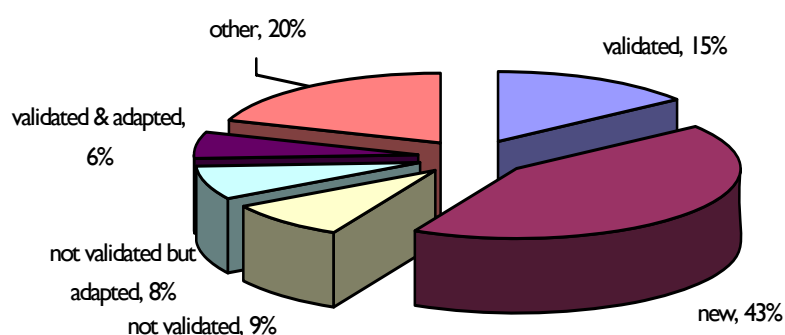


Figure 2 illustrates the percentage of total reported uses of instrument (e.g. validated or unvalidated questionnaire), focus group or interview to measure the five broad categories of the IECPCP Framework (educational system, learner outcomes, professional system, patient/provider outcomes, government policies). Quantitative results are outlined in Table 2.

- ◆ In total, projects reported using 115 instruments to measure the IECPCP Framework elements 473 (73%) times, 13 projects reported using focus groups to measure the elements 95 (15%) times, and 14 projects reported using interviews to measure the elements 79 (12%) times.
- ◆ The frequencies are greater than the number of instruments (n=115) and projects reporting use of focus groups (13 projects) and interviews (14 projects), since a single evaluation method could be used to evaluate more than one element or sub-element within the framework.
- ◆ The greatest emphasis of the evaluations appears to be on the educational system (273 [42%] of evaluation methods), followed by the learner outcomes (153 [24%] of

evaluation methods), and the professional system (130 [20%] evaluation methods). Fewer evaluations targeted patient/client or provider outcomes (79 [12%] of evaluation methods) and government policies (12 [2%] of evaluation methods) for a total of 647.

Figure 2: Percent of total reported uses of instruments, focus groups and interviews (n=647) to evaluate elements of D'Amour & Oandasan (2005) Framework

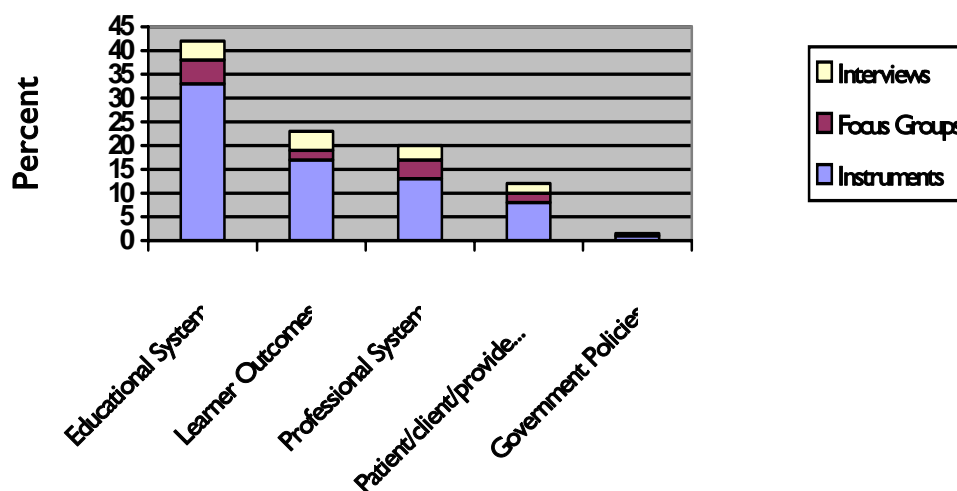


Table 2: Mapping of evaluation methods against the IECPCP Framework variables

	Educational System	Learner Outcomes	Professional System	Patient/client or Provider Outcomes	Government Policies	Total
'instruments' n=115	213 (33%)	112 (17%)	87 (13%)	52 (8%)	9 (1%)	473 (73%)
focus groups n=13	35 (5%)	16 (2%)	26 (4%)	15 (2%)	3 (0.5%)	95 (15%)
interviews n=14	25 (4%)	25 (4%)	17 (3%)	12 (2%)	0	79 (12%)
Total	273 (42%)	153 (24%)	130 (20%)	79 (12%)	12 (2%)	647 (100%)

Figure 3 illustrates the percent of total reported uses of instruments, focus groups and interviews to evaluate modified Kirkpatrick educational outcomes. Quantitative results are outlined in Table 3.

- ◆ Projects reported that the 115 instruments were being used to measure the educational outcomes 196 (74%) times, 13 projects reported using focus groups to measure the outcomes 39 (15%) times, and 14 projects reported using interviews to measure the outcomes 31 (12%) times, for a total of 266.
- ◆ The frequencies were greater than the number of instruments (n=115) reported and the number of projects reporting use of focus groups (n=13) and interviews (n=14), since a single evaluation method could be used to evaluate more than one educational outcome.

- ◆ The greatest emphasis of the evaluations appeared to be on the attitudes/beliefs (67 [25%] of evaluation methods), knowledge/skills (61 [23%] of evaluation methods), and reaction (55 [21%] of evaluation methods). Many projects also reported evaluating behavioral change (42 [16%] of evaluation methods). Fewer of the instruments were used to evaluate client/patient benefit (16 [6%] of evaluation methods) or organizational change (25 [9%] of evaluation methods).

Figure 3: Percent of total reported uses of instruments, focus groups and interviews (n=266) to evaluate modified Kirkpatrick educational outcomes

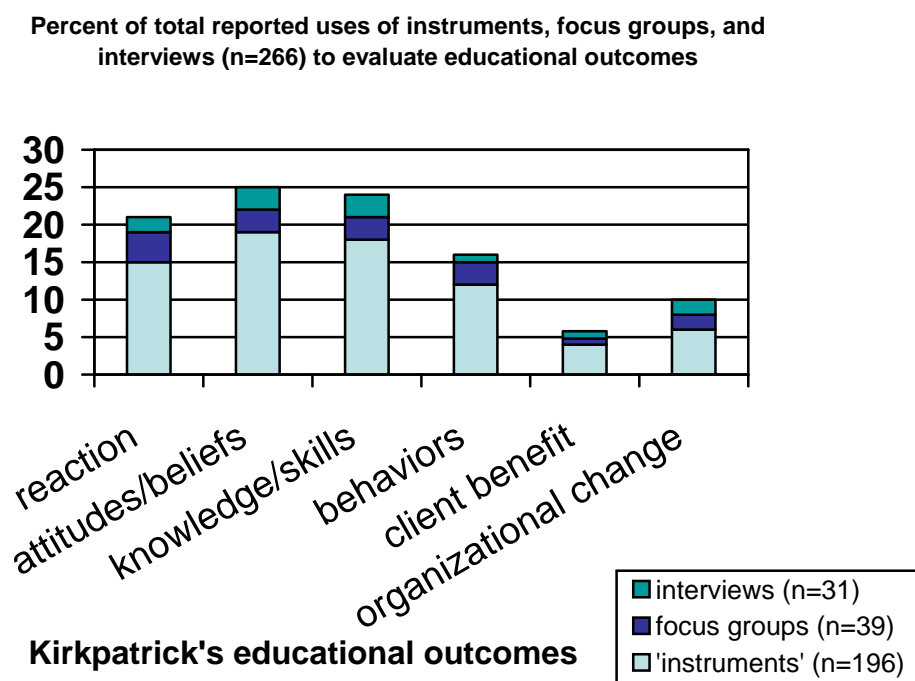


Table 3: Mapping evaluation methods against the modified Kirkpatrick model

	Reaction 1	Attitudes/ Beliefs 2a	Knowledge/ Skills 2b	Behaviors 3	Client/ Patient Benefit 4b	Organization Change 4a	Total
'instruments' (n=115)	41 (15%)	50 (19%)	47 (18%)	32 (12%)	11 (4%)	15 (6%)	196 (74%)
focus groups (n=13)	10 (4%)	8 (3%)	7 (3%)	7 (3%)	2 (1%)	5 (2%)	39 (15%)
interviews (n=14)	4 (2%)	9 (3%)	7 (3%)	3 (1%)	3 (1%)	5 (2%)	31 (12%)
Total	55 (21%)	67 (25%)	61 (23%)	42 (16%)	16 (6%)	25 (9%)	266

It was not unexpected to find that single instruments were being used to evaluate more than one educational outcome, however, it was interesting that for all five of the common instruments used by the projects, variability existed across the projects regarding which outcomes were being measured by each instrument(see Table 4). These five validated instruments were used to measure attitudes/beliefs, knowledge/skills, and reaction, with one instrument also reportedly used to measure behaviour and client/patient benefit.

Table 4: Five commonly used instruments and variable reporting of modified Kirkpatrick's educational outcomes

Instrument	# of projects reporting using the instrument to measure a specific outcome level, as outlined in the modified Kirkpatrick model*
Attitudes Towards Health Care Team Scale (used by 4 projects)	4 measured learners' Attitudes/Beliefs 1 measured learners' Knowledge/Skills 1 measured Reaction
Interdisciplinary Education Perception Scale (used by 3 projects)	2 measured learners' Reactions 3 measured learners' Attitudes/Beliefs 1 measured learners' Knowledge/Skills
Collaboration and Satisfaction about Care Decisions (used by 2 projects)	1 measured learners' Reactions 1 measured learners' Attitudes/Beliefs 2 measured learners' Knowledge/Skills 1 measured learners' Behavior 1 measured Patient/Client Benefit
Interprofessional (Interdisciplinary) Team Performance Scale (used by 2 projects)	2 measured learners' Reaction 2 measured learners' Attitudes/Beliefs 1 measured learners' Knowledge/Skills
Readiness for Interprofessional Learning Scale (used by 2 projects)	2 measured learners' Attitudes/Beliefs 1 measured learners' Knowledge/Skills

* Projects could report using instrument for more than one outcome level.

5 Synthesis of Results

5.1 EVALUATION FRAMEWORKS

Kirkpatrick's Model of Educational Outcomes

We chose the JET modified Kirkpatrick's Model of Educational Outcomes as a guiding framework for this synthesis as it was used in the three JET reviews and also by several of the IECPCP projects. The original 1959 Kirkpatrick model (1967) included four levels of education outcomes (reaction; learning; behaviour; and results). The model served to promote the importance of conducting evaluations of educational programs and the value of measuring outcomes at more than one level. It made the important distinction between learning and behaviour (translating knowledge into practice) and recognized the need to align evaluation results with organizational priorities. The model offered a language for evaluation and a straightforward, systematic way to evaluate whether a program is meeting its objectives. Kirkpatrick's model has since been modified or expanded to a variety of other versions including Hamblin (1974), Brinkerhoff (1987), Kaufman and Keller (1994), Phillips (1997), Guskey (2000), Holton (2000) and Freeth et al. (2002).

Even the expanded versions of the model have limitations. Most notably, while the model focused on the "what" or "who" of educational outcome measurement (changes in the learner, organization, and client) it does not explicitly address the "why" (the context) or "how" (structure and processes), both of which are equally critical to informing program development and implementation. Also, Holton (1996) notes the model is merely a 'taxonomy of outcomes' (page 5) with little evidence of an hierarchical or linear causality between levels. He identifies the need for a model which can "specify outcomes correctly, account for the effects of intervening variables that affect outcomes, and indicate causal relationships"(PAGE 5).

As aptly stated by Frechtling (2000):

"Rather than being an assessment of status, evaluation must provide an assessment of dynamics. Rather than being focused, evaluation must be both broad-based and cognizant of the connections among parts, not just the parts themselves. Rather than finding 'truth' through a treatment comparison design, evaluation must use partial comparisons or other substitutes for true experimental approaches. Finally, evaluation must get deeply inside the process and provide an understanding of what is occurring that addresses the need of a variety of stakeholders who speak with different voices and have a different mix of priorities."

The Kirkpatrick model was also consistent with the thinking around the 1960's & 70's, where evaluation was considered an activity independent of the intervention. More contemporary thinking around evaluation is that it be an integral part of an iterative cycle to inform and improve the educational intervention (Bricker & Littman, 1982). As noted by Stufflebeam (2001) "The purpose of evaluation is to improve, not prove."

A comprehensive review of all available evaluation models is beyond the scope of this report. Further, it is not the intent of this report to recommend the “best” model/framework. However, there are a variety of frameworks that address some (never all) of the shortcomings of the Kirkpatrick’s model.

The CAIPE JET has suggested the 3-P model (Biggs, 1993) as a useful process for evaluating interprofessional education and collaborative practice initiatives. Very similar to Stufflebeam (1971) and Lawrence (1988), this model includes presage factors (socio-political context for education, individual characteristics); process factors’ (strategies/approaches to learning); and ‘product factors’ (learning outcomes).

One of the more comprehensive models is proposed by Gilman et al (2002) in an effort to guide the evaluation of continuing medical education within the US Department of Veterans Affairs. Based on concepts from education, health services and quality management theories, Gilman proposed a domains-based outcomes pyramid (from top down): community at the peak, patient (cohort, sample), organization (process, structure), group/team (performance, composition, purpose), and at the base individual learner (performance, skill, knowledge, satisfaction).

In his proposed model (Learning Transfer Systems Inventory), Holton (1996, 2000) identified three primary outcome measures (learning, individual performance and organizational results) noting that “reaction” is not included as a primary outcome and “behaviour” is replaced with “individual performance.” The model also includes primary (motivation, ability/enabling, and environmental elements) and secondary (performance self-efficacy, learner readiness) intervening variables in the model.

5.2 EDUCATION OUTCOMES & EVALUATION CONTEXTS

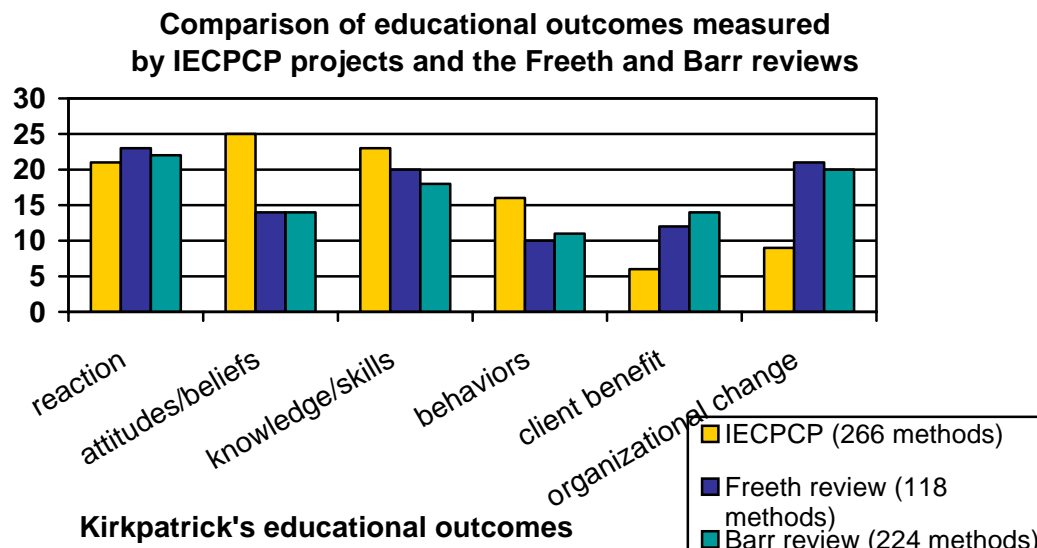
This section compares our findings from the 19 responding IECPCP projects against the 3 JET reviews (Freeth, 2002; Barr, 2005; Hammick, 2007). It is important to emphasize the differences in data sources between the JET reviews and our current report: the IECPCP data represents the educational outcomes measured by various evaluation methods (instruments, focus groups, interviews) as reported by each of the IECPCP learning projects. In contrast, the JET critical reviews used standard systematic review methodology involving independent data extraction of published papers by two reviewers.

Our findings that a single evaluation instrument was used to collect information on multiple outcomes, are consistent with Freeth et al (2002) who also found most studies using instruments to measure educational outcomes at more than one level. For example, they noted 16 of the 27 studies that reported reaction also reported changes in skill or knowledge.

Figure 4 illustrates the percentage of evaluation methods that were being used to assess the educational outcomes (using the modified Kirkpatrick model) across the Freeth et al (2002) and Barr et al (2005) reviews and the IECPCP learning projects. Quantitative results are outlined in Table 5.

Overall, the emphasis of the outcome evaluations in the Freeth and Barr reviews related primarily to reaction, changes in organizational practice, and the acquisition of knowledge and skills. In contrast, the emphasis of the IECPCP learning project evaluations was on attitudes/beliefs, knowledge and skills, and reaction.

Figure 4. Emphasis of educational outcomes measured across the IECPCP projects vs the Freeth (2002) and Barr (2005) reviews



Freeth et al (2002) noted that the learning environment influenced the educational outcomes evaluated. Their data showed that university-based studies tended to focus on learners' reactions, attitudes and perceptions, knowledge and skill, whereas work-based studies focused on changes in behaviour, delivery of care, and client outcomes. These findings are consistent with the outcomes measured by the IECPCP projects which focused mostly on the educational system, and measured reactions, attitudes/beliefs and knowledge/skills.

A relatively large proportion of the IECPCP learning projects reported evaluating behavioural change. Freeth et al (2002) questioned the accuracy of studies measuring the impact of educational interventions on behavior. They noted that the conceptualization and operationalization of the behavioral variable was not clear in most studies included in this review, and that the variable tended to be anecdotally reported rather than rigorously measured. A lack of baseline or comparative data and the inability to separate reports of changes in individual behaviour from changes in organizational practice are other shortcomings observed by Freeth et al. The IECPCP projects measuring the behaviour need to be cognizant of the limitations surrounding the measurement of this outcome.

Figure 5 illustrates the percentage of evaluation methods that were being used to assess the six educational outcomes (using the modified Kirkpatrick model) reported by the IECPCP learning projects and those noted by the third JET review (Hammick et al, 2007). Quantitative results are included in Table 5.

The outcomes measured across our findings and Hammick are quite similar. In contrast to the Freeth (2002) & Barr (2005) reviews where over 70% of the eligible studies focused on the professional system, in the review by Hammick et al, over 70% of the eligible studies involved pre-licensure students, mostly within the university setting. The majority of the IECPCP learning project evaluations also targeted the educational system, which likely explains the commonality of outcomes measured across both reviews.

Figure 5. Emphasis of educational outcomes measured across the IECPCP projects vs the Hammick (2007) review

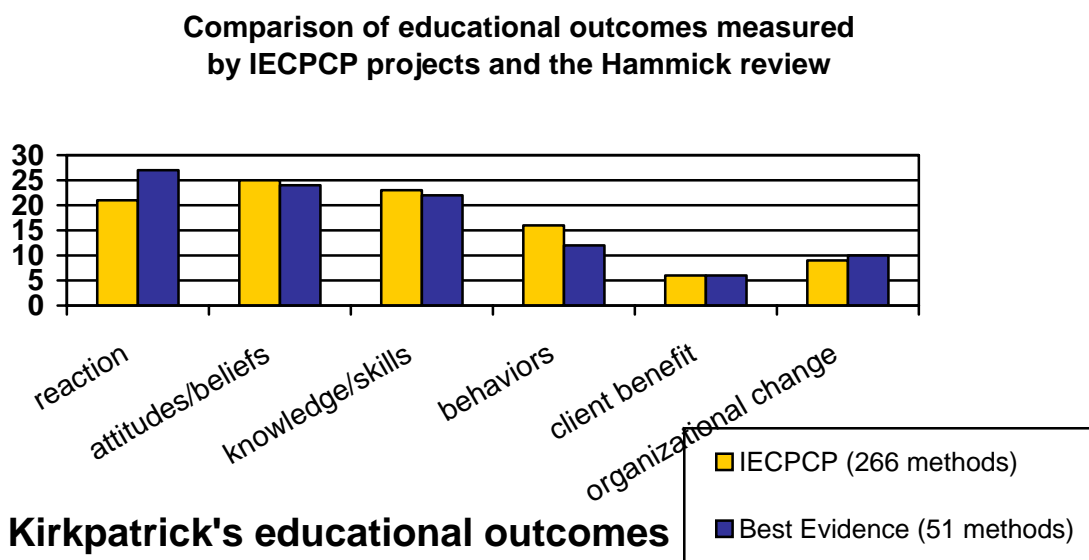


Table 5: Evaluations of educational outcomes (IECPCP vs Freeth vs Barr vs Hammick reviews)

	IECPCP (266 methods*)	Freeth review (118 methods)	Barr review (224 methods)	Hammick (51 methods)
Reaction 1	55 (21%)	27 (23%)	50 (22%)	14 (27%)
Attitudes/Beliefs 2a	67 (25%)	16 (14%)	32 (14%)	12 (24%)
Knowledge/Skills 2b	61 (23%)	24 (20%)	40 (18%)	11 (22%)
Behaviors 3	42 (16%)	12 (10%)	25 (11%)	6 (12%)
Client Benefit 4b	16 (6%)	14 (12%)	32 (14%)	3 (6%)
Organizational Change 4a	25 (9%)	25 (21%)	45 (20%)	5 (10%)
Total	266 (100%)	118 (100%)	224 (100%)	51 (100%)

6 Next Steps

Continuous analysis of updated web-based IECPCP framework

We encourage the IECPCP learning projects (or the individuals that carry on the various activities that are sustained from these initial efforts) to update the evaluation activities on the web-based interactive IECPCP framework. This tool will be housed on the CIHC website and will need ongoing updates to ensure it continues to inform the evaluation and research communities' interests. The more accurate and complete this web-based IECPCP framework is, the more useful it will be as a resource for future evaluations of interprofessional education initiatives. The interactive IECPCP framework is only one way to synthesize data but it remains valuable for encouraging the use of other potential "common matrices" for data synthesis to improve comparisons across projects (e.g. modified Kirkpatrick's model of educational outcomes).

Validation of Measurement Tools

It is crucial that the wealth of information on the evaluation of interprofessional education interventions continues to be captured, analyzed and translated to inform health care policy and practice. A logical next step from our work would be to gauge the effectiveness of the evaluation tools in measuring interprofessional education. Validation of the many newly developed instruments is recommended.

Secondary Data Analysis

It would be a useful exercise to compare and contrast findings across those projects that used the same evaluation instruments. Also, since many of the projects used qualitative interviews and focus groups, it would be of interest to examine the questions used in these qualitative interviews and focus groups to compile themes and categories of emergent information.

Evaluating the Professional System

Our study identified a gap in the evaluation of the effects of interprofessional education on the health system and patients. Being that such a large component of the projects' interventions & evaluations focused on the educational system side of the IECPCP framework, focusing further research on the professional system side of the framework would be a reasonable next step. We encourage development and evaluation of interprofessional education initiatives within the professional system to further our understanding of patient benefit and organizational change.

Evaluation Theory

Continued exploration of the Kirkpatrick, D'Amour & Oandasan and other models would be valuable to advancing interprofessional education and practice evaluation. The IECPCP community should look forward to further development of other models. The emergence of new theoretical models to guide IECPCP evaluation will help to demonstrate the value IECPCP in achieving not only improved learner outcomes, but an effective and efficient health care system which improves recruitment and retention of health care providers and ensures optimal patient outcomes. Developing a body of knowledge specific to interprofessional education is strongly recommended.

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Appendix I

COVER EMAIL FOR PHASE II UPDATE AND PHASE III SURVEY SENT MAY 2007

Dear Project Manager and Project Leads:

The CIHC evaluation subcommittee is currently wanting you to validate the information it has gathered about your project's evaluation strategy. We are also wanting to gather more information from you. There are 3 components to our request:

- (1) Attached are 5 tables containing data that the evaluation subcommittee has extracted about your project from the research template and a review of your original proposal to Health Canada. We recognize that there may have been many changes to the evaluation plans of your project since these events. We decided against reviewing the ethics submissions for each project as we also realized that, given the iterative nature of program evaluation, there may have been several amendments to the original ethics submission. We thought validation of the data extracted directly with the PIs of each project would be a much more efficient use of everyone's time. We are asking you to review what we have extracted about your project in these 5 tables and make any necessary corrections.
- (2) Also attached is a 3 question survey. We hope you will find it self-explanatory, relatively straightforward and quick to complete. An article on the modified Kirkpatrick's educational outcomes is also attached for your information. Pages 13-14 of this article include tables of the original versus modified educational outcomes.
- (3) Lastly, we would like you to tell us whether you are documenting any indicators of systemic/culture change (within health care organizations, universities, government etc.) that have occurred as a consequence of your project. If so, please provide examples of these indicators (such as proposals or funding for new clinical or faculty positions, proposals or funding for research or a new IPE centre, administrative changes, changes to curriculum, new courses, changes to faculty/department schedules). Feel free to be as comprehensive as you would like.

We encourage you to complete this validation phase, as these data will be posted on the CIHC website and we would like it to be an accurate and up-to-date reflection of the wonderful work being conducted by all IECPCP projects.

We would appreciate a response at your earliest convenience. Please try to complete our request by June 30, 2007, and send your response to Juliet Ho, CIHC Administrative Assistant, at juliet.ho@ubc.ca.

Regards,

Ruby Grymonpre and Judith McFetridge-Durdle
Co-Chairs, CIHC Evaluation Committee

Appendix II

PHASE III INDIVIDUALIZED SURVEY

The CIHC Evaluation subcommittee would like to link the evaluation instruments you are using in your project to an interactive model of the D'Amour, Oandasan IECPCP conceptual framework. We require some information from you to make this possible. Based on our review of the proposal that you submitted to Health Canada, we have determined that you are using the following instruments (see table below). If these data are incorrect, please update as it is important that we have the most accurate and up-to-date information were mailed out to each project.

For each instrument, please respond to the 3 questions

Q.1. IS THIS A:

NEW instrument (i.e. you developed it)	NON-VALIDATED ADAPTED instrument
NON-VALIDATED instrument	VALIDATED but ADAPTED instrument
VALIDATED instrument	DO NOT KNOW

Q.2. Thinking about the JET modified Kirkpatrick's educational outcomes, which outcome does this instrument evaluate? List all that apply.

REACTION	BEHAVIORS
ATTITUDES/BELIEFS	ORGANIZATIONAL CHANGE
KNOWLEDGE/SKILLS	BENEFIT TO THE CLIENT
DO NOT KNOW	

Q.3. THINKING ABOUT THE D'AMOUR OANDASAN IECPCP CONCEPTUAL FRAMEWORK WHO OR WHAT IS THIS INSTRUMENT EVALUATING IN YOUR PROJECT? LIST ALL THAT APPLY

Learners	Patient/Client	Educational System
Educators	Professionals	Professional System
Institutional factors	Organizational factors	Government Policies

Teaching/Learning Factors	Interactional factors	
Health Professional Learner Outcomes	Patient/Provider Outcomes	

Appendix III

DESCRIPTION OF IECPCP FRAMEWORK

The framework portrays two interdependent components:

- (1) Interprofessional education to enhance learner outcomes
- (2) Collaborative practice to enhance patient outcomes

The framework nicely illustrates that the learner and the patient are at the centre of the educational and patient care systems, respectively, and that a variety of factors influence each in achieving desired outcomes.

The factors within the educational system that influence optimal learner outcomes include:

- ◆ Educators – must possess the necessary knowledge, skills, behaviours and attitudes in collaborative patient-centred practice.
- ◆ Teaching factors – IE requires a strategic and coordinated approach - What should be taught? To whom? How? When? and Where?
- ◆ Institution factors – Academic VPs/Deans/Directors must be supportive of IECPCP initiatives; resources are required.
- ◆ Administrative factors – scheduling, grading of students, remediation are challenges.
- ◆ Educational System – for example, accreditation bodies have a strong influence over what is taught. Institutional structures must support IECPCP.

The factors within the professional system that influence optimal patient/provider outcomes include:

- ◆ Health care professionals – must possess the necessary knowledge, skills, behaviours and attitudes in collaborative patient-centred practice . Team members must practice and be willing to serve as roles models for collaborative patient-centred practice.
- ◆ Interactional factors – must be interprofessional, interactive, with shared team goals & leadership; solutions address complex problems and have depth and breadth; members feel empowered.
- ◆ Organizational factors – CEOs/COOs must be supportive of IECPCP initiatives. Policies, procedures, program structures, unions, resources should be aligned with IECPCP.
- ◆ Professional system – Regulatory bodies who license health care professionals have a strong influence over the competencies required for professional practice.

It is critical that federal/provincial/territorial government policies especially in education, health and social services are consistent and supportive of IECPCP.

A final critical element includes research/evaluation/knowledge translation which will further our understanding of IECPCP, improve teaching and collaborative practice, and provide evidence of the impacts of IECPCP on learner and patient outcomes.

Appendix IV

COVER LETTER SENT MARCH 2008

March 6, 2008

Dear IECPCP Project Colleagues:

Re: CIHC Evaluation Metric

As you probably recall, in July, 2007 the CIHC Evaluation Subcommittee sent your project a survey file titled: Surv_-_Grymonpre_Ruby. The purpose of this survey was to:

1. validate information that we already had on file about the evaluation instruments you were using in your project and
2. provide us with additional information about the evaluation instruments you were using in your project to allow us to map your data onto a web-based interactive D'Amour & Oandasan framework.

Thank you to the 18 projects who provided us with this information.

We have now completed the mapping exercise and our plans are to post the web-based interactive D'Amour & Oandasan framework for public access on the CIHC website. However, before we make this resource accessible to the public, we would like you to have one final opportunity to confirm your data. Although the research technician for this project mapped your data exactly as you reported, now that the data is visually represented, you may want to make some final changes.

Please click on the following webpage <http://www.cihc.ca/evaluation/framework>, to locate and review each interactive variable on the framework, locate, and to validate your data. For example: if you reported that your project assessed the variable "Learning Context," click *Learning Context* on the framework. A list of instruments being used (by all IECPCP projects) to evaluate this variable will appear on the left-hand side. Locate and click on the name of the instrument(s) your project reported using. On the right hand side of the screen, information about the JET modified Kirkpatrick's educational outcomes measured by the instrument, the instrument's validation status, and projects using the tool will be listed. Please review this information, as it relates to your project, and ensure that it is accurate.

If you have corrections/revisions please indicate them using the attached table. Please use this table *only* for those variables requiring *corrections* to the information presented on the website. When completing the table, please *clearly* indicate what should appear on the website. This will ensure that we represent your work as accurately as possible.

If you do not have any suggested changes, please let us know this as well by returning the blank table with a note indicating there are no changes to the information presented for your project.

Please send your responses to dejaeger@cc.umanitoba.ca by March 31, 2008. Once the identified corrections are modified, this resource will be publicly accessible on the CIHC website, accompanied by an announcement to CIHC members.

...continued

If you have any questions about this request, please contact:

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Technician
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CIHC Program Manager
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(604) 531-7970

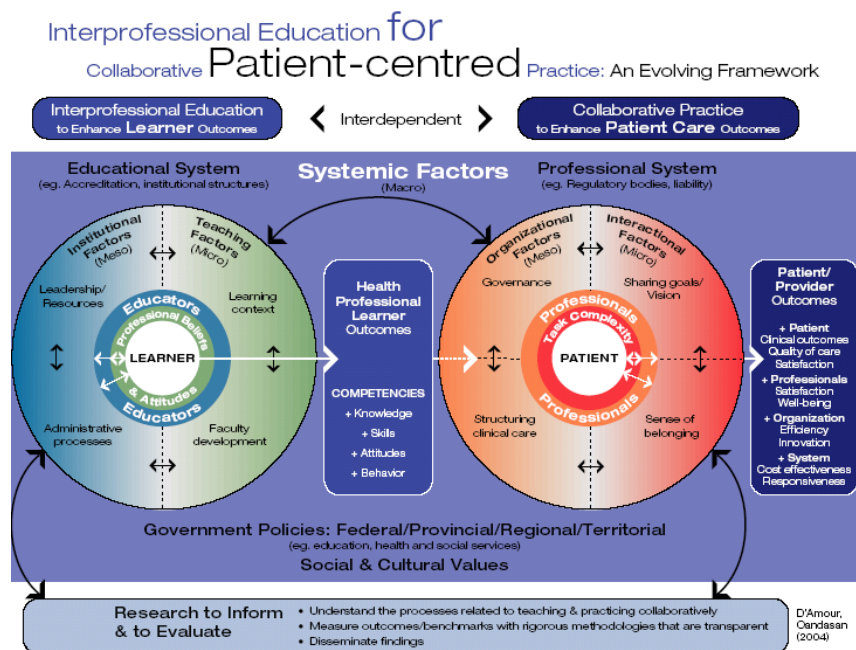
Thank you for your collaborative effort in producing this valuable resource.

Sincerely,
Ruby Grymonpre
Chair, CIHC Evaluation Sub-Committee

Appendix V

CIHC EVALUATION METRIC

<http://www.cihc.ca/evaluation/framework>



IECPCP Project Title:

D'Amour variable	Instrument
e.g.: Learning Context	Clinical Team Evaluation Post IEGC Program
Correction: e.g.: Website indicates that we examined Behaviour and Reaction – please delete <u>Behaviour</u>	
D'Amour variable	Instrument
e.g.: Learners	IEGC Knowledge Questionnaire
Correction: e.g.: Address change: should read PE461 Morley Avenue	

Completed by: _____ Date: _____

Please send your responses to dejaeger@cc.umanitoba.ca by March 31, 2008.