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Interprofessional collaboration among complementary and integrative health providers in private practice and community health centers

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A B S T R A C T

Background: The current healthcare environment is placing increasing emphasis on interprofessional collaboration (IPC). IPC may be of particular importance to complementary and integrative health (CIH) providers who have historically practiced in silos. The extent to which these providers are collaborating with each other and with other providers is not known.
Purpose: Investigate aspects of IPC occurring in a sample of CIH providers.
Method: A qualitative health services study using semi-structured interviews.
Discussion: CIH providers were found to be collaborating with each other and other providers. Subjects indicated IPC had a positive impact on practice and on patient care. Educating students and practitioners about other health disciplines was seen as being key to collaboration between professions, as was being able to communicate using terms others could understand.
Conclusions: Results of this study can contribute to broadening the scope of IPC, improve clinical outcomes, improve efficiency for healthcare systems, and may be useful to institutions engaged in training CIH providers in development of curricular content.

1. Background

The current healthcare environment is placing increasing emphasis on team based care.[1,2] The underlying premise of team care is interprofessional collaboration (IPC), defined as the efforts of different professions working together to positively impact healthcare.[3,4] IPC has also been defined as occurring "when learners/practitioners, patients/clients/families and communities develop and maintain interprofessional working relationships that enable optimal health outcomes."[5]

Previous authors have shown that IPC can improve healthcare processes and outcomes.[6,7] Patients are best served when healthcare providers understand and respect each other's professions, and are able to work well together.[8]

The principles and processes of IPC may be of particular importance to complementary and integrative health (CIH) providers, who have historically practiced in relative isolation from each other and from mainstream medicine. The five licensed CIH disciplines – acupuncture and Oriental medicine (AOM), chiropractic (DC), direct entry midwifery (DEM), massage therapy (MT), and naturopathic medicine (ND) – are known to have a small but growing degree of interprofessional education during their clinical training.[9] However, the extent to which these providers are collaborating with each other in private practice (PP) settings and in community health centers (CHCs) is not known.

CIH providers integrated into collaborative teams may help improve access to and quality of care to medically underserved communities (MUCs). Previous work has described the use of interprofessional staff to deliver care in family practice settings, and proposed that collaborative practice models can be developed to maximize staff contributions consistent with the parameters of the given facility.[10] This is commonly seen in community health facilities providing care to underserved populations.[11] It has been shown that such facilities can incorporate non-physician providers in manners consistent with their productivity and business models.[12] Others have shown that the inclusion of CIH approaches is effective and feasible for treating chronic pain in underserved populations[13,14] and can be a means of improving access to care.[15]

There is a growing trend of CIH providers being included in mainstream medical systems and facilities, and previous work has presented aspects of IPC occurring therein.[16,17,18] However, the vast majority of CIH providers deliver care in private practice settings, therefore a better understanding of the current state of IPC among CIH professionals in private practice is needed. Additionally, it has been proposed that CIH providers can be an asset to providing care in community health centers serving MUCs, but little has been presented on this.

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A qualitative assessment seeking broad understanding of a wide range of features in both of these areas is an important first step. The purpose of this study was to investigate the aspects of IPC occurring in a sample of CIH providers from the five licensed CIH disciplines, including both private practice providers and those practicing in community health centers providing care to medically underserved communities. This study was conducted by investigators at the Academic Collaborative for Integrative Health (ACIH), a non-profit organization whose core membership consists of national CIH academic organizations.

2. Method

2.1. Study design

This was a qualitative health services study using semi-structured interviews of providers from the five licensed CIH disciplines: acupuncture and Oriental medicine, chiropractic medicine, direct entry midwifery, massage therapy and naturopathic medicine.

2.2. Study population

This study assessed two CIH provider populations. The first group was CIH clinicians in private practice settings including solo practitioner offices or single discipline small group practices. We excluded providers in multidisciplinary groups, and those who are working as employees of integrated healthcare facilities, since these providers would likely experience a greater degree of IPC than the average provider. However, we did seek to include private practice providers who are providing some care in conjunction with (but not as employees or contractors of) MUC service delivery structures and/or processes. The second group was CIH clinicians providing care, through formal employee, contractor, or other arrangements, at CHCs or other care structures serving MUCs.

For both groups we sought to:

1) Document and characterize the current state of IPC, including the facilitators and obstacles to IPC; and
2) Identify factors that could strengthen and expand a) the amount and quality of IPC among these providers, and b) the structures and processes for CIH providers to contribute to community healthcare.

Additionally, for the PP providers we also sought to explore the extent that these clinicians are providing community care to underserved populations, and whether a) IPC influences their willingness and capacity to provide such care, and/or b) being engaged in providing community care influences the degree of IPC these clinicians experience. For the providers in CHC we sought to explore the mechanisms and arrangements through which these providers have become integrated at these facilities or systems.

For each group we used a purposive sampling approach. Subjects were recruited through personal contacts of the investigators, the study advisory committee, and other ACIH stakeholders. Subjects were contacted by email and invited to participate. We subsequently used snowball sampling[19] whereby the initial group of participating subjects were asked to identify other potential subjects, and we then contacted any additional individuals that were suggested.

2.3. Operational definitions

In very broad terms, IPC has been defined as different professions working together to positively impact healthcare.[20,21] For the purposes of our study we set out to operationalize this concept in a way that would allow more meaningful analysis. Previous authors have proposed and/or tested models of various elements of IPC including items such as governance, communication, and care delivery.[22,23] Also, various professional entities – including the *Interprofessional Education Collaborative (IPEC)*[24], *Canadian Interprofessional Health Collaborative*,[25] and the *Academic Collaborative for Integrative Health*[26] – have proposed models of competencies in IPC. The ACIH competencies are virtually identical to the first four fields of the IPEC competencies, plus an addition of two fields (evidence informed practice and institutional healthcare culture and practice). We selected the IPEC competencies as our primary operational framework, and developed an initial set of thematic codes based on this. We chose to use the IPEC competencies because they give a clear definition of how IPC should look, and they have been endorsed by a multitude of disciplines and organizations.

However, since we suspect that IPC in CIH disciplines is different from IPC in mainstream medical disciplines, we developed a secondary operational framework based on our review of the literature and the combined input of the study team and advisory committee. We also planned for inductive analyses, looking for themes emerging from our interviews. The IPEC Competencies and Additional IPC elements particularly relevant to CIH disciplines are listed below.

IPEC Competencies.

- Values/Ethics for Interprofessional Practice
- Roles/Responsibilities for Collaborative Practice
- Interprofessional Communication
- Interprofessional Teamwork and Team-based Care

Additional IPC Elements.

- For professions with variable educational standards, extent of professional education (length of program)
- Extent of residency/post-graduate training (in their discipline)
- Extent of other academic education/degrees (bachelors, masters, PhD)
- Extent of prior IPE exposure at undergraduate and/or graduate levels
- Effect of compensation or fee for service structures
- Outreach to underserved populations
- Effect of malpractice/liability considerations
- Licensure status

2.4. Data collection

Qualitative data was collected via semi-structured interviews conducted by telephone. Interview guides were developed from examples successfully used in previous work by the authors and others.[27,28] Questions were posed to elicit key features of IPC from each provider group. The IPEC competencies and additional IPC elements particularly relevant to CIH disciplines formed the basis for the semi-structured interview questions.

To ensure internal consistency, at least two study team members participated in each of the initial interviews, and debriefed immediately after each session to refine processes as needed. Once investigators demonstrated confidence in interview guides and protocols, subsequent interviews were conducted by only one investigator, who also audio recorded the session.

All subjects provided verbal consent prior to participation. All respondents agreed to be audio-recorded. The audio recordings were transcribed verbatim for analysis.

2.5. Data analysis

We followed a directed content analysis approach, in which thematic codes were developed consistent with a priori hypotheses based on prior literature and subject matter expertise, along with new themes emerging from transcript review. We performed directed content analysis to allow for a combination of inductive and deductive assessments. We began with a start list of codes generated from the IPEC

Table 1
Study subjects.

	Private Practice	CHC
AOM	2	2
DC	3	5
MT	2	2
DEM	3	0
ND	2	2
Other CHC	–	3
TOTAL (26 subjects)	**12**	**14**

competencies and the study advisory group comments. The first several transcripts were independently read and coded by all investigators using a tabular approach in Microsoft Word. The team debriefed to discuss, debate, and negotiate code assignments, the addition of new codes, and other aspects of consistency. After several iterations across each subject discipline we demonstrated internal consistency in our coding, thereafter subsequent transcripts were read and coded by any one of the three investigators, with each investigator coding an essentially equal number of transcripts overall.

We displayed key elements of the data by using Framework Analysis Tables for efficiency in organizing common themes and interesting observations. We then analyzed the data from the context of the existing literature and the study team expertise to draw conclusions. We referred back to transcript source documents for clarification and review as needed throughout this process.

3. Results

We interviewed 12 CIH clinicians in private practice settings and 14 practitioners in CHCs (Table 1). Three of the 14 CHC providers are classified as “CHC – Other” because they provide care to the underserved in community health centers but are not single discipline integrative health providers. One of these providers is dually degreed in acupuncture and Oriental medicine (AOM) and massage therapy (MT), one is a Nutritionist/Herbalist, and one is a medical doctor (MD).

4. Discussion

4.1. Current state of IPC

One of our objectives was to document and characterize the current state of IPC, and we used the IPEC competencies and additional IPC elements particularly relevant to CIH disciplines as the basis for our assessment. Through our analysis of interview transcripts we were able to categorize respondent themes aligned with the IPEC competencies and our additional IPC elements. We did not uncover emerging themes requiring additional categorization. Due to the open-ended nature of the questions, not every IPC element is addressed by each provider type.

We found that all provider types reported patient-centered care as an underlying value (IPEC Competency field #1, Values/Ethics for Interprofessional Practice). Most PP provider types reported bidirectional referrals with the exception of PP DEMs who commonly made outgoing referrals, receiving fewer incoming referrals from other providers. For the CHC providers, although bidirectional referrals were reported for all provider types, it was more common for CHC AOM and CHC MT to receive referrals than it was to make outgoing referrals (IPEC Competency field #2, Roles/Responsibilities for Collaborative Practice).

As might be expected, providers using EHRs reported more communication and collaboration than those using paper records (IPEC Competency field #3, Interprofessional Communication). It is not clear how much collaboration occurs between providers who are not using the same EHR system.

Although regular interprofessional meetings were not common, they were reported to be of great value for communication and collaboration. Working in a teaching hospital setting and offering clinics as training sites for students from different disciplines were reported as opportunities to increase interprofessional collaboration (IPEC Competency field #4, Interprofessional Teamwork and Team-based Care).

Providers reporting prior IPE exposure at undergraduate and/or graduate levels tended to collaborate more with other provider types (Extent of prior IPE exposure). This speaks to the importance of providing IPE exposure to health professionals during their training.

There was no clear relationship between IPC and compensation/fee for service structures. (Effect of compensation/fee for service structure). The effect of malpractice/liability/licensure status on IPC varied among providers. Licensure status was seen as a barrier when it was an obstacle to having hospital rights or limited the ability to bill third-party payers. In a few instances, licensure was seen as a facilitator of IPC because it required that patients be advised to consult with a medical doctor, which encouraged communication between providers. (Effect of malpractice/liability/licensure status).

4.2. Factors that could strengthen and expand IPC

Another of our objectives was to identify factors that could strengthen and expand a) the amount and quality of IPC among these providers, and b) the structures and processes for CIH providers to contribute to community healthcare.

Providers overwhelmingly reported that IPC had a positive impact on patient care, professional satisfaction, and their practice. Facilitators to IPC included regular interprofessional meetings, with providers making presentations about their disciplines, outreach/education to other providers, and using terminology others can understand. Physical proximity – i.e. being located on site – was also seen as a facilitator.

Barriers to IPC included having referring physicians make decisions or requests one does not agree with, lack of understanding about your discipline, the challenge of working with different provider styles/cultures, the time it takes to collaborate, billing, potential delay in treatment and potential loss of income. Another potential barrier to IPC are questions from potential employers like: Can you bill Medicaid/Medicare? Do you use certain diagnostic codes? Do you support vaccination? What is your primary care authority? (IPC Impact/Facilitators/Barriers).

Many recommendations and suggestions were made for improving IPC, at both the provider and student level. For providers, common recommendations were: Have regularly scheduled interprofessional meetings, educate other providers (and community) about your discipline, use terminology others can understand, build relationships with other providers, and share supportive research for your treatments. Common suggestions regarding students were: integrated education, shared classes and cross-training between disciplines, and giving students templates and examples of typical conversations useful for IPC.

4.3. IPC and care to the medically underserved

We set out to explore the extent to which PP clinicians are providing community care to underserved populations, and whether a) IPC influences their willingness and capacity to provide such care, and/or b) being engaged in providing community care influences the degree of IPC these clinicians experience. For the providers in CHCs, we sought to explore the mechanisms and arrangements through which these providers have become integrated at these facilities or systems.

We found that PP providers offered an array of services to the underserved such as discounts or free services for particular populations or on particular days of the month. Barriers to offering care to the underserved were also reported. One subject reported his view that he was unable to participate in outreach programs/free clinics due to

resistance of sponsors to include their services, reportedly because their services competed with pharmaceutical treatments. Many of the barriers to IPC could easily apply to offering care to the underserved such as lack of understanding of CIH disciplines. There is also likely the lack of understanding about how CIH disciplines could address the needs of the underserved.

We did not have sufficient data to answer the question of whether IPC influences the willingness and capacity to provide care to the medically underserved or whether being engaged in providing community care influences the degree of IPC these clinicians experience. This would be a very interesting area for further study.

5. Conclusion

There was agreement among providers in private practice that IPC has positive impact on practice and on patient care. Common themes among providers in CHCs about the impact of IPC were that: Patients benefit and feel cared for; Providers feel reassured that the patient's other conditions are taken care of; IPC is gratifying; Providers learn from each other; differences in provider style/cultures/ways of thinking was challenging to IPC as was the issue of time (delayed treatment if waiting for another provider; sacrificing clinic time for meetings).

Common themes among providers in private practice regarding suggestions for improving IPC were: Educate other providers about my discipline; Educate students about IPC and other disciplines; Use terminology that is understandable to others. Common themes among providers in CHCs for improving IPC were: Provide students with integrated education; Expose students to other providers in clinic settings; Educate others about your discipline, share supporting evidence; Give students opportunity to shadow with providers in different disciplines.

We found that complementary and integrative health (CIH) providers are collaborating with each other in private practice (PP) settings and in community health centers (CHCs). This is important because CIH providers have historically practiced in relative isolation from each other and from mainstream medicine. Facilitators and barriers to IPC were identified by the providers we interviewed, along with suggestions for improving IPC. As we expected, educating others (students and providers) about other disciplines was seen as being key to collaboration between professions, as was being able to communicate using terms others could understand.

We envision two primary areas of impact for this work. The first area of impact is a better understanding of collaborative care processes between CIH providers in single discipline private practice and between those CIH providers and conventional providers. With a better understanding of how collaboration occurs when providers are not under the same roof, we may be able to identify strategies to improve this collaboration.

The second area of impact is a better understanding of collaborative care processes occurring in Community Healthcare Centers that include CIH providers. Since IPC may be both a means to providing care for the medically underserved community, and/or a consequence of providing care to MUC, a better understanding of the process can be informative to help improve the incorporation of CIH providers into teams providing services to MUC. This can be an important contributor to increasing access to underserved communities and subsequently improving population health.

Both of these potential areas of impact are relevant for healthcare delivery systems and payers in planning and implementing efficient approaches to patient care. Results of this work can lead to raising IPC awareness and contribute to broadening the scope of IPC. Ultimately, enhanced IPC among CIH providers can lead to improved clinical outcomes for patients and improved efficiency for healthcare systems.

Here are some specific examples of how results of this work could broaden the scope of IPC among CIH providers:

- A naturopathic doctor could work alongside a conventional medical doctor to treat chronic conditions which may benefit from a wholistic approach but require prescription pharmaceuticals.
- Instead of offering conventional pain medication to a patient with chronic pain, a conventional medical doctor could refer a patient to an acupuncturist, naturopathic doctor, chiropractor or massage therapist for a more conservative approach.
- A chiropractor could work side by side with a massage therapist to offer patients a more optimal pain-care experience.
- In a healthcare system, a patient with low back pain could be given the choice to see a chiropractor first, which can be more cost-effective than conventional treatments.[29]
- A direct-entry midwife (DEM) could receive a referral from an OBGYN for an expectant mother interested in a home-birth, and a DEM could also perform a warm hand-off to an OBGYN if complications arise during labor.
- CIH providers could arrange regular interprofessional meetings/case presentations with professionals from different disciplines, including allied health professionals.
- Templates and handouts could be developed to help providers from CIH disciplines with outreach to educate about what they do (via written materials, presentations, complimentary treatments for providers).

Results of this work may also be relevant to institutions engaged in the training of CIH providers. Since our findings indicate that increased exposure to IPE during training may result in increased likelihood of IPC during professional practice, this may further encourage collaboration and ultimately improve patient care. Therefore, findings could be useful to inform development of curricular content for current students and continuing educational content for practicing providers.

Here are some specific examples of how results of this work could be relevant to the training of CIH providers:

- Students in the health disciplines could share classes and cross-training between disciplines, which could help develop relationships from the beginning.
- Students in the health disciplines could receive templates and examples of typical conversations useful for IPC.
- Students in the health disciplines could shadow providers of different disciplines, and participate in clinic rotations in different disciplines, which would also help facilitate IPC between professions.

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